

APPENDIX A

SURVEY QUESTIONNAIRES AND TENANT PROVIDED MSD SHEETS

ARMY RESERVE FACILITY (ARF)

FORM NOT COMPLETED
ARMY RESERVE FACILITY (ARF)

Yellow: ARF

Product Name	1, 1, 1-Trichloroethane	1, 1-Dichloroethene	1, 2, 4-Trimethylbenzene	1, 4-Dichlorobenzene	Benzene	Carbon Tetrachloride	chloroform (Trichloromethane)	cis-1, 2-Dichloroethane	Ethylbenzene	m&p-Xylene	Methylene chloride	Naphthalene	o-Xylene	Styrene	Tetrachloroethene	Toluene	Trichloroethene
#76 Dri 4-Way Action Penetrant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
#577 Liquid Wrench super penetrant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
#108 Special Airline Air tool oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
#52 Rapid arench Anti-seize	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
#546 Origional Nut Buster	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
#524 Marvel Mystery Oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
#167 Safety Solvent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
#207 NCP-2 Battery Corrison Preventive Spray	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
#60 Sctohweld Neoprene High Performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
#79 High Tack Spray-A-Gasket Sealent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
#103 Open & Shut NutBolt loosener& Rust	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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MATERIAL SAFETY DATA SHEET

Item Name: Cleaning Compound, Solvent P/N: A-A-59601B TYPE I

NSN: 6850-00-285-8012 CAGE CODE: 1WQQ2

1 MANUFACTURER'S INFORMATION

KAP SERVICES

P.O. BOX 17092, Sugarland, TX 77496

Ph : 281-403-0242, Emergency Ph : 1-800- 424-9300

Date MSDS prepared 06/21/2005

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration
Solvent Naphtha (Petroleum), Medium Aliphatic	64742-88-7	95 - 100 %W

3. HAZARDS IDENTIFICATION

Appearance and Odour	: Water white Liquid Aliphatic Hydrocarbon with almost no odor.
Health Hazards	: Vapors may cause drowsiness and dizziness. Harmful: may cause lung damage if swallowed.
Safety Hazards	: Combustible liquid. Vapors are heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger.
Environmental Hazards	: May cause long-term adverse effects in the aquatic environment.

Health Hazards	
Inhalation	: Vapors expected to be slightly irritating. Vapors may cause drowsiness and dizziness.
Skin Contact	: May cause moderate irritation to skin. Repeated exposure may cause skin dryness or cracking.
Eye Contact	: Vapors may be irritating to the eye.
Ingestion	: Harmful: may cause lung damage if swallowed.
Other Information	: Possibility of organ or organ system damage from prolonged exposure; see Chapter 11 for details. Target organ(s): Cardiovascular system. Central nervous system.

Signs and Symptoms	: Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing. Breathing of high vapor concentrations may cause central nervous system depression resulting in dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death. Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever.
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Aggravated Medical Condition : Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Skin.
Environmental Hazards : May cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

General Information : In general no treatment is necessary, however, obtain medical advice.
Inhalation : Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
Skin Contact : Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.
Eye Contact : Flush eyes with water while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision, or swelling persist, transport to the nearest medical facility for additional treatment.
Ingestion : If swallowed, do not induce vomiting; transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
Advice to Physician : Causes central nervous system depression. Dermatitis may result from prolonged or repeated exposure. Potential for chemical pneumonitis. Consider: gastric lavage with protected airway, administration of activated charcoal.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Flash point : 40 - 45 °C / 104 - 114°F (Tag Closed Cup)
Explosion / Flammability limits in air : 0.8 - 6.0 %(V)
Auto ignition temperature : 230 - 316 °C / 446 - 600 °F
Specific Hazards : Carbon monoxide may be evolved if incomplete combustion occurs. Will float and can be re-ignited on surface water. The vapor is heavier than air, spreads along the ground and distant ignition is possible.
Extinguishing Media : Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. Do not discharge extinguishing waters into the aquatic environment.
Unsuitable Extinguishing Media : Do not use water in a jet.
Protective Equipment for Firefighters : Wear full protective clothing and self-contained breathing apparatus.
Additional Advice : Keep adjacent containers cool by spraying with water.

6. ACCIDENTAL RELEASE MEASURES

Observe all relevant local and international regulations.

Protective measures : Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see Chapter 8/13 of this MSDS. Shut off leaks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading or

- entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapor or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding all equipment. Monitor area with combustible gas indicator.
- Clean Up Methods** : For small liquid spills (< 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.
- Additional Advice** : See Chapter 13 for information on disposal. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Vapor may form an explosive mixture with air. U.S. regulations may require reporting releases of this material to the environment which exceed the reportable quantity (refer to Chapter 15) to the National Response Center at (800) 424-8802. Under Section 311 of the Clean Water Act (CWA) this material is considered an oil. As such, spills into surface waters must be reported to the National Response Center at (800) 424-8802. This material is covered by EPA's Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Petroleum Exclusion. Therefore, releases to the environment may not be reportable under CERCLA.

7. HANDLING AND STORAGE

- General Precautions** : Avoid breathing of or contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
- Handling** : Avoid contact with skin, eyes, and clothing. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/sec until fill pipe submerged to twice its diameter, then ≤ 7 m/sec). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Extinguish any naked flames. Do Not smoke. Remove ignition sources. Avoid sparks. Handle and open container with care in a well-ventilated area. Ventilate workplace in such a way that the Occupational Exposure Limit (OEL) is not exceeded. Do not empty into drains. Avoid handling above its flashpoint otherwise the product will form flammable/explosive vapor-air mixtures

- Storage** : Must be stored in a diked well-ventilated area, away from sunlight, ignition sources and other sources of heat. Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable products which are not harmful or toxic to man or to the environment. Storage Temperature: Ambient.
- Product Transfer** : Keep containers closed when not in use. Do not use compressed air for filling, discharging or handling.
- Recommended Materials** : For containers, or container linings use mild steel, stainless steel.
- Unsuitable Materials** : Avoid prolonged contact with natural, butyl or nitrile rubbers.
- Container Advice** : Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Material	Source	Type	ppm	mg/m3	Notation
Stoddard Solvent	ACGIH	TWA	100 ppm		
	OSHA Z1	PEL	500 ppm	2,900 mg/m3	
	OSHA Z1A	TWA	100 ppm	525 mg/m3	

- Additional Information** : Wash hands before eating, drinking, smoking and using the toilet.
- Exposure Controls** : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits. Eye washes and showers for emergency use.
- Personal Protective Equipment** : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
- Respiratory Protection** : If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for organic gases and vapors [boiling point <65 °C (149 °F)] Where air-filtering respirators are unsuitable (e.g., airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus.
- Hand Protection** : Longer term protection: Nitrile rubber gloves
Incidental contact/Splash protection: PVC or neoprene rubber gloves
- Eye Protection** : Chemical splash goggles.
- Protective Clothing** : Use protective clothing which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant.
- Monitoring Methods** : Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to

confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Examples of sources of recommended air monitoring methods are given below or contact supplier. Further national methods may be available. National Institute of Occupational Safety and Health (NIOSH), USA: Manual of analytical Methods <http://www.cdc.gov/niosh/nmam/nmammenu.html> Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods <http://www.osha-slc.gov/dts/sltc/methods/toc.html> Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances <http://www.hsl.gov.uk/search.htm>

Environmental Exposure Controls : Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Water white to colorless Liquid.
 Odor : Slight Hydrocarbon.
 Boiling point : 305 - 406 °F
 Flash point : 40 - 41.7 °C / 104 - 107.1 °F (TCC)
 Explosion/Flammability limits in air : 0.8 - 6.0 %(V)
 Auto-ignition temperature : 230 - 316 °C / 446 - 600 °F
 Vapor pressure : 0.37 - 0.39 kPa at 20.0 °C / 68.0 °F
 Specific gravity : 0.765 - 0.82 at 15.6 °C / 60.0 °F
 Water solubility : 0.05 g/l Negligible.
 Vapor density (air=1) : 4.8
 Stability : Stable.
 VOC content : 100.0 %

10. STABILITY AND REACTIVITY

Stability : Stable under normal conditions of use.
Conditions to Avoid : Avoid heat, sparks, open flames and other ignition sources.
Materials to Avoid : Strong oxidizing agents.
Hazardous Decomposition Products : Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment : Information given is based on product testing, and/or similar products, and/or components.
Acute Oral Toxicity : Expected to be of low toxicity: LD50 >2000 mg/kg , Rat
 Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.
Acute Dermal Toxicity : Expected to be of low toxicity: LD50 >2000 mg/kg , Rat
Acute Inhalation Toxicity : Low toxicity: LC50 greater than near-saturated vapor concentration. / 1 hours, Rat
Skin Irritation : May cause moderate irritation to skin.
 Prolonged/repeated contact may cause de-fatting of the skin which can lead to dermatitis.
Eye Irritation : Essentially non-irritating to eyes.

- Repeated Dose Toxicity** : Kidney: caused kidney effects in male rats which are not considered relevant to humans
Cardiovascular system: chronic abuse of similar materials has been associated with irregular heart rhythms and cardiac arrest. Central nervous system: repeated exposure affects the nervous system.
- Carcinogenicity** : Repeated exposure causes skin tumour promotion in experimental animals.

12. ECOLOGICAL INFORMATION

- Acute Toxicity**
- Fish** : Expected to have low toxicity: LC/EC/IC50 > 1000 mg/l
 - Aquatic Invertebrates** : Expected to have low toxicity: LC/EC/IC50 > 1000 mg/l
 - Algae** : Expected to have low toxicity: LC/EC/IC50 > 1000 mg/l
 - Microorganisms** : Expected to have low toxicity: LC/EC/IC50 > 1000 mg/l
- Mobility** : Adsorbs to soil and has low mobility. Floats on water.

13. DISPOSAL CONSIDERATIONS

- Material Disposal** : Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.
- Container Disposal** : Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums.
- Local Legislation** : Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION

Combustible liquid. Not DOT regulated on trucks in containers of < 119 Gallons.
DOT S/N: BULK: Petroleum Distillates, n.o.s., Combustible liquid, UN1268, PG-III
Combustible liquid. Not DOT regulated on trucks in containers of < 119 Gallons.
DRUM LABEL: None (Combustible Liquid)
IATA / ICAO: Petroleum Distillates, n.o.s., 3, UN1268, PG-III
IMO / IMDG: Petroleum Distillates, n.o.s., 3, UN1268, PG-III
EMERGENCY RESPONSE GUIDEBOOK NUMBER: 128

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Federal Regulatory Status

Notification Status	
AICS	Listed.
DSL	Listed.
INV (CN)	Listed.

TSCA Listed.
EINECS Listed. 265-191-7
KECI (KR) Listed. KE-31664
PICCS (PH) Listed.

SARA Hazard Categories (311/312)

Fire Hazard. Delayed (Chronic) Health Hazard.

State Regulatory Status

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

16. OTHER INFORMATION

HMIS Rating (Health, Fire, Reactivity) : 1, 2, 0

NFPA Rating (Health, Fire, Reactivity) : 1, 2, 0

MSDS Regulation : The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Uses and Restrictions : Industrial Solvent.

MSDS Distribution : The information in this document should be made available to all who may handle the product

Disclaimer : The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.

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MATERIAL SAFETY DATA SHEET SAF-SOL 20/20

DATE OF ISSUE: 08/18/1998
SUPERCEDES: 04/03/1998

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms: N/A Trade Name & Synonyms: SAF-SOL 20/20
Chemical Family: CHLORINATED HYDROCARBON BLEND Formula Mixture: X
Manufacturer's Name: CERTIFIED LABS, DIV. OF NCH CORP.
Address: BOX 152170
IRVING, TEXAS 75015
Prepared By: G ZIMMERMAN/CHEMIST
Product Code Number: 0688
Emergency Phone Number: 800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS:

Chemical Name (Ingredients): METHYLENE CHLORIDE
Hazard: CARC. 4
TLV: 50 PPM 1.
PEL: 25 PPM 2.
STEL: N/E
CAS#: 75-09-2

Chemical Name (Ingredients): PERCHLOROETHYLENE
Hazard: CARC. 4
TLV: 50 PPM 1.
PEL: 25 PPM 2.
STEL: N/E
CAS#: 127-18-4

Chemical Name (Ingredients): MEDIUM ALIPHATIC SOLVENT NAPHTHA
Hazard: IRRITANT
TLV: 5MG/M3 \$1.
PEL: 5MG/M3 \$2.
STEL: N/E
CAS#: 64742-88-7

Chemical Name (Ingredients): \$ DENOTES OIL MIST VALUE
Hazard:
TLV:
PEL:
STEL:
CAS#:

SECTION III - PHYSICAL DATA

Boiling Point (f): 154
Specific Gravity (H2O=1): 1.053
Vapor Pressure (MM HG): 116
Color: COLORLESS-LT YELLOW
Vapor Density (Air=1): 3.1
Odor: ETHER-LIKE
PH @ 100%: N/A
Clarity: TRANSPARENT
Volatile by Volume: 100
Evaporation Rate (BU A/C=1): 14
H2O Solubility: NEGLIGIBLE
Viscosity: NON-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point: >200 F / SETAFLASH
Flammable Limits: SOLVENT NAPHTHA LEL: 0.7% UEL:6%

Extinguishing Media:

Foam: X Alcohol Foam: CO2: X
Dry Chemical: X Water Spray: X Other:

Special Fire Fighting Procedures:

FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. COOL FIRE-EXPOSED CONTAINERS WITH WATER SPRAY TO PREVENT BURSTING.

Unusual Fire and Explosion Hazards:

PHOSGENE GAS AND OTHER TOXIC COMPOUNDS CAN BE GENERATED VIA THERMAL DEGRADATION. CONCENTRATED VAPORS CAN IGNITE BY INTENSE IGNITION SOURCE.

Aerosol Level (NFPA 30B): N/A

NFPA 704 Hazard Rating:

(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)

Health: 2 Flammability: 1 Instability: 0 Special:

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:

NOT ESTABLISHED FOR PRODUCT MIXTURE. SEE SECTION II.

Effects of Overexposure:

-Acute (Short Term Exposure)

INHALATION: INHALATION OF MIST MAY CAUSE IRRITATION TO THE RESPIRATORY TRACT. INHALATION OF CONCENTRATIONS OF LOW VAPOR MAY CAUSE DIZZINESS, HEADACHE AND LOSS OF CONCENTRATION. HIGH VAPOR CONCENTRATIONS MAY RESULT IN CENTRAL NERVOUS SYSTEM DEPRESSION (INTOXICATION), UNCOORDINATION, DRUNKENESS, NUMBNESS, TINGLING IN THE ARMS AND LEGS, RAPID HEART BEAT, UNCONCIOUSNESS, AND IN EXTREME CASES DEATH. SKIN

CONTACT: CAUSES IRRITATION SEEN AS ITCHING AND REDNESS. MAY BE SEVERELY IRRITATING IF CONFINED TO THE SKIN FOR A SIGNIFICANT LENGTH OF TIME. ABSORPTION IS POSSIBLE UPON PROLONGED CONTACT. PROLONGED OR REPEATED EXPOSURE MAY CAUSE DERMATITIS. INGESTION: INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL. IF ASPIRATED, MAY BE ABSORBED THROUGH THE LUNGS AND CAUSE INJURY TO OTHER BODY SYSTEMS. ALCOHOL MAY EXACERBATE THE EFFECTS OF OVEREXPOSURE. EYE CONTACT: CAUSES IRRITATION SEEN AS PAIN, TEARING AND REDNESS. LIQUID MAY CAUSE TRANSIENT CORNEAL INJURY.

-Chronic (Long Term Exposure)

MEDICAL CONDITIONS AGGRAVATED: PRE-EXISTING LIVER, KIDNEY AND LUNG DISEASES ANEMIA, CORONARY DISEASE, AND ALCOHOLISM. PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS. TARGET ORGANS: LIVER, KIDNEY, HEART, CENTRAL NERVOUS SYSTEM. LONG-TERM SKIN CONTACT OR INHALATION EXPOSURE TO PERCHLOROETHYLENE OR METHYLENE CHLORIDE HAS CAUSED CANCER IN LABORATORY ANIMALS AND HAS BEEN DETERMINED TO BE A HUMAN CANCER RISK. REPEATED AND PROLONGED EXPOSURE MAY CAUSE ELEVATION OF THE CARBOXYHEMOGLOBIN LEVELS. OVER-EXPOSURE TO VAPORS MAY PRODUCE MYOCARDIAL INSTABILITY. TOXIC HAZARDS ARE INCREASED BY PRESENCE OF ALCOHOL, SMOKING, CARBON MONOXIDE AND HEAVY LABOR. THOSE WORKERS WITH A HISTORY OF CARDIOVASCULAR DISEASE, HEAVY DRINKERS AND HEAVY SMOKERS SHOULD AVOID EXPOSURE.

Primary Routes of Entry: Inhalation: X Ingestion: Absorption: X

Emergency and First Aid Procedures:

-Inhalation:

REMOVE FROM THE AREA TO FRESH AIR. IF NOT BREATHING, CLEAR THE AIRWAY AND START MOUTH TO MOUTH ARTIFICIAL RESPIRATION. GET IMMEDIATE MEDICAL ATTENTION.

-Eye Contact:

RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING WITH PLENTY OF WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Skin Contact:

WASH AFFECTED AREAS WITH LARGE AMOUNTS OF SOAP AND WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS. WASH CLOTHING AND CLEAN SHOES BEFORE REUSE.

-Ingestion:

GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. SEEK MEDICAL ATTENTION IF DISCOMFORT OCCURS.

-Notes to Physician:

INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC: Yes

NTP: Yes

OSHA: No

ACGIH: Ye

PERCHLOROETHYLENE
ORL-RAT LD50:2629 MG/KG 3.
SKN-RBT 810MG/KG 24HR 3.
-----CANCER STUDIES-----
ORL-MUS 500 MG/KG D 3.
ORL-RAT LD50:8100 MG/KG 5.
IHL-HMN TCLO:96 PPM/7H:SYS 5.
IHL-MAN TCLO:280 PPM/2H:EYE 5.
-----TERATOGENESIS-----
IHL-RAT 300 PPM/7H/D 3.
METHYLENE CHLORIDE
ORL-RAT LD50: 1600 MG/KG 3.
IHL-GPG LCLO: 500 PPM 2 HR 3.
SKN-RBT 810 MG/24H SEV 3.
EYE-RBT 162 MG/MOD 3.
-----CANCER STUDIES-----
IHL-RAT 500 MG/KG LIFETIME 3.
A PROPORTIONATE MORTALITY STUDY SHOWED NO INCREASE IN DEATH FROM
MALIGNANT
NEOPLASMS AMONG WORKERS EXPOSED FOR UP TO 30 YEARS TO MEAN
CONCENTRATIONS
OF 33 PPM - 118.8 PPM WHEN COMPARED TO CONTROL POPULATIONS 5.
INHALATION STUDIES AT CONCENTRATIONS OF 2000 PPM AND 4000 PPM INCREASED
THE
INCIDENCE OF BENIGN LIVER AND LUNG TUMORS IN MICE. THREE INHALATION
STUDIES
OF RATS HAVE SHOWN INCREASED INCIDENCE AT 500 PPM AND ABOVE, AND THE
SAME
IN MALES AT CONCENTRATIONS OF 1500 PPM AND ABOVE 6.

SECTION VII - REACTIVITY DATA

Stability: Stable: E Unstable:

Conditions to Avoid: AVOID HEAT, HOT SURFACES, SPARKS AND OPEN FLAMES.
Incompatibility (Materials to Avoid):

OXIDIZING AGENTS, ACIDS AND BASES, SODIUM, POTASSIUM, LITHIUM,
BARIUM, SODIUM, POTASSIUM AND REDUCING AGENTS.

Hazardous Decomposition Products:

OXIDES OF CARBON AND NITROGEN; HYDROGEN CHLORIDE, PHOSGENE GAS,
AND CHLORINE GAS.

Hazardous Polymerization:

May Occur: Will Not Occur: X

Conditions to Avoid: N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:

ELIMINATE ALL SOURCES OF IGNITION. DIKE AND CONTAIN SPILL IF SAFE TO DO
SO. USE ONLY NON-SPARKING EQUIPMENT. ABSORB WITH AN INERT MATERIAL AND

TRANSFER INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. WEAR APPROPRIATE PROTECTIVE CLOTHING.

Waste Disposal Method(s):

DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

Neutralizing Agent:

NONE KNOWN.

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:

LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE MISTS OR VAPORS.

Respiratory Protection:

A NIOSH/MSHA APPROVED RESPIRATOR IN POORLY VENTILATED AREAS WHERE THE TLV OR PEL IS EXCEEDED OR IF THE OPERATION PRODUCES MISTS.

Glove Protection:

NEOPRENE RUBBER OR VITON GLOVES SHOULD BE WORN.

Eye Protection:

CHEMICAL GOGGLES AND A FACE SHIELD SHOULD BE WORN.

Other Protection:

WEAR PROTECTIVE CLOTHING WHEN HANDLING.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors: X Outdoors:
 Heated: Refrigerated:

Minimum Temperature: 35 F Maximum Temperature: 120 F

Precautions to be taken in Handling and Storing:

ALWAYS STORE MATERIAL IN ITS ORIGINAL CONTAINER. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. DO NOT PRESSURIZE, CUT, WELD, SOLDER, DRILL, GRIND OR EXPOSE EMPTY CONTAINERS TO HEAT, HOT SURFACES, SPARKS OR OPEN FLAMES.

Other Precautions:

KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit	
METHYLENE CHLORIDE	75-09-2		20
PERCHLOROETHYLENE	127-18-4		35

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III and of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 1997. 2. OSHA PEL.
3. SAX'S DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, EIGHTH EDITION, RICHARD J. LEWIS, SR. 4. IARC.
5. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, MICROMEDEX, 1995.
6. PROCTOR ET.AL. 1988.

IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE
CARC:CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED,
COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE
CLOSED
CUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT,
NFPA:NATIONAL
FIRE PROTECTION ASSOCIATION, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH
ON
CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY &
HEALTH
ADMINISTRATION, ACHGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL
HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LEVEL,
STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE,
MUT:MUTAGENIC, ASPHYX:ASPHYXIAN

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE
IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED
OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE
OBTAINED FROM THE USE THEREOF.

CERTIFIED LABS, DIV. OF NCH CORP. assumes no responsibility for
personal injury or property damage caused by the use, storage, or
disposal of the product in a manner not recommended on the product
label. Users assume all risks associated with such unrecommended
use, storage or disposal of the product.

% Text: <5.0

Environmental Wt:

Other REC Limits: N/K

OSHA PEL: 5000 PPM

Code: M

OSHA

Code:

STEL:

ACGIH TLV: 5000PPM/30000STEL

Code: M

ACGIH N/P

Code:

STEL:

EPA Rpt Qty:

DOT Rpt

Qty:

Ozone Depleting Chemical: N

Health Hazards Data

TOP

LD50 LC50 Mixture NONE SPECIFIED BY MANUFACTURER.

Route Of Entry Inds - Inhalation: YES

Skin: YES

Ingestion: YES

Carcinogenicity Inds - NTP: NO

IARC: NO

OSHA: NO

Health Hazards Acute And Chronic

EYES: IRRITATION, TEARING, AND REDNESS, BLURRED VISION. INGESTION: GI IRRITATION, NAUSEA, VOMITING, DIARRHEA. INHALATION: RESPIRATORY TRACT IRRITATION, DIZZINESS, WEAKNESS, HEADACHE, NAUSEA, NARCOSIS, EUPHORIA. CHLOROCARBON MATLS HAVE PRDCEDED SENSIT OF MYOCARDIUM TO EPINEPHRINE IN LAB ANIMALS & COULD HAVE (EFTS OF OVEREXP)

Explanation Of Carcinogenicity

NOT RELEVANT

Signs And Symptoms Of Overexposure

HLTH HAZS: SIMILAR EFT IN HUMANS. ADRENOMIMETICS (E.G., EPINEPHRINE) MAY BE CONTRAINDICATED EXCEPT FOR LIFE-SUSTAINING USES IN HUMANS ACUTELY/CHRONICALLY EXPOSED TO CHLOROCARBONS (FP N).

Medical Cond Aggravated By Exposure

NONE SPECIFIED BY MANUFACTURER.

First Aid

EYES: FLUSH EYES & UNDER LIDS W/PLENTRY OF COOL WATER FOR @ LST 15 MIN. OBTAIN MED ATTN. INGEST: GIVE SEVERAL GLASSES OF WATER & INDUCE VOMIT. OBTAIN MED ATTN. NEVER GIVE ANYTHING BY MOUTH TO AN UNCON PERSON. INHAL: REMOVE TO FRESH AIR. PERFORM ARTF RESP IF INDICATED. OBTAIN MED ASSISTANCE. DO NOT GIVE STIMULANTS. SKIN: REMOVE CONTAM CLTHG & LAUNDER BEFORE RE-USE. WASH W/SOAP & WATER. NOTE TO (SUPDAT)

Spill Release Procedures

VENTILATE AREA. SOAK UP ON INERT ABSORBENT AND PLACE IN CLOSED CONTAINER FOR DISPOSAL.

Neutralizing Agent

NONE SPECIFIED BY MANUFACTURER.

Waste Disposal Methods

DISPOSAL MUST BE I/A/W FEDERAL, STATE & LOCAL REGULATIONS (FP N). CONSULT LOCAL ENVIRONMENTAL AUTHORITIES. DISPOSE OF EMPTY CANS IN NON-INCINERATED TRASH ONLY.

Handling And Storage Precautions

STORE IN A COOL, DRY PLACE. KEEP CONTAINERS TIGHTLY CLOSED WHEN NOT IN USE. KEEP AWAY FROM HEAT, OPEN FLAME AND DIRECT SUNLIGHT.

Other Precautions

KEEP OUT OF REACH OF CHILDREN. DO NOT PUNCTURE OR INCINERATE CANS. NO SMOKING IN AREA OF USE. DO NOT USE IN THE GENERAL VICINITY OF ARC WELDING, OPEN FLAMES OR HOT SURFACES. HEAT AND/OR UV RADIA MAY CAUSE FORM OF HCL &/OR PHOSGENE (FP N).

Fire and Explosion Hazard Information

[TOP](#)**Flash Point Method:** CC**Flash Point:****Flash Point Text:** NONE**Autoignition Temp:****Autoignition Temp Text:** N/A**Lower Limits:** N/A**Upper Limits:** N/A**Extinguishing Media**

FOAM, CARBON DIOXIDE, DRY CHEMICAL.

Fire Fighting Procedures

WEAR NIOSH/MSHA APPROVED PRESSURE DEMAND SCBA & FULL PROTECTIVE EQUIPMENT (FP N). USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS.

Unusual Fire/Explosion Hazard

EXPOS TO TEMPS IN EXCESS OF 120F OR PROLONGED EXPOSURE TO DIRECT SUNLIGHT MAY CAUSE CANS TO BURST. THERMAL DECOMP PRODS MAY INCLUDE HCL & PHOSGENE (FP N).

Control Measures

[TOP](#)**Respiratory Protection**

USE WITH ADEQUATE VENTILATION. USE OF A NIOSH/MSHA APPROVED ORGANIC VAPOR RESPIRATOR IS REQUIRED IF TLV IS TO BE EXCEEDED.

Ventilation

LOCAL EXHAUST/MECHANICAL:RECOMMENDED.

Protective Gloves

NEOPRENE GLOVES.

Eye Protection

ANSI APPROVED CHEM WORKERS GOGGS(SUPDAT)

Other Protective Equipment

EMERG EYE WASH AND DELUGE SHOWER WHICH MEET ANSI DESIGN CRITERIA (FP N).

Work Hygienic Practices

WASH THOROUGHLY AFTER HANDLING.

Supplemental Safety and Health

FIRST AID PROC:MD:DO NOT ADMINISTER STIMULANTS AFTER OVER-EXPOSURE. EYE PROT:AND FULL LENGTH FACE SHIELD (FP N).

Physical/Chemical Properties

[TOP](#)**HCC:****NRC/State LIC No:****Net Prop WT For Ammo:****Boiling Point:****B.P. Text:** 189F,87C**Melt/Freeze Pt:****M.P/F.P Text:** N/K**Decomp Temp:****Decomp Text:** N/K**Vapor Pres:** N/K**Vapor Density:** 4.5**Volatile Org Content %:****Spec Gravity:** 1.40**VOC Pounds/Gallon:****PH:** N/A

VOC Grams/Liter:

Viscosity: N/P

Evaporation Rate & N/K

Reference:

Solubility in Water: INSOLUBLE

Appearance and Odor: CLEAR, WATER WHITE LIQUID, CHLORINATED
SOLVENT ODOR.

Percent Volatiles by Volume: 100

Corrosion Rate: N/K

Reactivity Data

TOP

Stability Indicator: YES

Stability Condition To Avoid: HIGH TEMPERATURES.

Materials To Avoid: OXIDIZING AGENTS.

Hazardous Decomposition THERMAL DECOMPOSITION MAY YIELD
Products: OXIDES OF CARBON, HCL, CHLORINE AND
PHOSGENE (FP N).

Hazardous Polymerization NO

Indicator:

Conditions To Avoid NOT RELEVANT

Polymerization:

Toxicological Information

TOP

Toxicological Information: N/P

Ecological Information

TOP

Ecological: N/P

MSDS Transport Information

TOP

Transport Information: N/P

Regulatory Information

TOP

Sara Title III Information: N/P

Federal Regulatory Information: N/P

State Regulatory Information: N/P

Other Information

TOP

Other Information: N/P

Material Safety Data Sheet

Revision Date 29-Dec-2010

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product code DA6152
Product name Open & Shut
Recommended Use Solvent

Supplier Drummond, A Lawson Brand
Lawson Products, Inc.
1666 East Touhy Avenue
Des Plaines, IL 60018
1-866-529-7664

Emergency telephone number (888) 426-4851

2. HAZARDS IDENTIFICATION

Emergency Overview
Contents under pressure. Irritant.

Aggravated Medical Conditions
None Known.

Principal Routes of Exposure
Inhalation. Eyes. Skin contact.

Potential health effects

Eyes May cause the following effects: Irritation. Redness. Itching. Burning sensation.

Skin Repeated or prolonged exposure may cause: Skin Irritation. Redness. Itching. Burning sensation.

Inhalation Repeated or prolonged exposure may cause the following effects. Upper respiratory tract irritation. Headaches. Nausea. Dizziness.

Ingestion May be harmful if swallowed.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Petroleum distillates, hydrotreated heavy naphthenic	64742-52-5	10-30
Tetrachloroethylene	127-18-4	60-100
Carbon Dioxide	124-38-9	1-5

4. FIRST AID MEASURES

Eye contact Flush with plenty of water for at least 15 minutes. Seek medical attention.

Skin contact Wash area thoroughly with soap and water. Remove and wash contaminated clothing before re-use.

Ingestion Do not induce vomiting. Immediate medical attention is required.

Inhalation Remove from exposure. Restore breathing. Keep warm and quiet. Contact physician if breathing difficulty develops.

5. FIRE FIGHTING MEASURES

Flash point °C > 93
Flash point °F > 200
Method Pensky-Martens C.C.

Autoignition temperature °C No data available
Autoignition temperature °F No data available

Flammability Limits (% in Air)
Upper No data available
Lower No data available

Specific Information for Aerosol Products

Suitable extinguishing media
Carbon dioxide (CO2). Dry chemical. Foam.

Special protective equipment for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Fire and Explosion Hazards
Keep product and empty container away from heat and sources of ignition. Containers exposed to extreme heat may burst. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention. Water should be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. Water spray may be ineffective. If water is used, fog nozzles are preferable.

Sensitivity to shock
No information available.

Sensitivity to static discharge
No information available.

6. ACCIDENTAL RELEASE MEASURES

Methods for cleaning up
Eliminate all sources of ignition. Ventilate area to maintain exposure below permissible exposure limits. Soak up with inert absorbent material.

7. HANDLING AND STORAGE

7. HANDLING AND STORAGE**Handling**

Contents under pressure. Do not puncture or incinerate. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep in a well-ventilated place. Keep out of reach of children.

Storage

Store in temperatures below 120 degrees F.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	OSHA PEL (TWA)	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Tetrachloroethylene	100 ppm	200 ppm	25 ppm	100 ppm
Petroleum distillates, hydrotreated heavy naphthenic	-	-	-	-
Carbon Dioxide	5000 ppm 9000 mg/m ³	-	5000 ppm	30000 ppm

Ventilation and Environmental Controls

Use enough ventilation, local exhaust at the work area, general, or both, to keep below the TLV's in the worker's breathing zone and the general area. General: as necessary.

Hygiene measures

Wash hands before breaks and immediately after handling the product.

Other precautions

Avoid contact with the skin and the eyes. Avoid breathing vapors or mists.

Respiratory protection

If the exposure limits are exceeded, a NIOSH/MSHA approved respirator is recommended. Wear a NIOSH approved organic vapor/particulate respirator.

Hand Protection

Gloves are not required in normal use. The following gloves are recommended for prolonged or repeated contact: . Chemical resistant gloves.

Eye protection

Wear safety glasses with side shields.

Skin and body protection

None necessary under normal conditions

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Aerosol
Color	Colorless
Odor	Slight
Odor Threshold	No information available
pH	Not Applicable
Specific Gravity	1.38
Vapor pressure	No data available
Density	11.43 lb/gal, 1369 g/l
Vapor density	>1 (air=1)

Evaporation Rate	>1 (ether = 1)
Water solubility	No data available
VOC Content	0.003%
Partition Coefficient (n-octanol/water)	No data available
Boiling point/range °C	-18 - 122
Boiling point/range °F	0 - 252
Melting point/range °C	Not Applicable
Melting point/range °F	Not Applicable
Flash point °C	> 93
Flash point °F	> 200

10. STABILITY AND REACTIVITY**Stability**

Stable.

Conditions to avoid

None known.

Incompatibility

None known.

Hazardous Decomposition Products

Carbon dioxide. Carbon monoxide. Hydrogen chloride.

Polymerization

Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION**Component Information**

Chemical Name	LD50 (oral,rat)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat)
<i>Tetrachloroethylene</i> 127-18-4	2629 mg/kg	-	4000 ppm
<i>Petroleum distillates, hydrotreated heavy naphthenic</i> 64742-52-5	5000 mg/kg	2000 mg/kg	2.18 mg/L
<i>Carbon Dioxide</i> 124-38-9	-	-	-

Synergistic Products

None known

Potential health effects**Sensitization**

None known .

Chronic toxicity

See Section 2 .

Mutagenic effects

None known .

Teratogenic effects

None known .

Reproductive toxicity

None known .

Target Organ Effects None Known.

Carcinogenic effects NTP and IARC have determined that exposure to tetrachloroethylene (perchloroethylene) is reasonably anticipated to be carcinogenic to humans (IARC Group 2A). Risk of cancer depends on duration and level of exposure. .

Chemical Name	ACGIH OEL - Carcinogens	IARC	NTP - Known Carcinogens	NTP - Suspected Human Carcinogens	OSHA RTK Carcinogens
Tetrachloroethylene	Listed	Group 2A	Not Listed	Listed	Listed
Petroleum distillates, hydrotreated heavy naphthenic	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Carbon Dioxide	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

12. ECOLOGICAL INFORMATION

Tetrachloroethylene

Microtox Data

Tetrahymena pyriformis EC50=100 mg/L (24 h)

Nitrosomonas EC50=112 mg/L (24 h)

Photobacterium phosphoreum EC50=120.0 mg/L (30 min)

Water Flea Data

Daphnia magna hEC50 48 (7.49 mg/L)

Petroleum distillates, hydrotreated heavy naphthenic

Water Flea Data

Daphnia magna hEC50 48 (>1000 mg/L)

13. DISPOSAL CONSIDERATIONS

Disposal Information

This product contains tetrachloroethylene, a highly volatile solvent which is a toxic waste as defined by RCRA ,40 CFR 261 (United States) . In normal use this chemical will quickly evaporate.However, grease or other residue removed by this product may contain sufficient tetrachloroethylene to be classified as a toxic waste. Do not puncture or incinerate. Depressurize before disposal. Dispose in accordance with federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

DOT

Consumer commodity, ORM-D

TDG

Consumer commodity, ORM-D

15. REGULATORY INFORMATION

US EPA SARA 313

Chemical Name	US EPA SARA 313 Emission Reporting
Tetrachloroethylene	Listed

State Regulations

Chemical Name	New Jersey - RTK	Pennsylvania - RTK	California Prop. 65
Tetrachloroethylene	Listed	Listed	Carcinogen
Petroleum distillates, hydrotreated heavy naphthenic	Not Listed	Not Listed	Not Listed
Carbon Dioxide	Listed	Listed	Not Listed

WARNING: This product contains a chemical(s) known to the state of California to cause cancer

International Inventories

Chemical Name	EINECS	DSL	NDSL	TSCA
Tetrachloroethylene	X	X	-	X
Petroleum distillates, hydrotreated heavy naphthenic	X	X	-	X
Carbon Dioxide	X	X	-	X

CPR

This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all of the information required by the Controlled Product Regulations

16. OTHER INFORMATION

HMIS

Health - 2 *

Flammability - 2

Physical Hazard - 0

Prepared By

V. Shargorodsky, Regulatory Affairs Engineer

The information accumulated herein is believed to be accurate, but is not warranted to be, whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

10.003-36

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Coating Electrical
 Product No: FSN#597000962335

Manufacturer: STAR BRITE
 4041 S. W. 47 AVENUE
 FT. LAUDERDALE, FL 33314

Information Phone: 954-587-6280 Emergency Phone: 800-424-9300 or 703-527-3887
 Prepared by: Jeff Tieger Prepared: June 13, 2003

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

EM NO.	CHEMICAL NAME	CAS NUMBER	WT. PERCENT RANGE
1	ERL 4221	2386-87-0	5%
2	K-FLEX	120-55-8	7%
3	VINYL CHLORIDE/VINYL ACETATE CO-POLYMER	9003-22-9	23%
4	XYLENE	1330-20-7	14%
5	ACETONE	67-64-1	5%
6	METHYL ETHYL KETONE	78-93-3	40%

----- EXPOSURE LIMITS -----

EM NO.	ACGIH			OSHA PEL-CEILING	COMPANY TLV-TWA	SKIN
	TLV-TWA	TLV-STEL	PEL-TWA			
	N.A.	N.A.	N.A.	N.A.		NO
	N.E.	N.E.	N.E.	N.E.		YES
	750PPM	1000PPM	N.E.	N.E.		NO
	100 PPM	150 PPM	N.A.	N.A.		NO
	N.A.	N.A.	N.A.	N.A.		NO
	200 PPM	300 PPM	200 PPM	N.A.		YES

See Section 16 for abbreviation Legend)

SECTION 3 - HAZARDS IDENTIFICATION

Emergency overview***: In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention. For skin, wash thoroughly with soap and water. If affected by inhalation of vapors or spray mist, remove to fresh air. If allowed, get medical attention immediately. If swallowed, do not induce vomiting. Keep person warm, quiet and get medical attention. Aspiration of this material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal.

Effects of overexposure - eye contact: Irritation. Symptoms are tearing, redness and discomfort. Causes eye, skin, nose and throat irritation. Causes severe irritation, experienced as discomfort or pain, excess blinking and tear production, with marked conjunctival redness and swelling of the conjunctive. Severely irritating. If not removed promptly, will injure eye tissue which may result in permanent damage.

Effects of overexposure - skin contact: Irritation. Can cause defatting of skin which may lead to dermatitis. Toxic by absorption through skin with same effects as shown by inhalation. Prolonged exposure may cause a skin sensitization reaction in susceptible individuals. Brief contact may cause slight irritation with itching and local redness.

Effects of overexposure - inhalation: Irritation to nose and throat. Extended or repeated exposure to concentrations above the recommended exposure limits may cause brain or nervous system depression, with symptoms such as dizziness, headache. If continued indefinitely, loss of consciousness, liver and kidney damage.

Reports have associated repeated or prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Excessive inhalation of vapors can cause respiratory irritation, dizziness, headache, nausea and asphyxiation. Use with caution.371. Due to its low vapor pressure, the inhalation exposure hazard potential is regarded to be low. However if the product is heated, misted or sprayed, concentrations above the recommended levels may be reached and mucous membranes and upper respiratory irritations may result.

Product Name: Coating Electrical
Product No: FSN#597000962335

SECTION 3 - HAZARDS IDENTIFICATION cont'd

Effects of overexposure - Ingestion: May cause mouth, throat, esophagus and stomach irritation, nausea, vomiting and diarrhea. Ingested do not induce vomiting, keep person warm, quiet, and get medical attention. Aspiration of material into lungs can cause chemical pneumonitis which can be fatal. Moderately toxic. May cause abdominal discomfort, nausea, vomiting and diarrhea.

Effects of overexposure - Chronic hazards: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. If swallowed, do not induce vomiting. Keep person warm, quiet and get medical attention. Aspiration of this material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal.

Primary route(s) of entry: Skin contact, inhalation, ingestion, eye contact.

SECTION 4 - FIRST AID MEASURES

First aid - Eye contact: In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention immediately. Rinse with water for 15 minutes.

First aid - Skin contact: Wash with soap and water immediately. Wash affected area with soap and water. Remove contaminated clothing. Consult a physician if irritation persists. Immediately remove contaminated clothing including shoes. Launder clothing before reuse: do not re-use leather or absorbant shoes. Wash skin with mild soap and water; apply a good quality skin cream. If irritation persists, consult a physician.

First aid - Inhalation: If affected by inhalation of vapors or spray mist, remove to fresh air. Remove victim to fresh air immediately. Coughing, difficult breathing or any other respiratory symptoms develop, seek medical attention at once. Remove to fresh air if difficulty in breathing.

First aid - Ingestion: If swallowed, get medical attention immediately!! If ingested do not induce vomiting. Keep person warm and get medical attention. Aspiration of material into lungs can cause chemical pneumonitis which can be fatal. Seek medical attention.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point: 60° F
(Stafash Closed Cup)

Lower Explosive Limit: 0.3%
Upper Explosive Limit: 11.5%

Autoignition Temperature:

Extinguishing Media: Alcohol Foam CO₂ Dry Chemical Foam Water Fog

Usual fire and explosion hazards: Vapors may cause flash fire. Keep container tightly closed and isolate from heat, electrical equipment, sparks and flame. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Keep containers tightly closed. Isolate from heat, electrical equipment sparks and open flame. Sealed containers may explode when exposed to extreme heat. Vapors are heavier than air and may travel along the ground, collect in low areas or may ignite at distant location. Do not weld on or near container, even when empty. Decomposition by burning in open flame may yield toxic hydrogen chloride gas and combustion by-products. Water and foam may cause frothing.

Special fire fighting procedures: water spray may be used to reduce rate of burning and for cooling containers. Fire fighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus. During emergency conditions, decomposition products can cause health hazard. Use self-contained breathing apparatus with full face shield operated in pressure demand or other positive; pressure mode. Burning will produce toxic fumes. Wear self-contained breathing apparatus and full turn-out gear to fight fire. Do not direct a solid stream of water or foam into hot, burning pools. This may cause charring and increase fire intensity. Use self-contained breathing apparatus and protective clothing.

Product Name: Coating Electrical
Product No: FSN#597000962335

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is released or spilled: remove all sources of ignition (flames, hot surfaces, and electrical, static, and electrical sparks). Avoid breathing vapors. Ventilate area. Contain and remove with inert absorbent and non-sparking tools. Eliminate all sources of ignition. Ventilate area. Absorb spill with an absorbent material such as sawdust, vermiculite or sand and place material into a closed container. If large spill, dike area to prevent this material from entering water systems or sewers. Wear protective equipment during cleanup. Eliminate all sources of ignition. Contain spill and absorb with absorbent material such as sand. Shovel into drums or other suitable containers using non-sparking tools. Notify appropriate authorities if spill enters environment. Collect for disposal. Avoid runoff to sewers or waterways. Wear suitable protective equipment. Vacuum with a HEPA filter or use wet clean up technique to avoid dusting. Keep recovered material enclosed.

SECTION 7 - HANDLING AND STORAGE

Handling: Avoid prolonged or repeated inhalation of heated vapors or spray mists. Keep away from heat or open flame. Avoid prolonged or repeated skin contact. Warning! Causes eye damage. May cause allergic skin reaction. Do not get in eyes, on skin or on clothing. Harmful if swallowed or inhaled. Avoid breathing dust. Use with adequate ventilation. Warning !!! Harmful if absorbed through the skin. Do not swallow. Causes eye and skin irritation. Keep containers tightly closed. No smoking or eating in the handling areas. Wash thoroughly after handling.

Storage: Keep away from excessive heat, sparks and open flame. Keep closures tight when not in use. Keep containers upright to prevent leakage. Store in cool, dry place. Protect from heat and flame. Store drum out of intense sunlight and away from heat.

Section 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: Efficient local exhaust ventilation is required.

Respiratory protection: Do not breathe vapors. Wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during use of this product until vapors are exhausted. Unless air monitoring demonstrates vapor levels are below applicable limits. Follow respirator manufacturer's directions for respirator use. Observe standard 29 CFR 1910.134. A canister type respirator must be worn to prevent the inhalation of vapors or spray mists when the TLV or PEL is exceeded. Approved NIOSH/MSHA (nuisance dust) is necessary under certain conditions where airborne contaminants may exceed exposure limits. Use supplied air respiratory protection in confined or enclosed spaces if needed.

Hand protection: Chemical resistant nitrile, neoprene or rubber gloves required. Rubber or plastic gloves.

Eye protection: Chemical goggles or face shield recommended. Safety glasses with side shields.

Other protective equipment: Wear protective clothing to prevent skin contact. Eye wash station and safety shower should be readily available. Readily available eye wash fountain, safety shower. Remove and separately launder contaminated clothing before use.

Hygienic practices: Wash hands before eating or smoking. Smoke in designated areas only.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Boiling Range:	131 - 449° F	Vapor Density:	Is heavier than air
Color:	Petroleum	Odor Threshold:	
Appearance:	Liquid Paint	Evaporation Rate:	Is faster than ether
Solubility In H2O:	Negligible	Specific Gravity:	.935
Freeze Point:		Ph @ 0.0%:	
Vapor Pressure:		Viscosity :	1200-1600 CPS
Physical State:	Liquid		
Distribution of Water/Oil			

(See Section 16 for abbreviation legend)

Name: Coating Electrical
Product No: FSN#597000962335

SECTION 10 - STABILITY AND REACTIVITY

Conditions to avoid: Very high temperature and open flames.

Compatibility: materials to avoid: amines, acids, and strong bases, strong alkalis. High temperatures in the presence of strong oxidizers. Acids. Strong oxidizing agents.

Hazardous decomposition products: burning can produce the following combustion products: Carbon monoxide and/or carbon dioxide. Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant. Hydrogen chloride, Carbon monoxide, carbon dioxide and acetic acid. Carbon dioxide, carbon monoxide, various hydrocarbons.

Hazardous polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

No product or component toxicological information is available.

SECTION 12 - ECOLOGICAL INFORMATION

Ecological information: No information

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal method: Obey relevant local, state and federal laws. Product is highly toxic to fish. Do not contaminate any lakes, streams, ponds, underground water supply. Do not discharge effluent containing this product to sewer system without prior notice. Dispose with an inert solvent and incinerate in a furnace where permitted under appropriate federal, state and local regulations. Preferred disposal methods would be by supervised incineration at an approved chemical disposal area under federal, state and local authority. Dispose of in accordance with local, state and federal regulations. Do not incinerate closed containers. Incinerate at approved facility.

SECTION 14 - TRANSPORTATION INFORMATION

DOT: Not regulated

ICAO & IATA:

Proper Shipping Name: Paint

Hazard Class: 3.2

UN Number: 1263 Packing Group: II Resp. Guide page: 26

SECTION 15 - REGULATORY INFORMATION

This product contains the following non-hazardous components:

CHEMICAL NAME	CAS NUMBER	WT/WT %
Styrene-acrylate copolymer	68240-06-2	0.7%

3. FEDERAL REGULATIONS: AS FOLLOWS -

3.1A: Hazardous by definition of hazard communication standard (29 CFR 1910.1200)

3.1A - Sara Hazard Category:

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (Sara Title III) and is considered, under applicable definitions, to meet the following categories:

Product Name: Coating Electrical
Product No: FSN#597000962335

SECTION 15 - REGULATORY INFORMATION cont'd

Section 313:

This product contains the following substances subject to the reporting requirements of section 313 of title iii of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER
RL 4221	2386-87-0
FLEX	120-55-8
NYL CHLORIDE/VINYL ACETATE CO-POLYMER	9003-22-9
YLENE	1330-20-7
ETONE	67-64-1
ETHYL ETHYL KETONE	78-93-3
OLITE AC -4	68240-06-2
3I-TALC	14807-96-6
OLORANT	

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

CHEMICAL NAME	CAS NUMBER
RL 4221	2386-87-0
FLEX	120-55-8
NYL CHLORIDE/VINYL ACETATE CO-POLYMER	9003-22-9
YLENE	1330-20-7
ETONE	67-64-1
BUTANONE	78-93-3
YRENE-ACRYLATE COPOLYMER	68240-06-2

Additional regulations: As follows -

Canadian WHMIS: This MSDS has been prepared in compliance with controlled product regulations except for use of the 16 headings.

Canadian WHMIS Class: Class B, Division 2

SECTION 16 - OTHER INFORMATION

HLS Ratings - Health: 2 Flammability: 3 Reactivity: 0

Previous MSDS Revision date: 04/28/03

Volatile Organic Compounds: (VOCs): 5.43 LBS./GAL. 651 GRAMS/LTR

SEND: N.A. - Not Available N.E. - Not Established
N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all federal, state and local laws and regulations.

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MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND MANUFACTURER'S INFORMATION	
NFPA Rating: Health-2; Flammability-0; Reactivity-0; Special-	HMIS Rating: Health-2; Flammability-0; Reactivity-0; Personal Protection-B
Manufacturer's Name: AMREP INC. Address: 990 Industrial Park Drive Marietta, Ga 30062	DOT Hazard Classification: ORM-D Identity (trade name as used on label): NEXT DIMENSION BRAKE AND PARTS CLEANER
Date Prepared: 07/1/05 Prepared By: LF/DL/IB	MSDS Number: A00733 Revision- 14
Information Calls: (770)422-2071 EMERGENCY RESPONSE NUMBER: 1(800)255-3924	NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION					
COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
PERCHLOROETHYLENE	127-18-4	Yes	25	25	a,b
ACETONE	67-64-1	No	1000	750	d
CARBON DIOXIDE	124-38-9	No	5000	5000	d
WARNING: This product contains a chemical or chemicals known to the State of California to cause cancer.					

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS	
Boiling Point: N/A	Specific Gravity (H2O=1): Concentrate Only = 1.60
Vapor Pressure: PSIG @ 70°F (Aerosols): 85-100	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): N/E	Evaporation Rate (n-butyl acetate= 1): 2.1 (concentrate only)
Solubility in Water: Insoluble	Water Reactive: No
Appearance and Odor: Clear, colorless spray with chlorinated solvent odor.	

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA			
FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) NON-FLAMMABLE	Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E	
FLASH POINT AND METHOD USED (non-aerosols): N/A	EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide.		
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.			
Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.			

SECTION 4 - REACTIVITY HAZARD DATA	
STABILITY [X] STABLE [] UNSTABLE	HAZARDOUS POLYMERIZATION [] WILL [X] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Reactive metals, aluminum, magnesium, strong oxidizing agents.	Conditions to Avoid: Open flame, welding arcs, heat.
Hazardous Decomposition Products: CO2, CO, HCl, small amounts of phosgene and chlorine.	

SECTION 5 - HEALTH HAZARD DATA	
PRIMARY ROUTES OF ENTRY: [X] INHALATION [] INGESTION [X] SKIN ABSORPTION [] EYE [] NOT HAZARDOUS	
ACUTE EFFECTS:	
Inhalation: Excessive inhalation of vapors can be harmful and may cause headache, dizziness, asphyxia, anesthetic effects and possible unconsciousness.	Skin Contact: Irritation due to defatting of skin.
Eye Contact: Irritation	
Ingestion: Possible chemical pneumonitis if aspirated into lungs. Nausea.	
CHRONIC EFFECTS:(Effects due to excessive exposure to the raw materials of this mixture) May cause liver abnormalities, kidney, spleen, lung or brain damage, cardiac abnormalities. Perchloroethylene has been shown to increase the rate of spontaneously occurring malignant tumors in certain laboratory rats and mice.	
Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.	

EMERGENCY FIRST AID PROCEDURES	
Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.	
Skin Contact: Wash with soap and water. If irritated, seek medical attention.	
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.	
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.	

SECTION 6 - CONTROL AND PROTECTIVE MEASURES	
Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by U.S. Bureau of Mines for organic vapor.	
Protective Gloves: Neoprene gloves recommended.	Eye Protection: Safety glasses recommended.
Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.	
Other Protective Clothing & Equipment: None	
Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.	

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE	
Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or Federal regulations. Allow to evaporate if small spill. DO NOT FLUSH TO SEWER.	
Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.	
Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.	
Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination. Avoid inhalation of vapors.	

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.
 ** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only
THIS MSDS IS CURRENT AS OF February 18, 2009. The DATE PREPARED section is the original date assembled and remains current until a change is necessary. This is tracked internally at AMREP by these date codes and therefore must remain as the originating date.

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Material Safety Data Sheet



Revision Number: 002.3

Issue date: 01/19/2010

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE® C5-A® Copper Based Anti-Seize Lubricant IDH number: 233317
 Product type: Lubricant Item number: 39643 Region: United States
 Company address: Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067
 Contact information: Telephone: 860.571.5100 Emergency telephone: 860.571.5100 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW			
Physical state:	Paste	HEALTH:	*1
Color:	copper	FLAMMABILITY:	1
Odor:	Mild	PHYSICAL HAZARD:	0
		Personal Protection:	See MSDS Section 8
CAUTION: MAY CAUSE EYE AND SKIN IRRITATION.			

Relevant routes of exposure: Skin, Eyes

Potential Health Effects

Inhalation: This product has low volatility and is not expected to cause respiratory tract irritation during normal conditions of use. Inhalation of copper fumes may result in metal fume fever. Symptoms include metallic taste, discoloration of skin or hair.
Skin contact: Prolonged or repeated contact may cause irritation.
Eye contact: Contact with eyes will cause irritation.
Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Principal hazard of ingestion is aspiration into the lungs and subsequent pneumonitis.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	30 - 60
Calcium dihydroxide	1305-62-0	10 - 30
Mineral oil light naphthenic hydrotreat. <3% DMSO	64742-53-6	10 - 30
Copper	7440-50-8	10 - 30
Graphite	7782-42-5	5 - 10
Quartz (SiO2)	14808-60-7	0.1 - 1

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If symptoms persist, seek medical advice.

Skin contact:	Wash with soap and water. If symptoms develop and persist, get medical attention.
Eye contact:	Get medical attention. Immediately flush eyes with plenty of water for at least 15 minutes.
Ingestion:	Aspiration may cause pulmonary edema and pneumonitis. Do not induce vomiting. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash point:	> 93 °C (> 199.4 °F)
Autoignition temperature:	Not determined
Flammable/Explosive limits - lower:	Not determined
Flammable/Explosive limits - upper:	Not determined
Extinguishing media:	Carbon dioxide. Dry chemical. Foam. Water spray or fog.
Special firefighting procedures:	None
Unusual fire or explosion hazards:	None
Hazardous combustion products:	Oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not allow material to contaminate ground water system.
Clean-up methods:	Follow all local, state, federal and provincial regulations for disposal. Scrape up as much material as possible. Clean residue with soap and water.

7. HANDLING AND STORAGE

Handling:	Wash thoroughly after handling. Keep container closed. Avoid contact with eyes, skin and clothing.
Storage:	Keep in a cool, well ventilated area.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS//PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Distillates (petroleum), hydrotreated heavy naphthenic	5 mg/m3 TWA mist 10 mg/m3 STEL mist	5 mg/m3 TWA mist	None	None
Calcium dihydroxide	5 mg/m3 TWA	5 mg/m3 TWA Respirable fraction. 15 mg/m3 TWA Total dust.	None	None
Mineral oil light naphthenic hydrotreat. <3% DMSO	5 mg/m3 TWA Mist. 10 mg/m3 STEL Mist.	500 ppm (2,000 mg/m3) TWA	None	None
Copper	1 mg/m3 TWA (as Cu) Dust and mist. 0.2 mg/m3 TWA Fume.	1 mg/m3 TWA (as Cu) Dust and mist. 0.1 mg/m3 TWA (as Cu) Fume.	None	None
Graphite	2 mg/m3 TWA Respirable fraction.	5 mg/m3 TWA Respirable fraction. 15 mg/m3 TWA Total dust. 15 MPPCF TWA	None	None
Quartz (SiO2)	0.025 mg/m3 TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.	None	None

Engineering controls:

Use only with adequate ventilation. Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection:

Use NIOSH approved respirator if there is potential to exceed exposure limit(s). Observe OSHA regulations for respiratory use (29 CFR 1910.134).

Eye/face protection:

Goggles. Safety glasses with side-shields.

Skin protection:

Cover as much of the exposed skin area as possible with appropriate clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Paste
Color:	copper
Odor:	Mild
Odor threshold:	Not available
pH:	Not applicable
Vapor pressure:	< 5.0 mm hg
Boiling point/range:	> 260 °C (> 500°F)
Melting point/ range:	Not available
Specific gravity:	1.30
Vapor density:	Heavier than air.
Flash point:	> 93 °C (> 199.4 °F)
Flammable/Explosive limits - lower:	Not determined
Flammable/Explosive limits - upper:	Not determined
Autoignition temperature:	Not determined
Evaporation rate:	Slower than ether.
Solubility in water:	Insoluble
Partition coefficient (n-octanol/water):	Not determined
VOC content:	Essentially Zero

10. STABILITY AND REACTIVITY

Stability:	Stable at normal conditions.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Hydrocarbons. Oxides of carbon.
Incompatible materials:	Strong acids and strong bases. Oxidizing agents.
Conditions to avoid:	Prolonged exposure to heat.

11. TOXICOLOGICAL INFORMATION

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Distillates (petroleum), hydrotreated heavy naphthenic	No	No	No
Calcium dihydroxide	No	No	No
Mineral oil light naphthenic hydrotreat. <3% DMSO	No	No	No
Copper	No	No	No
Graphite	No	No	No
Quartz (SiO ₂)	Known carcinogen.	Group 1	No

Hazardous components	Health Effects/Target Organs
Distillates (petroleum), hydrotreated heavy naphthenic	Irritant
Calcium dihydroxide	Irritant, Corrosive
Mineral oil light naphthenic hydrotreat. <3% DMSO	Irritant
Copper	Allergen, Blood, Central nervous system, Developmental, Gastrointestinal, Immune system, Irritant, Kidney, Liver, Mutagen, Sensory, Skin
Graphite	Lung
Quartz (SiO ₂)	Immune system, Lung, Some evidence of carcinogenicity

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.
Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Environmentally hazardous substances, liquid, n.o.s. (Copper)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: Copper
DOT Reportable quantity: Copper

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Copper)
Hazard class or division:	9
Identification number:	UN 3082
Packing group:	III
Marine pollutant:	Copper

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification:	None above reporting de minimus
CERCLA/SARA Section 302 EHS:	None above reporting de minimus
CERCLA/SARA Section 311/312:	Immediate Health
CERCLA/SARA 313:	This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Copper (CAS# 7440-50-8).
California Proposition 65:	No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDL Status:	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
WHMIS hazard class:	D.2.A, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: C.J. Michaels, Manager, Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFICATION

PRODUCT: **MULTI PURPOSE LITHIUM GREASE**
PRODUCT CODE: **N3124,N3127**

HFWA CODES: **H F R**
 1 1 0

HMIS CODES: PERSONAL PROTECTON B

MANUFACTURER: LUBRIMATIC / WITCO

ADDRESS: 1400 SOUTH HARRISON, OLATHE, KANSAS 66061

INFORMATION: 913-782-5800

EMERGENCY: CHEMTREC 800-424-9300

DATE: 5/2003

PREPARER: R. Madariaga

DISTRIBUTOR: NATIONAL REFRIGERATION PRODUCTS

2900 SAMUEL DRIVE · BENSLEM, PA 19020-7306
1-800-352-6951

COMPOSITION, INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	CAS NUM	CONTENTS:	EPA RQ:	TPQ:
PETROLEUM DISTILLATES AND RESIDUAL OILS**		70-100%	NA	NA
CARBON BLACK	1333-86-4	.1-1%	NA	NA

COMPOSITION COMMENTS: REFER TO SECTION EIGHT FOR EXPOSURE LIMITS ON INGREDIENTS
CHEMICAL INGREDIENTS NOT REGULATED BY OSHA OR SARA ARE TREATED CONFIDENTIALLY
** MIXTURE OF CAS REGISTRY NUMGERS 64742-52-5 & 64742-57-0

HAZARDS IDENTIFICATION

EXPOSURE TO VAPORS GENERATED AT HIGH TEMPERATURES MAY CAUSE RESPIRATORY IRRITATION.

CHRONIC EFFECTS:

SENSITIZATION:

NO KNOWN INFORMATION

CARCINOGENICTY:

PRODUCT CONTAINS:
IARC-3 AND NIOSH-X LISTED CARCINOGEN(S)
CARBON BLACK, CAS# 1333-86-4, 0.1-1%

HEALTH WARNINGS:

INHALATION: HEATING CAN GENERATE VAPORS THAT MAY CAUSE RESPIRATORY IRRITATION, NAUSEA, HEADACHE. INHALATION HAZARD AT ROOM TEMPERATURE IS UNLIKELY DUE TO THE LOW VOLATILITY OF THIS PRODUCT.

SKIN CONTACT: REPEATED OR PROLONGED CONTACT CAN RESULT IN DRYING OF THE SKIN. **EYE CONTACT:** IRRITATING.

INGESTION: CAN CAUSE STOMACH ACHE AND VOMITING. MAIN HAZARD, IF INGESTED IS ASPIRATION INTO THE LUNGS AND SUBSEQUENT PNEUMONITIS.

ROUTE OF ENTRY: INHALATION. SKIN AND/OR EYE CONTACT. INGESTION.

MEDICAL SYMPTOMS: MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: NOT DETERMINED

FIRST AID MEASURES

INHALATION: VAPOR INHALATION UNDER AMBIENT CONDITIONS IS NORMALLY NOT A PROBLEM. IF OVERCOME BY VAPOR OF HOT PRODUCT, IMMEDIATELY REMOVE FROM SOURCE OF EXPOSURE. MOVE THE EXPOSED PERSON TO FRESH AIR AT ONCE. FOR BREATHING DIFFICULTIES, OXYGEN MAY BE NECESSARY. GET MEDICAL ATTENTION IF ANY DISCOMFORT CONTINUES.

INGESTION: DO NOT INDUCE VOMITING! GET MEDICAL ATTENTION IMMEDIATELY!

SKIN: REMOVE CONTAMINATED CLOTHING. WASH SKIN THOROUGHLY WITH SOAP AND WATER. GET MEDICAL ATTENTION IF ANY DISCOMFORT CONTINUES.

EYES: RINSE THE EYE WITH WATER IMMEDIATELY. CONTINUE TO RINSE FOR AT LEAST 15 MINUTES. CONTACT PHYSICIAN IF DISCOMFORT CONTINUES.

FIRE FIGHTING MEASURES

FLASH POINT: 435°F METHOD: Cd OC (CLEVELAND OPEN CUP)

FLAMMABLE LIMITS: LEL: N/D UEL:N/D

EXTINGUISHING MEDIA: USE CO₂, DRY CHEMICAL, SAND, ETC. ALCOHOL RESISTANT FOAM. WATER SPRAY, FOG OR MIST.

SPECIAL FIREFIGHTING PROCEDURES: USE WATER TO KEEP FIRE EXPOSED CONTAINERS COOL AND DISPERSE VAPORS. WATER SPRAY MAY BE USED TO FLUSH SPILLS AWAY FROM EXPOSURES AND DILUTE SPILLS TO NON-FLAMMABLE MIXTURES. AVOID WATER IN STRAIGHT HOSE STREAM; WILL SCATTER AND SPREAD FIRE. KEEP RUN-OFF WATER OUT OF SEWERS AND WATER SOURCES. DIKE FOR WATER CONTROL.

UNUSUAL FIRE AND EXPLOSION HAZARDS: PRESSURE WILL INCREASE IN OVER HEATED, CLOSED CONTAINERS.

HAZARDOUS COMBUSTION PRODUCTS: ACRID SMOKE/FUMES. OXIDES OR CARBON.

PROTECTIVE MEASURES IN CASE OF FIRE: SELF-CONTAINED BREATHING EQUIPMENT AND CHEMICAL RESISTANT CLOTHING RECOMMENDED.

ACCIDENTIAL RELEASE MEASURES

PERSONAL PRECAUTIONS: MINIMIZE SKIN CONTACT.

PRECAUTIONS TO PROTECT THE ENVIRONMENTAL: KEEP PRODUCT OUT OF SEWERS AND WATERCOURSES BY DIKING OR IMPOUNDING. ADVISE AUTHORITIES IF PRODUCT HAS ENTERED OR MAY ENTER SEWERS, WATERCOURSES OR EXTENSIVE LAND AREAS. ASSURE CONFORMITY WITH APPLICABLE GOVERNMENT REGULATIONS.

SPILL CLEAN-UP PROCEDURES: KEEP ALL SOURCES OF IGNITION AND HOT METAL SURFACES AWAY FROM SPILL. AVOID CONTACT WITH EYES OR SKIN. PLACE LEAKING CONTAINERS IN WELL VENTILATED AREA. IF FIRE POTENTIAL EXISTS, BLANKET SPILL WITH FOAM OR USE WATER SPRAY TO DISPERSE VAPORS. CONTAIN SPILL TO MINIMIZE CONTAMINATED AREA AND FACILITATE SALVAGE OR DISPOSAL. TO CLEAN UP SPILL, FLUSH AREA SPARINGLY WITH WATER OR USE ABSORBANT MATERIAL. AVOID DISCHARGE TO NATURAL WATERWAYS.

HANDLING AND STORAGE

HANDLING PRECAUTIONS: KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME. VENTILATE WELL, AVOID BREATHING VAPORS. USE APPROVED RESPIRATOR IF AIR CONTAMINATION IS ABOVE ACCEPTED LEVEL. DO NOT REUSE CONTAINER. KEEP LID CLOSED WHEN NOT IN USE. DO NOT STORE OR MIX WITH STRONG OXIDIZERS. AVOID SPILLING, SKIN AND EYE CONTACT. EYE WASH AND EMERGENCY SHOWER MUST BE AVAILABLE AT THE WORKPLACE.

STORAGE PRECAUTIONS: STORE SEPARATE FROM STRONG ACIDS AND OXIDIZERS. KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME.

STORAGE CRITERIA: CHEMICAL STORAGE.

EXPOSURE CONTROLS, PERSONAL PROTECTION

INGREDIENT NAME:	CAS NO:	OSHA PEL:		ACGIH TLV:		OTHER:		UNITS:
		TWA:	STEL:	TWA:	STEL:	TWA:	STEL:	
PETROLEUM DISTILLATES AND RESIDUAL OILS		5	NAV	5	10	NAV	NAV	MG/M3
CARBON BLACK	1333-86-4	3.5	NE	3.5	NE	3.5	NE	MG/M3

ENGINEERING CONTROLS: USE ENGINEERING CONTROLS TO REDUCE AIR CONTAMINATION TO PERMISSIBLE EXPOSURE LEVEL.

VENTILATION: NO SPECIFIC VENTILATION REQUIREMENTS NOTED, BUT FORCED VENTILATION MAY STILL BE REQUIRED IF AIR CONTAMINATION EXCEEDS ACCEPTABLE LEVEL.

RESPIRATORS: NO SPECIFIC RECOMMENDATION MADE, BUT RESPIRATORY PROTECTION MAY STILL BE REQUIRED UNDER EXCEPTIONAL CIRCUMSTANCES WHEN EXCESSIVE AIR CONTAMINATION EXISTS.

PROTECTIVE GLOVES: CHEMICAL RESISTANT GLOVES RECOMMENDED TO PREVENT PROLONGED OR REPEATED CONTACT.

PROTECTIVE CLOTHING: WEAR APPROPRIATE CLOTHING TO PREVENT REPEATED OR PROLONGED SKIN CONTACT.

HYGIENIC WORK PRACTICES: WASH AT THE END OF EACH WORK SHIFT AND BEFORE EATING, SMOKING AND USING THE TOILET.

PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE:	GREASE
COLOR:	BLACK
ODOR:	MILD (OR FAINT) PETROLEUM
SOLUBILITY DESCRIPTION:	INSOLUBLE IN WATER
SOLUBILITY VALUE (g/100g H₂O 68 DEG. F):	<0.1
DENSITY/SPECIFIC GRAVITY (g/ml):	0.90 TEMPERATURE (F) 61
VAPOR DENSITY (AIR=1):	>5
VAPOR PRESSURE:	<0.01 mmHg TEMPERATURE (F) 68
EVAPORATION RATE:	<1 REFERENCE: BuAc=1
Ph-VALUE, CONC. SOLUTION:	NA

STABILITY AND REACTIVITY

STABILITY: NORMALLY STABLE

CONDITIONS TO AVOID: AVOID CONTACT WITH ACIDS AND OXIDIZING SUBSTANCES.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

POLYMERIZATION DESCRIPTION: NA

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: OXIDES OF CARBON.

TOXICOLOGICAL INFORMATION

NO EXPERIMENTAL TOXICOLOGICAL DATA ON THE PREPARATION AS SUCH IS AVAILABLE.

ECOLOGICAL INFORMATION

THERE IS NO ECOLOGICAL DATA ON THE PRODUCT ITSELF.

DISPOSAL CONSIDERATIONS

SPILLED MATERIAL, UNUSED CONTENTS AND EMPTY CONTAINERS MUST BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

TRANSPORT INFORMATION

U.S. DOT: NOT REGULATED

REGULATORY INFORMATION

REGULATORY STATUS OF INGREDIENTS:

NAME:	TSCA:	CERCLA:	SARA 302	SARA 313	DSL (CAN)
PETROLEUM DISTILLATES AND RESIDUAL OILS	YES	NA	NA	NA	YES
CARBON BLACK	YES	NA	NA	NA	
YES					

FEDERAL REGULATIONS:

REGULATORY STATUS: THIS PRODUCT OR ITS COMPONENTS, IF A MIXTURE, IS SUBJECT TO FOLLOWING REGULATION (NOT MEANT TO BE ALL INCLUSIVE-SELECTED REGULATION REPRESENTED). **TSCA:** THE INGREDIENTS OF THIS PRODUCT ARE ON THE TSCA INVENTORY. **SARA 311 CATEGORIES:** NONE. **SECTION 313:** THIS PRODUCT MAY CONTAIN TOXIC CHEMICAL SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE 111 OF THE SUPERFUND AMENDMENT AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372. ZINC COMPOUNDS UP TO 3% AND ANTIMONY COMPOUNDS UP TO 0.5%

DISCLAIMER

INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BELIEVED TO BE ACCURATE AT THE TIME OF PREPARATION. NO WARRANTY IS MADE CONCERNING THE ACCURACY AND NO LIABILITY SHALL BE MADE FOR CLAIMS FOR USE OR RELIANCE OF THE RECOMMENDATIONS CONTAINED HEREIN.



Material Safety Data Sheet
 May be used to comply with
 OSHA's Hazard Communication Standard
 29 CFR 1910.1200. Standard must be consulted
 for specific requirements

U.S. Department of Labor
 Occupational Safety and Health Administration
 (Non-Mandatory Form)
 Form Approved
 OMB No. 1218-0072

IDENTITY (as used on Label and List)

SUPER LUBE OIL WITH PTFE

**Part Numbers- 51010,51014,51004,51008,51040,
 51050,51550,51013,11520**

Note: Blank spaces are not permitted. If any item is
 not applicable, or no information is available, the
 space must be marked to indicate that.

SECTION I

Manufacturer's Name: SYNCO CHEMICAL CORPORATION
 Address: 24 DaVINCI DRIVE
 BOHEMIA, NY 11716

Emergency Telephone Number: 800-424-9300
 Telephone Number for Information: 631-567-5300
 Date Prepared: January 1, 2005
 Signature of Preparer (Optional):

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

<u>Hazardous Components</u> (Specific Chemical/Identity; Common Name(s))	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Recommended Percentages</u>
SYNTHETIC HYDROCARBON	CAS# 68037-01-4		75 - 85%
HYDRO TREATED POLYMER	CAS# 8042-47-5		15 - 25%
ANTI-OXIDANT	CAS# 41484-35-9		1 - 2%
FUMED SILICA	CAS# 68611-44-9		1 - 5%
POLYTETRAFLUORETHYLENE	CAS# 9002-84-0		2 - 4%
POLYGLYCOL	CAS# 025322-69-4		.5 - 1%
PROPRIETARY ADDITIVES			.25 - 1%

ALL INGREDIENTS ARE TSCA LISTED

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

<u>Boiling Point</u>	N/A	<u>Specific Gravity (H2O = 1)</u>	0.87 ± 0.02
<u>Vapor Pressure (mm Hg.)</u>	N/E	<u>Melting Point</u>	N/A
<u>Vapor Density (AIR = 1)</u>	N/E	<u>Evaporation Rate (Butyl Acetate = 1)</u>	N/E
<u>Solubility in Water</u>	Not Soluble in Water		
<u>Appearance and Odor</u>	Translucent White to Slightly Yellow, Slight Odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method used) >428°F (220°C) COC Flammable Limits: N/A LEL: N/E UEL: N/E
Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam
Special Fire Fighting Procedures: Self-contained respiratory protection should be provided for fighting fires in confined areas.
Unusual Fire and Explosion Hazards: None Known

SECTION V - REACTIVITY DATA

Stability: Unstable
 Stable: YES Conditions to Avoid: None Known

Incompatibility (materials to avoid): N/E



Hazardous Decomposition or Byproducts: Burning may produce carbon monoxide.

Hazardous Polymerization: May occur
Will not occur: YES
Conditions to Avoid: None Known

SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry: INHALATION? SKIN? YES INGESTION? YES

Health Hazards (Acute and Chronic): No Evidence of adverse effect from available information on swallowing. SKIN ABSORPTION and INHALATION: May cause slight irritation in contact with skin and eyes.

Carcinogenicity: NTP? Not Listed IARC MONOGRAPHS? Not Listed OSHA REGULATIONS? Not Listed

Signs and Symptoms of Exposure: Contact with Eye may result in slight irritation. Prolonged or repeated skin contact may cause mild irritation.

Medical Conditions Generally Aggravated by Exposure: N/E

Emergency and First Aid Procedures: SKIN: Remove by wiping and wash with soap and water. EYES: Wash with copious amounts of water.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled: Spills should be absorbed or scraped up.

Waste Disposal Method: Use method outlined in local EPA and Governmental Regulations. Contact your local EPA office.

Precautions to be Taken in Handling and Storage: Good manufacturing practices should be followed in handling and storage.

Other Precautions: Surface subject to spills with this product can become slippery.

SECTION VIII - CONTROL MEASURES

Respiratory Protection (Specify Type): None Required

Ventilation Local Exhaust: N/A Special: N/A
Mechanical (General) N/A Other: N/A

Protective Gloves: None under Normal Use **Eye Protection:** Safety Glasses Recommended

Other Protective Clothing or Equipment: None under Normal Use

Work Hygienic Practices: Normal Precautions common to good manufacturing practices should be followed.

HMS CODES:
FIRE: 1
HEALTH: 0
REACTANCE: 0
OTHER: 0



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M Brand STAINLESS STEEL CLEANER & POLISH
MANUFACTURER: 3M
DIVISION: Building & Commercial Services Division
ADDRESS: 3M Center, St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 10/04/11
Supersedes Date: 06/20/11

Document Group: 10-2819-0

Product Use:

Intended Use: Metal Polish
Specific Use: Cleans and polishes stainless steel, chrome, aluminum and laminated plastic surfaces.

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
WATER	7732-18-5	40 - 70
WHITE MINERAL OIL (PETROLEUM)	8042-47-5	10 - 30
ISOBUTANE	75-28-5	7 - 13
SORBITAN OLEATE	1338-43-8	0.5 - 1.5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Aerosol

Odor, Color, Grade: Thick white emulsion citrus odor

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Aerosol container contains flammable gas under pressure. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back. May cause target organ effects.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Inhalation:

Intentional concentration and inhalation may be harmful or fatal.

Single exposure, above recommended guidelines, may cause:

Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Target Organ Effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. Get immediate medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

4.2 NOTE TO PHYSICIANS

Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	<i>No Data Available</i>
Flash Point	No flash point
Flammable Limits(LEL)	<i>No Data Available</i>
Flammable Limits(UEL)	<i>No Data Available</i>
OSHA Flammability Classification:	Not Applicable

5.2 EXTINGUISHING MEDIA

Material will not burn. Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Aerosol container contains flammable material under pressure. Vapors may travel long distances along the ground or floor to an ignition source and flash back. (AEROSOL STORAGE level indicated below is based on NFPA 30B definition)

Classified as Div 2.2 nonflammable aerosol based on the results of flame projection testing according to ASTM D3065.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Close cylinder. If the cylinder can't be closed, place in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors.

6.2. Environmental precautions

For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Clean-up methods

Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Clean up residue with detergent and water.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Do not pierce or burn container, even after use. Do not spray near flames or sources of ignition. Avoid breathing of vapors, mists or spray. Aerosol container contains flammable gas under pressure. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Avoid contact with oxidizing agents. Avoid skin contact. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Do not store containers on their sides. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use in a well-ventilated area. If exhaust ventilation is not available, use appropriate respiratory protection. Do not remain in area where available oxygen may be reduced.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Safety Glasses with side shields.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Neoprene, Nitrile Rubber.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray. Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
WHITE MINERAL OIL (PETROLEUM)	CMRG	TWA	5 mg/m3	
WHITE MINERAL OIL (PETROLEUM)	CMRG	STEL	10 mg/m3	

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Aerosol
Odor, Color, Grade:	Thick white emulsion citrus odor
General Physical Form:	Liquid
Autoignition temperature	<i>No Data Available</i>
Flash Point	No flash point
Flammable Limits(LEL)	<i>No Data Available</i>
Flammable Limits(UEL)	<i>No Data Available</i>
Boiling Point	Approximately 212 °F
Density	Approximately 0.95 g/ml
Vapor Density	<i>No Data Available</i>
Vapor Pressure	<i>No Data Available</i>
Specific Gravity	Approximately 1 [<i>Ref Std: WATER=1</i>]

pH	9 - 11
Melting point	No Data Available
Solubility In Water	No Data Available
Solubility in Water	Complete
Evaporation rate	No Data Available
Volatile Organic Compounds	7 - 13 % [Test Method: calculated per CARB title 2]
Kow - Oct/Water partition coef	No Data Available
Percent volatile	45 - 85 %
VOC Less H2O & Exempt Solvents	170 - 330 g/l [Test Method: calculated per CARB title 2]
Viscosity	< 4500 centipoise [Details: For Liquid]

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

Heat
Sparks and/or flames

10.2 Materials to avoid

Strong oxidizing agents
Strong acids

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in an industrial or commercial facility. Facility must be capable of handling aerosol cans. Dispose of empty product containers in a sanitary landfill.

Empty aerosol cans may be recycled where facilities exist.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number	UPC	ID Number	UPC
61-5000-6132-2	000-48011-14002-0	70-0708-4135-1	031-34375-35244-9
70-0711-3340-2	000-48011-34736-3	70-0711-3341-0	000-48011-34737-0
70-0713-1355-8	000-48011-59158-2	70-0713-1493-7	000-48011-59249-7

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - Yes Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

STATE REGULATIONS

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. The components of this material are in compliance with the new chemical notification requirements for the Korean Existing Chemicals Inventory.

The components of this product are listed on the Australian Inventory of Chemical Substances.

The components of this product are listed on Japan's Chemical Substance Control Law List (also known as the Existing and New Chemical Substances List.)

All the components of this product are listed on China's Inventory of Chemical Substances.

The components of this product are in compliance with notification requirements in the Philippines.

The components of this product are listed on the Canadian Domestic Substances List.

INTERNATIONAL REGULATIONS

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 0 Reactivity: 0 Special Hazards: None
Aerosol Storage Code: 1

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification

Health: 2 Flammability: 0 Reactivity: 0 Protection: X - See PPE section.

Hazardous Material Identification System (HMIS®) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint and Coatings Association (NPCA).

Reason for Reissue: Add new stock number 70-0712-7966-8

Revision Changes:

- Section 1: Product use information was modified.
- Section 16: NFPA hazard classification for health was modified.
- Section 16: HMIS hazard classification for health was modified.
- Section 3: Potential effects from eye contact was modified.
- Section 3: Potential effects from skin contact information was modified.
- Section 3: Potential effects from inhalation information was modified.
- Section 10: Hazardous decomposition or by-products table was modified.
- Section 4: First aid for skin contact - decontamination - was modified.
- Section 4: First aid for skin contact - medical assistance - was modified.
- Section 4: First aid for inhalation - termination of exposure - was modified.
- Section 4: First aid for inhalation - medical assistance - was modified.
- Section 16: HMIS explanation was modified.
- Section 9: Density information was modified.
- Section 9: Vapor density value was modified.
- Section 9: Vapor pressure value was modified.
- Section 9: Boiling point information was modified.
- Section 5: Flammable limits (UE) information was modified.
- Section 5: Flammable limits (LEL) information was modified.
- Section 5: Autoignition temperature information was modified.
- Section 5: Flash point information was modified.
- Section 9: Property description for optional properties was modified.
- Section 9: Specific gravity information was modified.
- Section 9: pH information was modified.
- Section 9: Melting point information was modified.
- Section 9: Solubility in water value was modified.
- Section 9: Solubility in water text was modified.
- Section 9: Flash point information was modified.
- Section 9: Flammable limits (LEL) information was modified.
- Section 9: Flammable limits (UEL) information was modified.
- Section 9: Autoignition temperature information was modified.
- Section 14: ID Number(s) and/or UPC(s) Template 1 was modified.
- Section 2: Ingredient table was modified.
- Section 8: Exposure guidelines ingredient information was modified.
- Section 4: First aid for skin contact - termination of exposure - was added.
- Section 4: First aid for skin contact - handling - was added.

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely

within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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3M USA MSDSs are available at www.3M.com



MSDS - Material Safety Data Sheet

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY

Contact: Robert Geer

Address: 600 RADIATOR ROAD

Information Telephone Number: 704-684-1811

City, ST Zip: INDIAN TRAIL, NC 28079

Emergency Contact: Rocky Mountain Poison Control Center

Emergency Telephone Number: 303-623-5716

Country:

Emergency Restrictions:

Product Name: LIQUID WRENCH INDUSTRIAL HEAVY DUTY SILICONE SPRAY

MSDS No.: PL911

Issue Date: 05/10/2010

Supersedes Date: 03/25/2009

II. Hazards Identification:

EMERGENCY OVERVIEW

Flammable. Harmful or fatal if swallowed. Eye and Skin Irritant. Contents under Pressure.

Level 3 Aerosol

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects

Route(s) of Entry:

Absorption, Eye, Inhalation, and Ingestion.

Health Hazards (Acute and Chronic):

See Signs and Symptoms below

Signs and Symptoms:

Eye Contact: Irritant. Prolonged contact may cause conjunctivitis.

Skin Contact: Irritant. Defatting of tissue, dermatitis may occur.

Inhalation: Irritant to mucous membranes. Repeated exposure may cause narcosis.

Ingestion: HARMFUL OR FATAL IF SWALLOWED.

Medical Conditions Generally Aggravated by Exposure:

Unknown

Other Health Warnings:

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema, which is a potentially fatal condition.

Potential Environmental Effects

Not Available

III. Composition/Information on Ingredients:

MSDS - Material Safety Data Sheet

Chemical Name	CAS No.	% Range	Trade Secret
1,2,4-Trimethylbenzene	95-63-6	1.0 - 5.0	
Aliphatic Hydrocarbon Solvent	8052-41-3	40.0 - 70.0	
Carbon dioxide	124-38-9	1.0 - 5.0	
Dimethyl Polysiloxane	63148-62-9	3.0 - 7.0	
Hydrocarbon Fluid	64742-47-8	15.0 - 40.0	
Mesitylene	108-67-8	1.0 - 5.0	
Naphthenic Petroleum Distillate	64742-52-5	1.0 - 5.0	
Xylene (mixed isomers)	1330-20-7	1.0 - 5.0	
Ethylbenzene	100-41-4	0.1 - 1.0	

IV. First Aid Measures:

Emergency and First Aid Procedures:

Eye Contact: Flush eyes with clean water for 20 minutes while lifting eyelids. Get prompt medical attention.

Skin Contact: Wash skin with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Remove and isolate contaminated clothing. Launder contaminated clothing before reuse.

Inhalation: Move victim to fresh air. If breathing becomes difficult, administer oxygen and get prompt medical attention. If breathing stops, give artificial respiration and get prompt medical attention.

Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately. Aspiration of vomitus into the lungs can cause pneumonitis, which can be fatal.

Note to Physicians:

N/E

V. Fire Fighting Measures:

Suitable Extinguishing Media:

Water Fog, Foam, Carbon Dioxide, and Dry Chemical

Unsuitable Extinguishing Media:

Do not use forced water stream as this could cause the fire to spread.

Products of Combustion:

Normal products of combustion, carbon dioxide, smoke and Nitrogen and Sulfur Oxides

Protection of Firefighters:

Wear self-contained positive pressure breathing apparatus and protective clothes. Use shield to protect from rupturing and venting containers. At elevated temperatures containers may vent, rupture or burst, even violently

VI. Accidental Release Measures:

Personal Precautions:

Eliminate all ignition sources. Persons not wearing protective equipment should be excluded from area of spill until clean up has been completed.

Environmental Precautions:

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred. Run off to sewer may create fire or explosion hazard.

Methods for Containment:

Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc).

Methods for Cleanup:

Using a non-metallic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material.

Other Information:

All equipment used with handling the concentrate must be grounded. If run-off occurs, notify proper authorities as required that a spill has occurred.

VII. Handling and Storage:

Handling Precautions:

Handling Use with adequate ventilation and proper protective equipment. Do not use near fire, sparks, or flame. Do not puncture or incinerate container. Avoid contact with eyes. Avoid prolonged or repeated breathing of vapors. If exposure may or does exceed occupational exposure limits, use a NIOSH approved respirator to prevent over-exposure. Avoid contact with eyes. Keep Away From Children and Animals.

MSDS - Material Safety Data Sheet

Storage Precautions:

Store in cool, well-ventilated area below 120°F away from heat, fire, sparks or flame. Keep away from oxidizers and acids.

VIII. Exposure Controls/Personal Protection:

Chemical Name	OSHA PEL	ACGIH TLV	Other Limits
Aliphatic Hydrocarbon Solvent	100 ppm	100 ppm	Not Available
Mesitylene	N/A	N/A	Not Available
1,2,4-Trimethylbenzene	N/E	25 ppm	Not Available
Xylene (mixed isomers)	100 ppm (TWA)	100 ppm (TWA)	Not Available
Dimethyl Polysiloxane	N/E	N/E	Not Available
Carbon dioxide	N/AV	5000 ppm	Not Available
Naphthenic Petroleum Distillate	5 mg/m ³	5 mg/m ³	Not Available
Hydrocarbon Fluid	5 mg/m ³	5 mg/m ³	Not Available

Engineering Controls:

See Section above for applicable exposure limits. Use with adequate ventilation. If TLV is exceeded, wear NIOSH approved respirator.

Personal Protective Equipment:

For prolonged exposure wear protective safety glasses, gloves, and apron.

IX. Physical and Chemical Properties:

Boiling Point: 310°F

Boiling Range: N/D

Solubility in Water: Insoluble

Flash Point: 105°F

Odor Threshold: N/D

Vapor Density (AIR = 1): N/D

pH Range: N/A

Decomposition Temp: N/D

Lower Explosive Limit: N/D

Specific Gravity (H₂O = 1): 0.82

Other Information: N/E

Melting Point: N/A

Freezing Point: N/D

Flash Point Method: TCC

Evaporation Rate (Butyl Acetate = 1): N/D

Appearance and Odor: Clear to slight yellow liquid with petroleum odor.

Vapor Pressure (mm Hg.): N/D

Partition Coefficient: N/D

Auto-Ignition Temp: N/D

Upper Explosive Limit: N/D

X. Stability and Reactivity:

Stability:

Stable

Conditions to Avoid:

Avoid heat, sparks, and flames. Avoid incompatible materials.

Incompatible Materials:

Oxidizing agents and acids.

Hazardous Decomposition Products:

Normal products of combustion, carbon dioxide, smoke and Nitrogen and Sulfur Oxides

Possibility of Hazardous Reactions:

Will not occur

XI. Toxicological Information:

N/D

MSDS - Material Safety Data Sheet

XII. Ecological Information:

N/D

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in a recycling centers when empty. Before offering for recycling, empty the can or bottle by using the product according to the label. If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations

XIV. Transport Information:

Shipping Name: Consumer Commodity
DOT Hazard Class: ORM-D

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for international and air shipping purposes.

ICAO/IATA (US)
UN number: UN1950
Shipping Name: Aerosols
Class: 2.1

International:

ICAO/IATA
UN number: UN1950
Shipping Name: Aerosols
Class: 2.1

IMDG
UN number: UN1950
Shipping Name: Aerosols
Class: 2.
EMS: F-D, S-U

XV. Regulatory Information:

SARA 313 Reportable Chemicals:
1,2,4-Trimethylbenzene - 95-63-6
Xylene - 1330-20-7
Ethylbenzene - 100-41-4

USA TSCA: All components of this material are listed on the US TSCA Inventory.

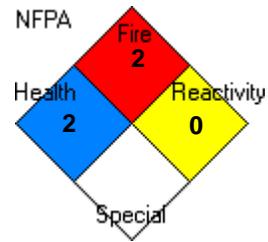
Warning This product contains a chemical(s) known to the State of California to cause cancer or birth defects or other reproductive harm.

State RTK Chemicals:
Aliphatic Hydrocarbon - 8052-41-3
1,2,4-Trimethylbenzene - 95-63-6
1,3,5-Trimethylbenzene - 108-67-8
Xylene -1330-20-7

MSDS - Material Safety Data Sheet

XVI. Other Information:

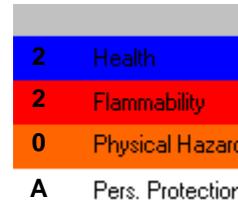
Chemical State: Liquid Gas Solid
Chemical Type: Pure Mixture
Hazard Category: Acute Chronic Fire Pressure Reactive



Additional Manufacturer Warnings:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

N/E: Not Established
 N/D: Not Determined
 N/A: Not Applicable
 N/AV: Not Available



Additional Product Information:

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product, which may not be covered by this MSDS. The user is responsible for full compliance.

MATERIAL SAFETY DATA SHEET

Revision Number 1, Revision Date 10/6/06

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product code A00392PL MSDS 1006
Product name Original Nut Buster Penetrating Lubricant, A-158
Chemical characterization Aerosol
Manufacturer, importer, supplier Chemax Corporation
 PO Box 7453
 Beaumont, TX 77726
 Phone: 800-346-0132
EMERGENCY TELEPHONE NUMBER 1-800-346-0132

2. HAZARD IDENTIFICATION

Emergency Overview:

- DANGER:
- Extremely flammable
- Harmful or fatal if swallowed
- Harmful by inhalation
- Irritating to eyes and skin.
- Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 122°F (50°C)
- KEEP OUT OF REACH OF CHILDREN

HMIS (Hazardous Material Information System)	Health=2; Fire=3; Reactivity=0 Personal protective equipment = B
Eye contact	Contact with eyes may cause irritation.
Skin contact	Irritating to skin. Prolonged skin contact may defat the skin and produce dermatitis.
Inhalation	Inhalation of high vapour concentrations may cause nasal & respiratory irritation and symptoms like headache, dizziness, tiredness, nausea, vomiting and possible unconsciousness.
Ingestion:	Aspiration may cause pulmonary oedema and pneumonitis.
General advice	Ensure adequate ventilation, especially in confined areas. Avoid contact with skin and eyes.
Principle Routes of Exposure	Inhalation, Ingestion and Skin Absorption

3. COMPOSITION/INFORMATION ON INGREDIENTS

(hazardous components 1% or greater; carcinogens 0.1% or greater)

CAS	Chemical Name	% Weight	OSHA*	ACGIH TLV (ppm)
64742-47-8	Hydrotreated Light Petroleum Distillates	75 - 85	5 mg/m3 (mist)	5 mg/m3 (mist)
64742-53-6	Petroleum distillates, hydrotreated light naphthenic	5 - 10	5 mg/m3 (mist)	5 mg/m3 (mist)
64742-88-7	Solvent naphtha (petroleum), medium aliphatic	5 - 10	100 ppm	100 ppm
124-38-9	Carbon dioxide	< 5.0	5000 ppm	5000 ppm

* OSHA - PELs

4. FIRST AID MEASURES

Eye contact • Immediately flush with plenty of water. After initial flushing, remove any

contact lenses and continue flushing for at least 15 minutes.

Skin contact	<ul style="list-style-type: none"> • If eye irritation persists, consult a specialist • Wash off with soap and water • If skin irritation persists, call a physician
Inhalation	<ul style="list-style-type: none"> • Move to fresh air • If not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth. • Obtain medical attention
Ingestion:	<ul style="list-style-type: none"> • DO NOT INDUCE VOMITING • Clean mouth with water and afterwards drink plenty of water • Call a physician or Poison Control Centre immediately
Aggravated Medical Conditions	<ul style="list-style-type: none"> • May aggravate existing eye, skin, or upper respiratory conditions

5. FIRE-FIGHTING MEASURES

NFPA (National Fire Protection Association)	Health=2; Fire=3; Reactivity=0; Special = -
Flammability as per USA Flame Projection Test (aerosols)	Extremely flammable
Flash point (non-aerosols)	NA
Suitable extinguishing media	Foamy spray. Dry chemical. Carbon dioxide (CO2).
Extinguishing media which must not be used for safety reasons	None
Specific Hazards	Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 122°F (50°C)
Special protective equipment for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
Specific methods	Water mist may be used to cool closed containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Ensure adequate ventilation. Use personal protective equipment.
Environmental precautions	Prevent product from entering drains. Should not be released into the environment
Methods for cleaning up	Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container .

7. HANDLING AND STORAGE

Handling

Safe handling advice	Wear personal protective equipment. Do not pierce or burn, even after use. Do not spray on naked flame or any incandescent material.
-----------------------------	--

Storage

Technical measures/Precautions	KEEP OUT OF REACH OF CHILDREN. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 122°F (50°C).
---------------------------------------	---

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures	Ensure adequate ventilation, especially in confined areas Remove all sources of ignition
Hand protection	Neoprene gloves, nitrile rubber or solvent-resistant gloves
Eye protection	Safety glasses with side-shields
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators
Skin and body protection	None under normal use.

Hygiene measures	Handle in accordance with good industrial hygiene and safety practice. Wash hands and face before breaks and immediately after handling the product Keep away from food and drink When using, do not eat, drink or smoke. Keep working clothes separately
------------------	---

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Form	Aerosol
Appearance	Opaque, Conical mist
Colour	tan
Odour	Solvent

Important Health Safety and Environmental Information

Specific Gravity	0.81
Density @ 68°F (20 °C)	6.76 lbs/gal
pH	N/A
Boiling point/range	N/A
Flash point	>170(76.67 °C)
Vapour pressure	Not Applicable.
Vapour density	(Air=1); greater than 1.
Water solubility	negligible.
Evaporation Rate	>1.0 (water = 1)
VOC Content(%)	3.7%; per US EPA Definition

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions
Conditions to avoid	Heat, flames and sparks. Extremes of temperature and direct sunlight. Do not expose to temperatures above 54°C .
Materials to avoid	Strong oxidizing agents
Hazardous decomposition products	Carbon oxides , Sulphur oxides and Unidentified organic compounds
Polymerization	Hazardous polymerization does not occur

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Component Information

CAS	Chemical Name	% Weight	NIOSH - Selected LD50s and LC50s
64742-47-8	Hydrotreated Light Petroleum Distillates	75 - 85	N/A
64742-53-6	Petroleum distillates, hydrotreated light naphthenic	5 - 10	N/A
64742-88-7	Solvent naphtha (petroleum), medium aliphatic	5 - 10	N/A
124-38-9	Carbon dioxide	< 5.0	N/A

Product Information

LD50/oral/rat =	Not Determined
LD50/dermal/rat =	Not Determined
Local effects	
Skin irritation	Irritating to skin. Possible irritation due to defatting of skin.

Eye irritation	Eye irritation.
Inhalation	Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Ingestion:	May be harmful or fatal if swallowed.
Sensitization	May cause sensitization of susceptible persons.
Chronic toxicity	Prolonged exposure may cause chronic effects such as, cardiac irregularities, Lung damage or liver and kidney injuries may occur

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Component Information

CAS	Chemical Name	% Weight	EFFSD*
64742-47-8	Hydrotreated Light Petroleum Distillates	75 - 85	N/A
64742-53-6	Petroleum distillates, hydrotreated light naphthenic	5 - 10	N/A
64742-88-7	Solvent naphtha (petroleum), medium aliphatic	5 - 10	N/A
124-38-9	Carbon dioxide	< 5.0	N/A

* EFFSD - Ecotoxicity - Freshwater Fish Species Data

Product Information

Aquatic toxicity Not Determined.

Other information:

Ozone depletion potential; ODP; (R-11 = 1)	Not Determined.
Global warming potential (GWP)	Not Determined.
Additional ecological information	Not Determined.
Mobility	Not Determined
Bioaccumulative potential	Not Determined

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products	Should not be released into the environment. Dispose of in accordance with local regulations.
Contaminated packaging	Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

DOT (Ground).
UN Number Not Applicable
Proper shipping name Consumer Commodity ORM-D
Packing group Not Applicable
Subsidiary Risk Not Applicable
Description 1 4G Fiberboard Box X 12 Metal Cans

IATA

UN Number UN1950
Proper shipping name Aerosol, Flammable, 2.1
Packing group Not Applicable
Subsidiary Risk Not Applicable

Description 1 4G Fiberboard Box X 12 Metal Cans

TDG

UN Number UN1950
Proper shipping name Aerosols, Class 2.1
Packing group Not Applicable
Subsidiary Risk Not Applicable
Description 1 4G Fiberboard Box X 12 Metal Cans

15. REGULATORY INFORMATION

U.S. Inventories

CAS	Chemical Name	% Weight	TSCA*	CERCLA/SARA RA*	SARA III	CPCL*	CPCL*
64742-47-8	Hydrotreated Light Petroleum Distillates	75 - 85	Present	N/A	No	N/A	N/A
64742-53-6	Petroleum distillates, hydrotreated light naphthenic	5 - 10	Present	N/A	No	N/A	N/A
64742-88-7	Solvent naphtha (petroleum), medium aliphatic	5 - 10	Present	N/A	No	N/A	N/A
124-38-9	Carbon dioxide	< 5.0	Present	N/A	No	N/A	N/A

- * TSCA - United States - Section 8 (b) Inventory (TSCA)
- * CERCLA/SARA - Hazardous Substances and their Reportable Quantities
- * CPCL - California - Proposition 65 - Carcinogens List
- * CPCL - California - Proposition 65 - Reproductive Toxicity - Female

International Inventories

CAS	Chemical Name	% Weight	DSL - Canada*	WHMIS*
64742-47-8	Hydrotreated Light Petroleum Distillates	75 - 85	Present	N/A
64742-53-6	Petroleum distillates, hydrotreated light naphthenic	5 - 10	Present	N/A
64742-88-7	Solvent naphtha (petroleum), medium aliphatic	5 - 10	Present	N/A
124-38-9	Carbon dioxide	< 5.0	Present	A; Uncontrolled product according to WHMIS classification criteria (solid)

- * DSL - Canada - Domestic Substances List (DSL)
- * WHMIS - Canada - WHMIS - Classifications of Substances

16. OTHER INFORMATION

Prepared By D. Padovani (IB). Regulatory Department. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication.

End of Safety Data Sheet

HOLLINGSHEAD CORP. -- LUBRICATING OIL -- 9150-00-273-2389

=====
Product Identification
=====

Product ID:LUBRICATING OIL
MSDS Date:10/24/1991
FSC:9150
NIIN:00-273-2389
MSDS Number: BLCZB
=== Responsible Party ===
Company Name:HOLLINGSHEAD CORP.
City:TULSA
State:OK
Country:US
Info Phone Num:COMPANY OUT OF BUSINESS
Emergency Phone Num:COMPANY OUT OF BUSINESS
Preparer's Name:DGSC-SSH
CAGE:LO077

=====
Contractor Identification
=====
Company Name:HOLLINGSHEAD CHEMICALS INC
Address:(OUT OF BUSINESS)
Box:City:TULSA
State:OK
Country:US
CAGE:7E720
Company Name:HOLLINGSHEAD CORP.
City:TULSA
State:OK
Country:US
Phone:COMPANY OUT OF BUSINESS
CAGE:LO077

=====
Composition/Information on Ingredients
=====

Ingred Name:LUBRICATING OIL(COMPOSITION NOT SPECIFIED)
OSHA PEL:5 MG/M3,AS OIL MIST
ACGIH TLV:5 MG/M3,AS OIL MIST

Ingred Name:OTHER COMPONENTS (TYPE NOT SPECIFIED)

=====
Hazards Identification
=====

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:ACUTE: IRRITATION OF EYES, SKIN,
RESPIRATORY OR GASTROINTESTINAL TRACTS. CNS EFFECTS LIKE HEADACHE,
DIZZINESS, NAUSEA, VOMITING. CHRONIC: DRYING OF SKIN, DEFATTING OR
DERMATITIS.
Explanation of Carcinogenicity:DATA PER MSDS
Effects of Overexposure:PROLONGED/REPEATED SKIN CONTACT MAY CAUSE MILD
IRRITATION.
Medical Cond Aggravated by Exposure:PERSONS WITH A HISTORY OF AILMENTS
MAY BE MORE ADVERSELY AFFECTED BY EXPOSURE TO THIS PRODUCT.

=====
First Aid Measures
=====

First Aid:INHALATION:REMOVE TO FRESH AIR. RESUSCITE IF NOT BREATHING.
GET MEDICAL ATTENTION. EYES:IMMEDIATELY FLUSH WITH PLENTY OF WATER
FOR 15 MINUTES HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

SKIN:REMOVE CONTAMINATED CLOTHING. WASH WITH SOAP AND WATER. IF IRRITATION PERSISTS, GET MEDICAL ADVICE. INGESTION:DO NOT INDUCE VOMITING. GIVE NOTHING BY MOUTH IF UNCONSCIOUS. GET IMMEDIATE MEDICAL ATTENTION.

===== Fire Fighting Measures. =====

Flash Point Method:COC

Flash Point:320F,160C

Lower Limits:1.0

Upper Limits:7.0

Extinguishing Media:USE CARBON DIOXIDE, FOAM, DRY CHEMICAL, OR WATER FOG.

Fire Fighting Procedures:FIRE FIGHTERS SHOULD USE NIOSH APPROVED SCB & FULL PROTECTIVE EQUIPMENT WHEN FIGHTING CHEMICAL FIRE. USE WATER SPRAY TO CO NEARBY CONTAINERS EXPOSED TO FIRE.

Unusual Fire/Explosion Hazard:COOL FIRE-EXPOSED CONTAINERS W/WATER SPRAY DO NOT STORE OR MIX W/STRONG OXIDANTS

===== Accidental Release Measures =====

Spill Release Procedures:USE PROPER PERSONAL PROTECTION;CONTAIN FREE MATERIAL IF POSSIBLE;USE SUITABLE INERT ABSORBENT MATERIAL AND RECOVER FOR PROPER DISPOSAL IN AN APPROVED CONTAINER.

Neutralizing Agent:NOT APPLICABLE.

===== Handling and Storage =====

Handling and Storage Precautions:STORE IN A COOL, DRY, WELL VENTILATED AREA. KEEP CONTAINERS TIGHTLY CLOSED WHEN NOT IN USE. PROTECT CONTAINERS FROM PHYSICAL DAMAGE.AVOID STRONG OXIDIZR

Other Precautions:DO NOT TAKE INTERNALLY. DO NOT BREATHE MIST. AVOID PROLONGED OR REPEATED BREATHING OF VAPOR. AVOID CONTACT WITH EYES. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING.DO NOT USE CONTAMINATED CLOTHING.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:NORMALLY NOT NEEDED;USE NIOSH/MSHA APPROVED RESPIRATOR FOR ORGANIC VAPORS/MIST AS REQUIRED IF ABOVE PEL/TLV OR SCBA IN AN ENCLOSED AREA.

Ventilation:LOCAL EXHAUST AND/OR GENERAL VENTILATION TO MAINTAIN PEL/TLV.

Protective Gloves:NEOPRENE, NITRILE, OR NATURAL RUBBER

Eye Protection:SAFETY GOGGLES WITH OPTIONAL FACE SHIELD

Other Protective Equipment:EYE WASH STATION, WORK CLOTHING AND APRON AS REQUIRED.

Work Hygienic Practices:OBSERVE GOOD PERSONAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES. DO NOT WEAR CONTAMINATED CLOTHING OR FOOTWEAR.

Supplemental Safety and Health

AVOID PROLONGED OR REPEATED EXPOSURE. DO NOT GET ON SKIN OR IN EYES. DO NOT BREATHE VAPORS OR MISTS. *** COMPANY OUT OF BUSINESS. MSDS GENERATED BY DGSC-SSH ***

===== Physical/Chemical Properties =====

HCC:V6

Boiling Pt:B.P. Text:550F,288C

Vapor Pres:<0.01

Spec Gravity:0.89

Solubility in Water:NEGLIGIBLE

Appearance and Odor:LIGHT STRAW-COLORED LIQ,SLIGHT PETROLEUM ODOR

Percent Volatiles by Volume:NEG

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

STRONG OXIDANTS LIKE LIQ CHLORINE & CONC OXYGEN

Stability Condition to Avoid:HIGH TEMPERATURES

Hazardous Decomposition Products:UPON INCOMPLETE COMBUSTION-CARBON
MONOXIDE

===== Disposal Considerations =====

Waste Disposal Methods:CONSULT LOCAL AUTHORITIES.DISPOSAL MUST BE MADE
IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND
REGULATIONS.

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document should seek competent professional advice to verify and
assume responsibility for the suitability of this information to their
particular situation.

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

PRODUCT NAME: Marvel Mystery Oil
PRODUCT CODE: MM010, 011, 012, 013, 014, 015, 016, 017, 018
REVISION #: # 1
EFFECTIVE DATE: November 1, 1999

CHEMICAL NAME : Complex mixture of hydrocarbons
FORMULA: Mixture
SYNONYMS: NA
CHEMICAL FAMILY: Petroleum Distillates

CAS #: NA
CAS NAME: NA

HMIS:HEALTH: 2 FIRE:2 REACTIVITY: 0 PE: B

HAZARD CLASSIFICATION: Petroleum products, n.o.s, Combustible, PG III,
UN 1268

SHIPPING NAME: Petroleum oils and related products
IDENTIFICATION #: NMFC 155250

2. HAZARDOUS INGREDIENTS

<u>MATERIAL</u>	<u>CAS #</u>	<u>TLV (UNITS/SOURCE)</u>	<u>HAZARD</u>
Mineral Spirits	08052-41-3	100 ppm (NIOSH) 8 hr/500 ppm (STEL) 15 min	Eyes, skin ingestion, inhalation, fire.
Napthenic Hydro- Carbons	64742-52-5	5 mg/m3 TWA (OSHA)	Eyes, skin, ingestion, inhalation
Chlorinated Hydro- Carbons	00095-50-1	25 ppm (ACGIH) (TWA) 50 ppm (ACGIH) (STEL)	Eyes, skin, ingestion, inhalation.

Product MM010

3. PHYSICAL DATA

BOILING POINT, 760 mm Hg: 172 ° C
SPECIFIC GRAVITY @ 60 F.: 0.876
VAPOR PRESSURE @ 60 F.: 5 mm @ 25 ° C
VAPOR DENSITY (AIR-1): ND
SOLUBILITY IN WATER, WT % : Insoluble
PERCENT VOLATILE, VOL % : 25 %
EVAPORATION RATE: ND
APPEARANCE AND ODOR: Clear amber liquid
MELTING POINT: NA
pH (1:1 H2O): ND
VISCOSITY: 10 cSt @ 40 ° C

4. HEALTH HAZARD DATA

TLV & SOURCE: Mineral Spirits 100 ppm - 8 hr. (TWA-NIOSH) / 500 ppm - 15 min. (STEL)
Oil mist of 5 mg/M3 or less

ACUTE EFFECTS OF OVEREXPOSURE:

SWALLOWING: Can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration into lungs can cause pneumonitis which can be fatal.

SKIN ABSORPTION: Not known.

INHALATION: Can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, headache, possible unconsciousness and even asphyxiation.

SKIN CONTACT: Prolonged or repeated contact can cause moderated irritation, defatting or dermatitis.

EYE CONTACT: Can cause severe irritation, redness, tearing or blurred vision.

CHRONIC EFFECTS OF OVEREXPOSURE:

Not known.

EMERGENCY AND FIRST AID PROCEDURES:

Product MM010

- SWALLOWING:** Do not induce vomiting. Keep person quiet and warm. Get medical attention. Aspiration of material into lungs can cause chemical pneumonitis which can be fatal.
- SKIN:** Thoroughly wash exposed area with soap and water. Remove contaminated clothing. Launder before re-use.
- INHALATION:** Remove person to fresh air. If breathing difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep person warm and quiet. Call a physician.
- EYES:** Flush with large amounts of water, lifting upper and lower eyelids occasionally. Get medical attention.
- CARCINOGENICITY:** Not known to be carcinogenic.

NOTES TO PHYSICIAN: None.

5. FIRE & EXPLOSION HAZARD DATA

FLASH POINT & METHOD: 142 F (TCC)

FLAMMABLE LIMITS IN AIR, % BY VOLUME: 0.9 % LOWER 7.0 % UPPER

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, foam.

SPECIAL FIRE FIGHTING PROCEDURES:

Wear self-contained breathing apparatus with full facepiece operated with positive pressure-demand when fighting large fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Vapors heavier than air and may travel along ground to ignition sources distant from fire area.

6. REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: None known.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizing agents.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:

Carbon monoxide, carbon dioxide and hydrocarbons.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Strong oxidizing agents.

7. SPILL & LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Ventilate area. Remove sources of ignition. Prevent entry into sewers and waterways. Pick up free liquid for recycle and/or disposal. Absorb small amounts on inert material for disposal.

WASTE DISPOSAL METHOD:

Dispose of product in accordance with all local, state and federal laws and regulations.

8. PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE): If exposure levels exceed those established, use approved air supplied respirator in absence of proper environmental controls.

VENTILATION: Provide sufficient ventilation to avoid exposure levels above established TLV's.

PROTECTIVE GLOVES: Wear chemically resistant gloves.

EYE PROTECTION: Splash goggles.

OTHER PROTECTIVE EQUIPMENT: Wear impervious clothing to avoid contact with product.

9. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Empty containers may be dangerous since fumes may still exist. Observe precautions given for this product as stated in this document.

PRECAUTIONS DURING USE: None.

10. ADDITIONAL INFORMATION

REGULATORY INFORMATION:

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

- * Immediate Health
- * Delayed Health
- * Fire Hazard

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

- * None

CAL. PROP 65: This product contains the following chemical(s) known to the state of California to cause cancer and/or birth defects:
< 150 ppm p-dichlorobenzene CAS 00106-46-7

WHMIS (Canada): ND

REASON FOR REVISION: New format.

PREPARED BY: Richard P. Kelly

This information is to the best of Marvel Oil Company's knowledge and belief, accurate and reliable. However, no representation, warranty, or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.

NA = Not applicable

ND = Not determined

MSDMM010

MATERIAL SAFETY DATA SHEET
COMPLIES WITH OSHA'S HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

SECTION I - PRODUCT IDENTIFICATION

Product Name: Enviro-Seal Parts Protector
Product Number: 74173
Product Type: AEROSOL
Formula: Proprietary
Distributor's Name: IBS, Inc.
Distributor's Address: P.O. Box1717, Auburn, WA 98017-1717
DOT Ship Description: CONSUMER COMMODITY, ORM-D

Date Prepared: 11/01/07
Information Phone: (800) 678-1906
Emergency Phone: (800) 255-3924

HMIS Rating (Based on Aerosol Conc.):
0-Minimal 1-Slight 2-Moderate
3-Serious 4-Extreme

HEALTH:	1
FLAMMABILITY:	3
PHYSICAL HAZARD:	0
Personal Protection:	B

SECTION II - INGREDIENTS

<u>CHEMICAL NAME</u>	<u>CAS #</u>	<u>%WT</u>	<u>313/Chem</u>	<u>Skin</u>	<u>Carcinogen</u>	<u>PEL</u>	<u>TLV-TWA</u>
Petroleum Distillates	8052-41-3	15 - 25	NO	NO	NO	500 ppm	100 ppm
Isoparaffinic Hydrocarbon	64741-66-8	10 - 20	NO	NO	NO	N/E	281 ppm*
Liquefied Petroleum Gas	68476-86-8	40 - 50	NO	NO	NO	1000 ppm	1000 ppm

*manufacturer's Recommended Exposure Limit (REL)-TWA

SECTION III - PHYSICAL DATA

Aerosol Concentrate:
Boiling Point: 244°F
pH: N/A
Appearance/Odor: Dark brown liquid with petroleum solvent odor
Specific Gravity (H₂O=1)@70°F: 0.848
Solubility In Water: insoluble
Vapor Density(Air=1): >1

Total Contents:
Total VOC %: 76.33%
Vapor Pressure (can; psig @72°F): 50

SECTION IV - FIRE AND EXPLOSION DATA

Flash Point (Conc.): 67°F (T.O.C.)
Extinguishing Media: Foam, CO₂, Dry Media
Special Fire Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Cool fire exposed containers to prevent rupturing.
Unusual Fire and Explosion Hazards: Exposure to temperature above 120° F may cause bursting.
Flammability (as per CSMA Flame Projection Test): Extremely-Flammable Spray

SECTION V - REACTIVITY DATA

Stability: Material Stable.
Incompatibility: Avoid contact with strong oxidizing agents.
Hazardous Decomposition Products: Carbon Dioxide, Carbon Monoxides, Aldehydes.
Hazardous Polymerization: Will not Occur.

SECTION VI - STORAGE AND HANDLING

KEEP OUT OF REACH OF CHILDREN.
For Industrial and Institutional use only.
Store in a cool, dry area away from heat or open flame.
Do not store at temperatures above 120° F.
NFPA Code 30B Rating: Level 3 Aerosol.

SECTION VII - HEALTH AND FIRST AID

PRIMARY ROUTES OF ENTRY & EFFECTS OF OVER EXPOSURE:

Eyes: May cause moderate to severe irritation accompanied by stinging, tearing, redness, blurred vision, and pain.
Skin: Frequent or prolonged contact may cause irritation and possibly dermatitis. May aggravate existing skin conditions.
Inhalation: Inhalation of mist can cause irritation of nasal and respiratory passages. Abusive or excessive inhalation may cause irritation to the upper respiratory tract, anesthesia, dizziness, headache, rapid breathing, narcosis, and other central nervous system effects, including unconsciousness and death.
Ingestion: Can cause gastrointestinal irritation, nausea, vomiting, diarrhea and abdominal pain. Aspiration of material into the lungs can cause severe pulmonary injury, possibly progressing to death.

FIRST AID PROCEDURES:

Eyes: Flush with large amounts of cool running water for at least 15 minutes while holding upper and lower lids open. If irritation persists get medical attention immediately.
Skin: Wash with soap and water. If irritation persists seek medical attention.
Inhalation: Remove to fresh air. Seek medical attention immediately. If breathing stops give artificial respiration.
Ingestion: Do not induce vomiting. Seek medical attention immediately.

SECTION VIII - SPECIAL PROTECTION DATA

Respiratory Protection: None needed for proper use in accordance with label directions.
Ventilation: Provide local exhaust to keep concentration of Section II ingredients below acceptable limits.
Protective Gloves: Use chemical resistant gloves if hand contact will be made.
Eye Protection: Always wear safety glasses or chemical proof goggles when working with chemicals.

SECTION IX - SPILL OR LEAK PROTECTION

STEPS TO BE TAKEN IN CASE OF SPILL OR LEAK: Allow propellant to evaporate. Maintain local exhaust and adequate ventilation. No smoking. Keep sparks, heat sources and open flame far away from spill or leak. Cover with absorbent material and sweep up. Wash area to prevent slipping. Dispose of soaked absorbent material in accordance with Federal, State and local laws.

WASTE DISPOSAL METHOD: Aerosol cans, when emptied and depressurized through normal use, pose no disposal hazard and should be recycled. Consult Federal, State and local authorities for approved procedures.

N/A= NOT APPLICABLE · N/E=NOT ESTABLISHED · N/D=NOT DETERMINED · <=LESS THAN · >=MORE THAN

NOTICE: The information contained on this Material Safety Data Sheet is considered accurate as of the date of publication. It is not necessarily all inclusive nor fully adequate in every circumstance. The suggestions should not be confused with, nor followed in violation of applicable laws, regulations, rules or insurance requirements. No warranty, express or implied, of merchantability, fitness, accuracy of data, or the results to be obtained from the use thereof is made. The vendor assumes no responsibility for injury or damages resulting from the inappropriate use of this product.

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6850-00-926-2275

6850-00-435-4052

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MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 49 CFR 1910.1200 and OSHA Form 174

IDENTITY AND MANUFACTURER'S INFORMATION	
NFPA Rating: Health-3; Flammability-3; Reactivity-0; Special- -	HMIS Rating: Health-3; Flammability-3; Reactivity-0; Personal Protection-B
Manufacturer's Name: RITE-KEM, INC. Address: 703 Westmoreland Drive Tupelo, MS 38801	DOT Hazard Classification: SEE SECTION 8 BELOW IMDG: METHANOL, 3, 6.1, UN1230, PG II, in Limited Quantity
CAGE OVVNO GSA CONTRACT GS-07F-0283J BPA GS-F-BRDEM	Identity (trade name as used on label): CLEANING COMPOUND, WINDSHIELD
Date Prepared: 10/10/2007 Prepared By: ML	NSN 6850-00-926-2275 (IAW A-A-59664A) Revision - 5 6850-01-435-4052
Information Calls: (662)840-8060 EMERGENCY RESPONSE NUMBER: 1(800)424-9300	NOTICE: JUDGMENT BASED ON INDIRECT TEST DATA

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION					
COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
METHANOL (approx 70% by weight)	67-56-1	Yes	100	100	d
Remaining Ingredients are non-hazardous and are a trade secret					

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS	
Boiling Point: -165°F	Specific Gravity (H2O=1): 0.890
Vapor Pressure: PSIG @ 70°F (Aerosols): N/A	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): 68°F 27 mm/Hg
Vapor Density (Air = 1): N/D	Evaporation Rate (water = 1): >1
Solubility in Water: Miscible	Water Reactive: No
Appearance and Odor: Clear, light green, non-viscous liquid with alcohol odor.	

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA		
FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) N/A	Auto Ignition Temperature N/A	Flammability Limits in Air by % in Volume: % LEL: 5.5 % UEL: 36.5
FLASH POINT AND METHOD USED (non-aerosols): 63F TCC	SPECIAL FIRE FIGHTING PROCEDURES: Full protective clothing & self-contained breathing apparatus should be worn when exposed to vapors or products of combustion.	
EXTINGUISHER MEDIA: Water spray, alcohol foam, CO2, dry chemical.	Unusual Fire & Explosion Hazards: None known.	

SECTION 4 - REACTIVITY HAZARD DATA	
STABILITY <input checked="" type="checkbox"/> STABLE <input type="checkbox"/> UNSTABLE	HAZARDOUS POLYMERIZATION <input type="checkbox"/> WILL <input checked="" type="checkbox"/> WILL NOT OCCUR
Incompatibility (Mat. to avoid): Alkal & alkaline earth metals, anything reactive to water.	Conditions to Avoid: Heat, sparks, open flame.
Hazardous Decomposition Products: Oxides of carbon, formaldehyde, methanol vapors.	

SECTION 5 - HEALTH HAZARD DATA	
PRIMARY ROUTES OF ENTRY: <input checked="" type="checkbox"/> INHALATION <input type="checkbox"/> INGESTION <input checked="" type="checkbox"/> SKIN ABSORPTION <input type="checkbox"/> EYE <input type="checkbox"/> NOT HAZARDOUS	
ACUTE EFFECTS: Prolonged or repeated exposure by any route may cause systemic poisoning including varying degrees of temporary or permanent visual damage.	
Inhalation: May irritate respiratory mucous membranes. May cause systemic toxicity.	
Eye Contact: May cause eye irritation. Sufficient absorption for systemic toxicity unlikely.	Skin Contact: May cause irritation & dryness. Absorption from prolonged contact may cause systemic toxicity.
Ingestion: Causes dizziness, headache, acidosis, visual disturbances & damage & possible unconsciousness.	
CHRONIC EFFECTS: Methanol poisoning can result in permanently impaired vision or blindness & degenerative damage to internal organs. The effects of methanol may be cumulative.	
Medical Conditions Generally Aggravated by Exposure: Not specifically known.	

EMERGENCY FIRST AID PROCEDURES	
Eye Contact: Flush with large amounts of water for 15 minutes. If irritation persists, get medical attention.	
Skin Contact: Wash with large amounts of water. If irritation persists, get medical attention.	
Inhalation: Remove to fresh air. Give artificial respiration or oxygen as needed. If symptoms develop, get medical attention.	
Ingestion: Give 2 glasses of water and INDUCE VOMITING. Repeat until vomitus is clear. Get immediate medical attention. Never give anything by mouth to an unconscious person.	

SECTION 6 - CONTROL AND PROTECTIVE MEASURES	
Respiratory Protection (specify type): None needed under normal conditions of handling and usage.	
Protective Gloves: Impervious gloves.	Eye Protection: Chemical goggles or full face shield.
Ventilation Requirements: No special ventilation is needed under normal conditions of handling. If mechanical ventilation is required, use explosion-proof ventilation.	
Other Protective Clothing & Equipment: Impervious clothing as needed where splashing is a problem. Eyewash stations and safety showers.	
Hygienic Work Practices: Do not eat, drink or smoke in work area. Wash hands after handling.	

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE	
Steps To Be Taken if Material is Spilled Or Released: Contain spill. Soak up in inert absorbent material. Place in leak-proof containers. Seal & properly label containers.	
Waste Disposal Methods: Dispose of in accordance with all local, state and federal regulations.	
Precautions To Be Taken in Handling & Storage: Store in original shipping containers. Keep closed when not in use. Shelf life 1 year. Store in cool area away from heat, sparks or open flame.	
Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Read & follow label directions.	

SECTION 8 - TRANSPORT INFORMATION			
US Department of Transportation		Subsidiary Hazard: 6.1 (Toxic Material)	
Shipping Name: METHANOL, 3, 6.1, UN1230, PGII,	Hazard Class: 3, (6.1), UN1230, PGII	Subsidiary Packing Group: III in Limited Quantity	MFAG Table No.: 306
Label: FLAMMABLE	Exemption (1 gI container or less):	EMS No.: 3-06	Flash point (test method): 54F (TCC)
Shipping Name: METHANOL SOLUTION, ORM-D	Hazard Class: ORM-D	IMDG Page Number: 3251	Label: FLAMMABLE
Label: ORM-D		IMDG: (Containers over 1 gI)	
Proper Shipping Name: METHANOL, 3, 6.1, UN1230, PGII, in Limited Quantity	Hazard Classification: 3 (Flammable Liquid)	International Marine UN Number: UN1230	Packing Group: II
International Marine UN Number: UN1230	Packing Group: II in Limited Quantity		

Section I -- PRODUCT & COMPANY IDENTIFICATION

PRODUCT NUMBER A202
PRODUCT NAME NCP-2 Battery Corrosion Preventative
HMS CODES Health: 2*, Flammability: 4, Reactivity: 0

MANUFACTURER'S NAME
The Noco® Company
Cleveland, OH 44122

EMERGENCY TELEPHONE NO.
(800) 424-9300
INFORMATION TELEPHONE NO.
(800) 456-6626

DATE OF PREPARATION
25-FEBRUARY-08

Section II -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
15	74-98-6	Propane ACGIH TLV OSHA PEL	2500 ppm 1000 ppm	760 mm
34	64742-62-7	Paraffinic Mineral Oil ACGIH TLV OSHA PEL	5 mg/m³ as Mist 5 mg/m³ as Mist	
0.7	100-41-4	Ethylbenzene ACGIH TLV ACGIH TLV OSHA PEL OSHA PEL	100 ppm 125 ppm STEL 100 ppm 125 ppm STEL	7.1 mm
4	1330-20-7	Xylene ACGIH TLV ACGIH TLV OSHA PEL OSHA PEL	100 ppm 150 ppm STEL 100 ppm 150 ppm STEL	5.9 mm
20	67-64-1	Acetone ACGIH TLV ACGIH TLV OSHA PEL	500 ppm 750 ppm STEL 1000 ppm	180 mm
20	78-93-3	Methyl Ethyl Ketone ACGIH TLV ACGIH TLV OSHA PEL OSHA PEL	200 ppm 300 ppm STEL 200 ppm 300 ppm STEL	70 mm

Section III -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

Irritation of eyes, skin and upper respiratory system.
May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

Section IV -- FIRST AID MEASURES

If INHALED:	If affected, remove from exposure. Restore breathing. Keep warm and quiet.
If on SKIN:	Wash affected area thoroughly with soap and water. Remove contaminated clothing and launder before re-use.
If in EYES:	Flush eyes with large amounts of water for 15 minutes. Get medical attention.
If SWALLOWED:	Do not induce vomiting. Get medical attention immediately.

Section V -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
Propellant <0 °F	1.0	12.8

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section VI -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area. Remove with inert absorbent.

Section VII -- HANDLING AND STORAGE

STORAGE CATEGORY

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120 °F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

Section VIII -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes.

Avoid breathing vapor and spray mist.

Wash hands after using.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

Continued on page 3

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Section IX -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	6.35 lb/gal	761 g/l
SPECIFIC GRAVITY	0.76	
BOILING POINT	<0 - 292 °F	<-18 - 144 °C
MELTING POINT	Not available	
VOLATILE VOLUME	65 %	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS	VOC Theoretical	
Volatile weight	40.00% Less Water and Federally Exempt Solvents	

Section X -- STABILITY AND REACTIVITY

STABILITY	Stable
CONDITIONS TO AVOID	None known
INCOMPATIBILITY	None known
HAZARDOUS DECOMPOSITION PRODUCTS	By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION	Will not occur

Section XI -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDOUS

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

Methyl Ethyl Ketone may increase the nervous system effects of other solvents.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary and reproductive systems.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

CAS No.	Ingredient Name				
74-98-6	Propane				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
64742-62-7	Paraffinic Mineral Oil				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
100-41-4	Ethylbenzene				
		LC50	RAT	4HR	Not Available
		LD50	RAT		3500 mg/kg
1330-20-7	Xylene				
		LC50	RAT	4HR	5000 ppm
		LD50	RAT		4300 mg/kg
67-64-1	Acetone				
		LC50	RAT	4HR	Not Available
		LD50	RAT		5800 mg/kg
78-93-3	Methyl Ethyl Ketone				
		LC50	RAT	4HR	Not Available
		LD50	RAT		2740 mg/kg

Continued on page 4

Section XII -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available

Section XIII -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulation regarding pollution.

Section XIV -- TRANSPORT INFORMATION

No data available

Section XV -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
100-41-4	Ethylbenzene	0.7	
1330-20-7	Xylene	4	
78-93-3	Methyl Ethyl Ketone	20	

CALIFORNIA PROPOSITIDN 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATIDN

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Section XVI -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formatted, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

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MATERIAL SAFETY DATA SHEET: **THREAD-EZE ULTRA BRUSH TOP** PAGE : 1
(000000-000000- -5913) | DATE OF ISSUE | SUPERSEDES |
| 1/16/2004 | 11/20/2002 |

SECTION I - GENERAL INFORMATION

CHEMICAL NAME & SYNONYMS TRADE NAME & SYNONYMS
N/A THREAD-EZE ULTRA BRUSH TOP

CHEMICAL FAMILY: FORMULA
MINERAL/PETROLEUM BLEND X <--MIXTURE

MANUFACTURER'S NAME:
CHEMSEARCH, DIV. OF NCH CORP.

ADDRESS (NUMBER, STREET, CITY, STATE & ZIP CODE)
BOX 152170
IRVING, TEXAS 75015

PREPARED BY: | PRODUCT CODE NUMBER | EMERGENCY TELEPHONE NUMBER
L BOYNTON/CHEMIST 5913 800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

CHEMICAL NAME (INGREDIENTS):
SEVERELY REFINED MINERAL OIL
HAZARD---->OIL MIST | TLV--->5 MG/M3 1. | PEL--->5 MG/M3 2. |
STEL(TWA)*->10MG/M3 1. | CAS#-->8042-47-5 ||

CALCIUM CARBONATE
HAZARD---->IRRITANT | TLV--->3 MG/M3 1. | PEL--->5 MG/M3 2. |
STEL(TWA)*->N/E | CAS#-->1317-65-3 ||

ZINC OXIDE
HAZARD---->IRRITANT | TLV--->2 MG/M3 1. | PEL--->5 MG/M3 2. |
STEL(TWA)*->10 MG/M3 1. | CAS#-->1314-13-2 ||

SECTION IIA - NON-HAZARDOUS INGREDIENTS

NON-HAZARDOUS INGREDIENT NAMES AND CAS NUMBERS ARE PROTECTED UNDER NJ TRADE SECRET
REGISTRY # 409363-5032P

SECTION III - PHYSICAL DATA

BOILING PT. (F) | >450F | SPEC. GRAVITY (H2O=1) | 1.16

VAPOR PR. (MM HG) | <0.1 | COLOR | WHITE

VAPOR DENSITY | > 1 | ODOR | PETROLEUM

PH. @ 100% | N/A | CLARITY | OPAQUE

% VOLATILE BY VOL | 60-65 | EVAPORATION RATE | < 0.1
| (BU A/C = 1)

MATERIAL SAFETY DATA SHEET: **THREAD-EZE ULTRA BRUSH TOP PAGE : 2**
SECTION III – PHYSICAL DATA (CONTINUED)

H2O SOLUBILITY | NEGLIGIBLE

VISCOSITY | VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

FLASH POINT: NON-FLAM | FLAMMABLE LIMITS | LEL | UEL
C.O.C. | N/E | N/E | N/E

EXTINGUISHING MEDIA "ALCOHOL" DRY WATER
X <--FOAM X <--FOAM X <--CO2 X <--CHEMICAL X <--SPRAY <--OTHER

SPECIAL FIRE FIGHTING PROCEDURES:

FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR.
EXTINGUISHING MEDIA SHOULD BE CHOSEN BASED ON THE NATURE OF THE SURROUNDING FIRE. COOL
FIRE EXPOSED CONTAINERS WITH WATER SPRAY TO PREVENT BURSTING.

UNUSUAL FIRE AND EXPLOSION HAZARDS

THE USE OF WATER SPRAY WHILE EFFECTIVE, MAY CAUSE FROTHING AND FOAMING. NEVER USE A
WATER JET AS THIS WILL JUST SPREAD THE FIRE. USE CARE AS SPILLS MAY BE SLIPPERY.

NFPA HAZARD RATING (0=INSIGNIFICANT; 1=SLIGHT; 2=MODERATE; 3=HIGH; 4=EXTREME):
1 <--HEALTH 1 <--FLAMMABILITY 0 <--INSTABILITY <--SPECIAL

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE:
NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

EFFECTS OF OVEREXPOSURE:

- ACUTE - (SHORT TERM EXPOSURE)

INGESTION: MAY CAUSE IRRITATION WITH POSSIBLE NAUSEA, VOMITING AND DIARRHEA.
INHALATION: MAY CAUSE RESPIRATORY IRRITATION SEEN AS COUGHING AND SNEEZING.
SKIN CONTACT: MAY CAUSE IRRITATION SEEN AS INFLAMMATION, ITCHING AND REDNESS.
EYE CONTACT: MAY CAUSE IRRITATION SEEN AS STINGING, TEARING AND REDNESS.

- CHRONIC - (LONG TERM EXPOSURE)

CHRONIC EXPOSURE TO ZINC OXIDE MAY CAUSE RESPIRATORY TRACT IRRITATION WITH
NASOPHARYNGITIS AND LARYNGITIS. ON RARE OCCASIONS, PROLONGED AND REPEATED EXPOSURE TO
OIL MIST POSES A RISK OF CHRONIC LUNG INFLAMMATION. THIS CONDITION IS USUALLY ASYMPTOMATIC
AS A RESULT OF REPEATED SMALL ASPIRATIONS. SHORTNESS OF BREATH AND COUGHING ARE THE MOST
COMMON SYMPTOMS. ASPIRATION MAY LEAD TO PULMONARY EDEMA AND HEMORRHAGE AND MAY BE
FATAL. SIGNS OF LUNG INVOLVEMENT INCLUDE INCREASED RESPIRATION AND HEART RATES AS WELL AS
A BLUISH DISCOLORATION OF THE SKIN. CHRONIC SKIN CONTACT MAY PROMOTE DERMATITIS AND OIL
ACNE. IN RARER CASES, AN INCREASED SENSITIVITY TO SUNLIGHT (PHOTOSENSITIVITY) MAY OCCUR.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN
CONDITIONS SUCH AS ASTHMA, EMPHYSEMA AND DERMATITIS.

TARGET ORGANS: NONE KNOWN. THERE IS NO PRIMARY ROUTE OF ENTRY INTO THE BODY. THE PRIMARY ROUTES OF EXPOSURE ARE SKIN AND EYE CONTACT.

PRIMARY ROUTE OF ENTRY: < INHALATION < INGESTION < ABSORPTION

EMERGENCY & FIRST AID PROCEDURES

INHALATION:

REMOVE FROM THE AREA TO FRESH AIR. SEEK MEDICAL ATTENTION IF RESPIRATORY IRRITATION DEVELOPS OR IF BREATHING BECOMES DIFFICULT.

MATERIAL SAFETY DATA SHEET: **THREAD-EZE ULTRA BRUSH TOP** PAGE : 3
SECTION V - HEALTH HAZARD DATA (CONTINUED)

EYE CONTACT:

RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING WITH PLENTY OF WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

SKIN CONTACT:

WASH AFFECTED AREAS WITH PLENTY OF SOAP AND WATER FOR SEVERAL MINUTES. REMOVE AND CLEAN CONTAMINATED CLOTHING AND SHOES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

INGESTION:

GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. GET IMMEDIATE MEDICAL ATTENTION IF DISCOMFORT OCCURS.

NOTES TO PHYSICIAN:

THERE IS NO SPECIFIC ANTIDOTE. TREAT THE PATIENT SYMPTOMATICALLY.

SECTION VI - TOXICITY INFORMATION

PRODUCT CONTAINS CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN BY:
IARC <--YES NTP <--YES OSHA <--YES ACGIH <--YES OTHER <--YES
X<--NO NTP X<--NO OSHA X<--NO ACGIH X<--NO OTHER X<--NO

SEVERELY REFINED MINERAL OIL

ORL-RAT TDLO: 92 G/KG/92D-C 4.

ORL-RAT LD50: > 5000 MG/KG 3.

SKN-RBT LD50: > 2000 MG/KG 3.

EYE-RBT SDT: NON-IRRITATING 3.

SKN-RBT SDT: NON-IRRITATING 3.

BUEHLER GUINEA PIG SENSITIZATION TEST: NON-SENSITIZING 3.

SKN-RBT SUB-CHRONIC: 28-DAY NON-IRRITATING 3.

SKN-MSE CHRONIC: 104-WEEK NO SKIN TUMORS AT SITE OF APPLICATION 3.

MODIFIED AMES ASSAY (SALMONELLA TYPHIMURIUM): NEGATIVE 3.

IN-VITRO MSE LYMPHOMA ASSAY NEGATIVE NO TOXICITY 3.

LIFETIME MOUSE SKIN PAINTING STUDIES INDICATED THAT THIS PRODUCT IS NOT MUTAGENIC OR CARCINOGENIC. 3.

MINERAL OIL MISTS DERIVED FROM HIGHLY REFINED OILS ARE REPORTED TO HAVE LOW ACUTE AND SUB-ACUTE TOXICITIES IN ANIMALS. EFFECTS FROM SINGLE SHORT-TERM REPEATED EXPOSURES TO HIGH CONCENTRATIONS OF MINERAL OIL MISTS WELL ABOVE APPLICABLE WORKPLACE EXPOSURE LEVELS INCLUDE LUNG INFLAMMATORY REACTION, LIPOID GRANULOMA FORMATION AND LIPOID PNEUMONIA. IN ACUTE AND SUB-ACUTE STUDIES INVOLVING EXPOSURES TO LOWER CONCENTRATIONS OF MINERAL OIL MISTS AT OR NEAR CURRENT WORK PLACE EXPOSURE LEVELS PRODUCED NO SIGNIFICANT TOXICOLOGICAL EFFECTS. IN LONG TERM STUDIES (UP TO TWO YEARS) NO CARCINOGENIC EFFECTS HAVE BEEN REPORTED IN ANY ANIMAL SPECIES TESTED. THIS PRODUCT IS FORMULATED WITH MINERAL OILS WHICH ARE CONSIDERED TO BE SEVERELY REFINED AND NOT CONSIDERED TO BE CARCINOGENIC UNDER IARC. 3.

CALCIUM CARBONATE

MILD TO MODERATE EYE IRRITANT 3.

MILD TO MODERATE SKIN IRRITANT 3.

ORL-RAT LD50: 6450 MG/KG 3.

ZINC OXIDE

ORL-RAT LD50: >8437 MG/KG 4.

ORL-HMN LDLO: 500 MG/KG 4.
IHL-HMN TCLO: 600 MG/M3 4.
SKN-RBT SDT: 500 MG/24H MILD 4.
EYE-RBT SDT: 500 MG/24H MILD 4.

MATERIAL SAFETY DATA SHEET: **THREAD-EZE ULTRA BRUSH TOP PAGE : 4**
SECTION VII - REACTIVITY DATA

| X <--STABLE <--UNSTABLE | CONDITIONS TO AVOID
STABILITY | _____
NONE KNOWN.

INCOMPATIBILITY (MATERIALS TO AVOID):
STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE;
ACIDS AND ALKALIES.

HAZARDOUS DECOMPOSITION PRODUCTS
OXIDES OF ALUMINUM AND CARBON; VARIOUS HYDROCARBONS.

| WILL NOT MAY | CONDITIONS TO AVOID
HAZARDOUS | X <--OCCUR <--OCCUR |
POLYMERIZATION | _____ | _____
N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
WEAR APPROPRIATE CLOTHING. USE CARE AS SPILLS MAY BE SLIPPERY. DIKE AND CONTAIN SPILL.
ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED
CONTAINER FOR DISPOSAL. PREVENT THE PRODUCT FROM CONTAMINATING SOIL OR FROM ENTERING
SEWAGE AND DRAINAGE SYSTEMS AND BODIES OF WATER. FLUSH AREA WITH WATER.

WASTE DISPOSAL METHOD(S):
DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

NEUTRALIZING AGENT:
N/A

SECTION IX - SPECIAL PROTECTION INFORMATION

REQUIRED VENTILATION:
GENERAL VENTILATION IS NORMALLY ADEQUATE.

RESPIRATORY PROTECTION:
NONE UNDER NORMAL CONDITIONS OF USE.

GLOVE PROTECTION:
NONE UNDER NORMAL CONDITIONS OF USE.

EYE PROTECTION:
NONE UNDER NORMAL CONDITIONS OF USE.

OTHER PROTECTION:
NONE UNDER NORMAL CONDITIONS OF USE.

SECTION X - STORAGE AND HANDLING INFORMATION

STORAGE TEMPERATURE INDOOR HEATED REFRIGERATED OUTDOOR
MAX: 120 F. MIN: 35 F. X

PRECAUTIONS TO BE TAKEN IN HANDLING & STORING

ALWAYS STORE MATERIAL IN ITS ORIGINAL CONTAINER. KEEP CONTAINER TIGHTLY CLOSE WHEN NOT IN USE. EMPTY CONTAINERS MAY CONTAIN PRODUCT RESIDUE WHICH MAY EXHIBIT THE HAZARDS OF THE PRODUCT. TO AVOID POSSIBLE EXPLOSION DO NOT PRESSURIZE, CUT, WELD, SOLDER, DRILL, GRIND OR EXPOSE EMPTY CONTAINERS TO HEAT, HOT SURFACES, SPARKS OR OPEN FLAMES.

OTHER PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THIS PRODUCT. FOLLOW THE LABEL DIRECTIONS. REMOVE OIL SOAKED CLOTHING AND SHOES. WASH CLOTHING AND CLEAN SHOES BEFORE REUSE.

SECTION XI - REGULATORY INFORMATION

CHEMICAL NAME C.A.S NUMBER UPPER % LIMIT

ZINC COMPOUNDS N/A 15

THOSE INGREDIENTS LISTED ABOVE ARE SUBJECT TO THE REPORTING REQUIREMENTS OF 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372. IF UE (USE EXEMPTION) APPEARS UNDER UPPER % LIMIT, END USERS ARE EXEMPT FROM NOTIFICATION BECAUSE THE PRODUCT IS USED AND LABELED FOR ROUTINE JANITORIAL WORK, OR THE PRODUCT IS USED AND LABELED FOR FACILITY GROUNDS MAINTENANCE (SUCH AS FERTILIZERS AND HERBICIDES), OR THE PRODUCT IS USED AND LABELED FOR MAINTAINING MOTOR VEHICLES.

SECTION XII - REFERENCES

1. THRESHOLD LIMITS VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2002.
2. OSHA PEL
3. VENDOR'S MSDS.
4. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFODISC, 2002.

* SHORT TERM EXPOSURE LIMIT (TWA) LISTED AS FINAL RULE LIMITS PUBLISHED IN THE FEDERAL REGISTER/VOL. 54 NO. 12, 1-19-89

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHEMSEARCH, DIV. OF NCH CORP. ASSUMES NO RESPONSIBILITY FOR PERSONAL INJURY OR PROPERTY DAMAGE CAUSED BY THE USE, STORAGE OR DISPOSAL OF THE PRODUCT IN A MANNER NOT RECOMMENDED ON THE PRODUCT LABEL.
USERS

ASSUME ALL RISKS ASSOCIATED WITH SUCH UNRECOMMENDED USE, STORAGE, OR DISPOSAL OF THE PRODUCT

% Text: <5.0	Environmental Wt:		
	Other REC Limits: N/K		
OSHA PEL: 5000 PPM	Code: M	OSHA STEL:	Code:
ACGIH TLV: 5000PPM/30000STEL	Code: M	ACGIH N/P STEL:	Code:
EPA Rpt Qty:		DOT Rpt Qty:	

Ozone Depleting Chemical: N

Health Hazards Data

TOP

LD50 LC50 Mixture NONE SPECIFIED BY MANUFACTURER.

Route Of Entry Inds - Inhalation: YES	Skin: YES	Ingestion: YES
Carcinogenicity Inds - NTP: NO	IARC: NO	OSHA: NO

Health Hazards Acute And Chronic

EYES: IRRITATION, TEARING, AND REDNESS, BLURRED VISION. INGESTION: GI IRRITATION, NAUSEA, VOMITING, DIARRHEA. INHALATION: RESPIRATORY TRACT IRRITATION, DIZZINESS, WEAKNESS, HEADACHE, NAUSEA, NARCOSIS, EUPHORIA. CHLOROCARBON MATLS HAVE PRDCE D SENSIT OF MYOCARDIUM TO EPINEPHRINE IN LAB ANIMALS & COULD HAVE (EFTS OF OVEREXP)

Explanation Of Carcinogenicity

NOT RELEVANT

Signs And Symptions Of Overexposure

HLTH HAZS: SIMILAR EFT IN HUMANS. ADRENOMIMETICS (E.G., EPINEPHRINE) MAY BE CONTRAINDICATED EXCEPT FOR LIFE-SUSTAINING USES IN HUMANS ACUTELY/CHRONICALLY EXPOSED TO CHLOROCARBONS (FP N).

Medical Cond Aggravated By Exposure

NONE SPECIFIED BY MANUFACTURER.

First Aid

EYES: FLUSH EYES & UNDER LIDS W/PLENTHY OF COOL WATER FOR @ LST 15 MIN. OBTAIN MED ATTN. INGEST: GIVE SEVERAL GLASSES OF WATER & INDUCE VOMIT. OBTAIN MED ATTN. NEVER GIVE ANYTHING BY MOUTH TO AN UNCON PE RSON. INHAL: REMOVE TO FRESH AIR. PERFORM ARTF RESP IF INDICATED. OBTAIN MED ASSISTANCE. DO NOT GIVE STIMULANTS. SKIN: REMOVE CONTAM CLTHG & LAUNDRER BEFORE RE-USE. WASH W/SOAP & WATER. NOTE TO (SUPDAT)

Spill Release Procedures

VENTILATE AREA. SOAK UP ON INERT ABSORBENT AND PLACE IN CLOSED CONTAINER FOR DISPOSAL.

Neutralizing Agent

NONE SPECIFIED BY MANUFACTURER.

Waste Disposal Methods

DISPOSAL MUST BE I/A/W FEDERAL, STATE & LOCAL REGULATIONS (FP N). CONSULT LOCAL ENVIRONMENTAL AUTHORITIES. DISPOSE OF EMTPY CANS IN NON-INCINERATED TRASH ONLY.

Handling And Storage Precautions

STORE IN A COOL, DRY PLACE. KEEP CONTAINERS TIGHTLY CLOSED WHEN NOT IN USE. KEEP A WAY FROM HEAT, OPEN FLAME AND DIRECT SUNLIGHT.

Other Precautions

KEEP OUT OF REACH OF CHILDREN. DO NOT PUNCTURE OR INCINERATE CANS. NO SMOKING IN AREA OF USE. DO NOT USE IN THE GENERAL VICINITY OF ARC WELDING, OPEN FLAMES OR HOT SURFACES. HEAT AND/OR UV RADIA MAY C AUSE FORM OF HCL &/OR PHOSGENE (FP N).

Fire and Explosion Hazard Information

[TOP](#)**Flash Point Method:** CC**Flash Point:****Flash Point Text:** NONE**Autoignition Temp:****Autoignition Temp Text:** N/A**Lower Limits:** N/A**Upper Limits:** N/A**Extinguishing Media**

FOAM, CARBON DIOXIDE, DRY CHEMICAL.

Fire Fighting Procedures

WEAR NIOSH/MSHA APPROVED PRESSURE DEMAND SCBA & FULL PROTECTIVE EQUIPMENT (FP N). USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS.

Unusual Fire/Explosion Hazard

EXPOS TO TEMPS IN EXCESS OF 120F OR PROLONGED EXPOSURE TO DIRECT SUNLIGHT MAY CAUSE CANS TO BURST. THERMAL DECOMP PRODS MAY INCLUDE HCL & PHOSGENE (FP N).

Control Measures

[TOP](#)**Respiratory Protection**

USE WITH ADEQUATE VENTILATION. USE OF A NIOSH/MSHA APPROVED ORGANIC VAPOR RESPIRATOR IS REQUIRED IF TLV IS TO BE EXCEEDED.

Ventilation

LOCAL EXHAUST/MECHANICAL:RECOMMENDED.

Protective Gloves

NEOPRENE GLOVES.

Eye Protection

ANSI APPROVED CHEM WORKERS GOGGS(SUPDAT)

Other Protective Equipment

EMERG EYE WASH AND DELUGE SHOWER WHICH MEET ANSI DESIGN CRITERIA (FP N).

Work Hygienic Practices

WASH THOROUGHLY AFTER HANDLING.

Supplemental Safety and Health

FIRST AID PROC:MD:DO NOT ADMINISTER STIMULANTS AFTER OVER-EXPOSURE. EYE PROT:AND FULL LENGTH FACE SHIELD (FP N).

Physical/Chemical Properties

[TOP](#)**HCC:****NRC/State LIC No:****Net Prop WT For Ammo:****Boiling Point:****B.P. Text:** 189F,87C**Melt/Freeze Pt:****M.P/F.P Text:** N/K**Decomp Temp:****Decomp Text:** N/K**Vapor Pres:** N/K**Vapor Density:** 4.5**Volatile Org Content %:****Spec Gravity:** 1.40**VOC Pounds/Gallon:****PH:** N/A

VOC Grams/Liter:
Evaporation Rate & N/K
Reference:

Viscosity: N/P

Solubility in Water: INSOLUBLE
Appearance and Odor: CLEAR, WATER WHITE LIQUID, CHLORINATED
SOLVENT ODOR.

Percent Volatiles by Volume: 100

Corrosion Rate: N/K

Reactivity Data

TOP

Stability Indicator: YES
Stability Condition To Avoid: HIGH TEMPERATURES.
Materials To Avoid: OXIDIZING AGENTS.
Hazardous Decomposition THERMAL DECOMPOSITION MAY YIELD
Products: OXIDES OF CARBON, HCL, CHLORINE AND
PHOSGENE (FP N).
Hazardous Polymerization NO
Indicator:
Conditions To Avoid NOT RELEVANT
Polymerization:

Toxicological Information

TOP

Toxicological Information: N/P

Ecological Information

TOP

Ecological: N/P

MSDS Transport Information

TOP

Transport Information: N/P

Regulatory Information

TOP

Sara Title III Information: N/P
Federal Regulatory Information: N/P
State Regulatory Information: N/P

Other Information

TOP

Other Information: N/P

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Material Safety Data Sheet

HMIS®



HEALTH

2

REACTIVITY

1

FLAMMABILITY

3

PERSONAL PROTECTION

B

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identity: Steel Blue Layout Fluid Item No.: 80000 Formula: 8703A	<i>Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.</i>
Another Exclusive Product of: ITW Dykem	Emergency Telephone Number 800-424-9300 (Chemtrec)
Address (Number, Street, City, State, and ZIP Code) 805 East Old 56 Highway Olathe, KS 66061-4914	Telephone Number for Information 800-443-9536
Product Class: Layout Fluids	Date Prepared 4/14/04
	Signature of Preparer (Optional) Regulatory Dept.

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components (Specific Chemical Identity, Common Name(s))	CAS No.	OSHA PEL	ACGIH-TLV	Other Limits Recommended	%(Opt.)
Ethanol	64-17-5	TWA 1000 ppm	TWA 1000 ppm	No data	30 - 50
Butyl Acetate	123-86-4	TWA 150 ppm	TWA 150 ppm	No data	20 - 30
Butanol	71-36-3	TWA 50 ppm	TWA 50 ppm	No data	10 - 20
Propane	74-98-6	TWA 1000 ppm	TWA 1000 ppm	No data	5 - 15
N-Butane	106-97-8	TWA 800 ppm	TWA 800 ppm	No data	5 - 15
Nitrocellulose	9004-70-0	No data	No data	No data	1 - 5
n-Propyl Acetate	109-60-4	TWA 200 ppm	TWA 200 ppm	No data	1 - 5
Isopropanol	67-63-0	TWA 400 ppm	TWA 400 ppm	No data	1 - 5
Diacetone Alcohol	123-42-2	TWA 50 ppm	TWA 50 ppm	No data	1 - 5
Malachite Green	569-64-2	No data	No data	No data	< 1
Methyl Violet XXA	8004-87-3	No data	No data	No data	< 1

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW — Blue thin viscosity liquid with sweet solvent odor. **Warning! Flammable liquid and vapor.** Keep away from heat sparks and flames. May cause eye, skin and respiratory tract irritation. If swallowed do not induce vomiting. Get immediate medical attention.

POTENTIAL HEALTH EFFECTS

Eyes: Liquid is moderately irritating to the eyes.

Skin: Liquid is mildly irritating to the skin.

Ingestion: Ingestion of liquid may cause vomiting.

Inhalation: High concentration of vapors may produce irritation of the respiratory tract, headache, dizziness, and nausea.

CHRONIC HEALTH EFFECTS

Prolonged or repeated contact may cause skin sensitization or dermatitis. Reports have associated repeated and prolonged occupational overexposure to solvents with irreversible brain and nervous system damage. Intentional misuse by deliberately concentrating or inhaling this product may be harmful or fatal.

SECTION 4 FIRST AID MEASURES

Eyes — Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Inhalation — Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Skin — Flush skin with plenty of water. Remove contaminated clothing and shoes.

Ingestion — If large quantities of this material are swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

SECTION 5 FIRE FIGHTING MEASURES

Flash Point (Method Used) -156°F (Propellant) Product has a flashpoint of 53°F	Flammable Limits	LEL 1.40	UEL 19.0
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Extinguishing Media -

Use water fog, foam, dry chemical or CO2. Use water spray to cool fire-exposed containers and to protect personnel.

Special Fire Fighting Procedures -

Keep containers cool and vapors down with water spray. Prevent spill from entering drains, sewers, streams or other bodies of water. If run-off occurs, notify proper authorities. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus.

Unusual Fire and Explosion Hazards — Vapors are heavier than air and may travel along ground, or be moved by ventilation and be ignited by ignition source.

SECTION 6 ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Absorb liquid with non-combustible floor absorbent and place in non-leaking container; seal properly and dispose of properly in compliance with federal, state, and local regulations.

LARGE SPILL: Evacuate area of unprotected personnel. Eliminate all ignition sources. Stop spill at source if safe to do so. Handling equipment must be grounded to prevent sparking. Prevent spill from entering drains, sewers, streams or other bodies of water. If run-off occurs, notify proper authorities. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Dispose of properly in compliance with federal, state, and local regulations.

SECTION 7 HANDLING AND STORAGE

HANDLING: Empty containers retain residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, sparks, flames, static electricity, or other sources of ignition. Many hot organic chemical vapors or mists are susceptible to sudden spontaneous combustion when mixed with air. Ignition may occur at temperatures below those published in the literature as autoignition or ignition temperatures. Ignition temperatures decrease with increasing vapor volume and vapor volume and vapor/air contact time, and are influenced by pressure changes. Ignition of organic chemical vapors may occur at typical elevated-temperature process conditions, especially in processes operating under vacuum if subjected to sudden ingress of air, or outside process equipment operating under elevated pressure if sudden escape of vapors or mists to the atmosphere occurs. Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained.

STORAGE:

Contents under pressure. Keep away from heat, sparks and open flames. Keep out of reach of children. Keep container tightly sealed when not in use. Store in cool, well-ventilated place away from incompatible materials.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**Respiratory Protection (Specify Type) —**

Not usually necessary. Use with adequate ventilation. Use NIOSH/MSHA approved respirator if PELs or TLVs are exceeded.

Engineering Controls	Local Exhaust	Not usually needed	Special	None
	Mechanical (General)	Yes	Other	None

Protective Gloves — Chemical resistant gloves if skin contact is possible (consult your safety equipment supplier).

Eye Protection — Not normally required if used as intended. Wear chemical splash goggles in compliance with OSHA regulation if splashing is possible.

Other Protective Clothing or Equipment -

Not usually necessary. For bulk material, if direct contact is possible, wear apron, boots, face shield, etc. as needed.

Work/Hygienic Practices -

Follow label instructions. Wash hands after use and before eating, drinking, smoking, using restrooms, etc.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point	170°F- 257°F	Specific Gravity (H₂O = 1) @70° F	0.85
Vapor Pressure (mm-Hg @ 70° F)	No Data	Melting Point	No Data

Vapor Density (AIR = 1)	Greater than one (1)	Evaporation Rate (Butyl Acetate = 1)	Greater than (1)
Solubility in Water	Negligible	pH	No Data

Appearance and Odor —Blue thin viscosity liquid with sweet solvent odor.

VOC: This product contains 808 grams per liter or 95.59% by weight VOC s.

SECTION 10 STABILITY AND REACTIVITY

Chemical	Unstable		Conditions to Avoid — None known.
Stability	Stable	X	

Incompatibility (Materials to Avoid) -

Strong oxidizing and reducing agents, strong alkalis and strong acids.

Hazardous Decomposition or Byproducts -

Carbon dioxide, carbon monoxide, smoke, soot and various organic oxidation by-products.

Hazardous Polymerization	May Occur		Conditions to Avoid - No data
	Will Not Occur	X	

SECTION 11 TOXICOLOGICAL INFORMATION

	Oral LD50 (Rat)	Dermal LD50 (Rabbit)	Inhalation LC50 (Rat)
Ethanol	7060 mg/kg	No data	20000 ppm/10H
Butyl Acetate	14 g/kg	No data	No data
Butanol	2500 mg/kg	Slight	>8000 ppm/4H
Nitrocellulose	>5000 mg/kg	No data	No data
Isopropanol	5045 mg/kg	No data	No data

Please refer to Section 3 for available information on potential health effects.

SECTION 12 ECOLOGICAL INFORMATION

No specific ecological data are available for this product. Please refer to Section 6 for information regarding accidental releases and Section 15 for regulatory reporting information.

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable local, state and federal regulations.

SECTION 14 TRANSPORT INFORMATION (Not meant to be all inclusive)

Domestic Highway (Containers < 1 Quart are ORM-D)	Domestic Air Shipments: Varies
Proper Shipping Name: No Data	Proper Shipping Name: No data
Hazard Class/Subsidiary Hazard: Consumer Commodity ORM-D	Hazard Class/Subsidiary Hazard: No data
UN/NA No.: No Data	UN/NA No.: No data
Packing Group: No Data	Packing Group: No data
Label Required: No Data	Label Required: No data

SECTION 15 REGULATORY INFORMATION (Not meant to be all inclusive - selected regulations represented)

U.S. FEDERAL REGULATIONS:

TSCA: Components of this product are listed on the TSCA inventory.

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	No	No	No

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

SECTION 313: This product contains Butanol (71-36-3) which is listed and may require reporting under SARA Title III Sec. 313 if used over the threshold reporting quantity. This information must be included in all MSDSs that are copied and distributed for this material.

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65: This product is not known to contain any material listed under California s Proposition 65.

SECTION 16 OTHER INFORMATION

MSDS Status: Revised Section(s):

4/14/04 Flashpoint data updated.

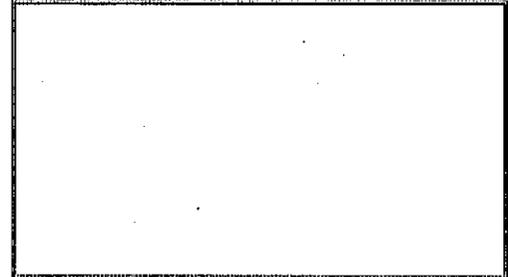
WARNING! The use of this product is beyond the control of the manufacturer and distributor; therefore, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice. The user must assume all responsibility, including injury or damage, resulting from its misuse as such, or in combination with other materials. The manufacturer and distributor warrant only that this product meets the specifications for such product. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AS TO DESCRIPTION, QUALITY, MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, PRODUCTIVENESS, OR ANY OTHER MATTER OF THIS PRODUCT. THE MANUFACTURER AND DISTRIBUTOR SHALL BE IN NO WAY RESPONSIBLE FOR THE PROPER USE OF THIS PRODUCT. The sole and exclusive remedy against the manufacturer and distributor for breach of warranty shall be reimbursement of the purchase price of the product in the event that a defective condition of the product shall be found to exist. NO OTHER REMEDY (INCLUDING BUT NOT LIMITED TO INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR INJURY TO PERSON OR PROPERTY OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE.

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SAFETY DATA SHEET

Section 1: Product and Company Identification

Product Name: Zoom Spout[®] Oiler
Product Code: 79704
Product Use: Lubricating oil for general applications.
Manufacturer: LA-CO Industries, Inc.
 1201 Pratt Boulevard
 Elk Grove Village, IL.
 60007-5746
 E-mail Contact: customer_service@laco.com
Phone Number: (847) 956-7600
Fax: (847) 956-9885
24-hour Emergency: CHEMTREC: (800) 424-9300



Section 2: Hazards Identification

Protective Clothing	NFPA Rating (USA)	WHMIS (Canada)	Transport
Not Required for Normal Use		Not Controlled	Not Regulated

Emergency Overview: Exposure to hazardous substances is not expected when handling this product for its intended use.

Appearance, Color and Odor: Clear, colorless to light yellow liquid, petroleum-oil odor.

USA: This product is not a hazardous material as defined by 29 CFR1910.1200, OSHA Hazard Communication Standard.

Canada: This is not a controlled product under WHMIS.

Potential Health Effects: **ACUTE (short term):**

Relevant Route(s) of Exposure: Skin contact.

Inhalation: Exposure to hazardous substances by inhalation is not expected with normal use. Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Ingestion: Not an expected route of occupational exposure. Acute oral toxicity of the component substances is low. Ingestion of large amounts of the product may cause nausea, vomiting and diarrhea.

Skin: May cause skin irritation in some individuals. Symptoms may include redness and a burning sensation. A component of this material may cause an allergic skin reaction.

Eye: Direct contact with the eye may cause mild irritation.

CHRONIC (long term):

Prolonged or repeated contact can defat the skin, causing drying and cracking of the skin, and possibly dermatitis (inflammation).

Medical Conditions Aggravated by Exposure: Preexisting skin disorders may be aggravated by repeated exposure to the product.

Interactions With Other Chemicals: Not available

Potential Environmental Effects: Not available



SAFETY DATA SHEET

Section 3: Composition / Information on Ingredients

Chemical Name	CAS No.	Wt. %
Product is a non-hazardous mixture of Petroleum, lubricating base oil and proprietary additives. No hazardous/dangerous ingredients by OSHA and WHMIS criteria.		

Section 4: First Aid Measures

- Inhalation:** If respiratory symptoms develop, remove source of contamination or move victim to fresh air. Obtain medical advice.
- Eye Contact:** No effects expected. If irritation occurs, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes. If irritation persists, obtain medical advice.
- Skin Contact:** Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention.
- Ingestion:** If irritation or discomfort occurs, obtain medical advice immediately.

Section 5: Fire Fighting Measures

- Flammable Properties:** Product will burn if involved in a fire. Flashpoint: >150°C (>302°F) ASTM D93
- Suitable extinguishing Media:** For small fires, use water spray, dry chemical, carbon dioxide or appropriate foam. Use water spray to cool fire-exposed containers.
- Unsuitable extinguishing Media:** DO NOT use a solid stream of water directly on the fire as the water may spread the fire.
- Explosion Data:**
- Sensitivity to Mechanical Impact:** Not applicable
 - Sensitivity to Static Discharge:** Not applicable
- Specific Hazards arising from the Chemical:** Combustion may produce nitrogen oxides, carbon dioxide, carbon monoxide, smoke, toxic and irritating gases. Hot product can cause thermal burns.
- Protective Equipment and precautions for firefighters:** Self-contained breathing apparatus and protective clothing should be worn. Remove all unprotected personnel.
- NFPA**
- | | |
|---------------|---|
| Health: | 0 |
| Flammability: | 1 |
| Instability: | 0 |

Section 6: Accidental Release Measures

- Personal Precautions:** Avoid contact with skin and eyes. Extinguish all sources of ignition. Ventilate the area. Monitor the workplace air for harmful concentrations of vapors and take appropriate precautions if concentrations in air exceed workplace exposure limits.
- Environmental Precautions:** Prevent the product from entering sewers or waterways.
- Methods for Containment:** Stop the release if it is safe to do so.
- Methods for Clean-up:** Clean up spills immediately. Absorb spilled material with dry earth, sand, or other non-combustible absorbent material and transfer to appropriate, covered and labeled waste containers. Dispose of unusable product as described in Section 13 of this SDS.



SAFETY DATA SHEET

Section 7: Handling and Storage

Handling: Do not ingest. Avoid breathing vapors. Avoid contact with skin and eyes. Do not use near hot surfaces or flames. No smoking. Keep out of reach of children.

Storage: Store in a cool, dry area, out of direct sunlight and away from heat, flames and ignition sources. Keep containers tightly closed when not in use.

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines

Measurable airborne concentrations of the component substances are not expected when the product is used for its intended purpose.

<u>Ingredient</u>	<u>ACGIH TLV (8-hr. TWA)</u>	<u>U.S. OSHA PEL (8-hr. TWA)</u>	<u>Ontario (Canada) TWAEV</u>
Lubricant Base Oil (Petroleum)	5mg/m ³ STEL: 10 mg/m ³ as Oil Mist, if generated	5 mg/m ³ as Oil Mist, if generated	5mg/m ³ STEV: 10 mg/m ³ Mineral oil mist

Exposure Controls

Engineering Controls: Not required for its intended use.

Personal Protection:

- Eye/Face Protection:** Not required for normal use. Wear safety glasses when needed to prevent eye contact.
- Skin Protection:** Not required for normal use. Wear gloves when needed to prevent repeated or prolonged skin contact.
- Respiratory Protection:** Not required for normal use.

General Hygiene Measures: Do not ingest. Avoid contact with skin and eyes. Keep out of reach of children. Wash hands after handling.

Section 9: Physical and Chemical Properties

Physical State:	Liquid	Flash Point & method:	>150°C (>302°F) ASTM D93
Appearance, Color and Odor:	Clear, colorless to light yellow, petroleum-oil odor.	Autoignition Temperature:	Not available
Odor Threshold:	Not available	Flammability Limits in Air:	Not available
pH:	Not available	Vapor Pressure:	<1 mmHg
Specific Gravity: (water = 1)	0.86 - 0.87 @ 15.6°C (60°F) Bulk density=7.2 - 7.3 lbs/gal	Vapor Density: (Air = 1)	>1
Partition coefficient: (n-octanol/water)	Not available	Evaporation Rate: (n-Butyl Acetate = 1)	<1
Solubility:	Insoluble in water	Boiling Point/Range:	Not available
Viscosity:	Not available	Freezing Point:	<-18°C (<-0.4°F)
Decomposition Temperature:	Not available	VOC Content:	Not available

SAFETY DATA SHEET

Section 10: Stability and Reactivity

Chemical Stability: Stable at normal room temperature.

Conditions to Avoid: Avoid extreme heat and open flames.

Incompatible Materials: Incompatible with strong oxidizing agents strong reducing agents.

Hazardous Decomposition Products: From thermal oxidative decomposition; Nitrogen oxides, carbon monoxide and carbon dioxide, hydrocarbon vapor.

Possibility of Hazardous Reactions: Not available

Section 11: Toxicological Information

Acute Toxicity Data

<u>Chemical Name</u>	<u>LD₅₀ Oral</u> (mg/kg)	<u>LD₅₀ Dermal</u> (mg/kg)	<u>LC₅₀ Inhalation</u> (4 hrs.)
Lubricant oil	>5 000	>2 000	Not available

Other Toxicity Data

Carcinogenicity: The petroleum base oils contained in this product have been highly refined by a variety of processes including severe hydrocracking/hydroprocessing to reduce aromatics and improve performance characteristics. All of the oils meet the IP-346 criteria of less than 3 percent PAH's and are not considered carcinogens by NTP, IARC, or OSHA.

Irritation: Contact with the skin may cause irritation in some individuals. Direct eye contact may cause irritation.

Corrosivity: Not applicable

Sensitization: Not available

Neurological Effects: Not available

Genetic Effects: Not available

Reproductive Effects: Not available

Developmental Effects: Not available

Target Organ Effects: Not available

Section 12: Ecological Information

Ecotoxicity: Assays have demonstrated acute aquatic toxicity values greater than 1000 mg/L.

Persistence/Degradability: Not readily biodegradable.

Bioaccumulation/Accumulation: Log K_{ow} values measured for the hydrocarbon components of this material range from 4 to 6.

Mobility: Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. In water, base oils will float and spread over the surface.

Section 13: Disposal Considerations

Waste Disposal Method: Do NOT dump into any sewers, on the ground or into any body of water. Store material for disposal as indicated in Section 7 Handling and Storage. The conditions of use, storage and disposal of this product are beyond our control and may be beyond our knowledge. For this and other reasons, LA-CO Industries, Inc. does not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product. Dispose of in accordance with local, state/provincial and federal laws and regulations.



SAFETY DATA SHEET

Section 14: Transport Information:

U.S. Hazardous Materials Regulation (DOT 49CFR):	Not regulated
Canadian Transportation of Dangerous Goods (TDG):	Not regulated
ADR/RID:	Not regulated
IMDG:	Not regulated
Marine Pollutants:	Not applicable
ICAO/IATA:	Not regulated

Section 15: Regulatory Information

USA

TSCA Status: All ingredients in the product are listed on the TSCA inventory.

SARA Title III

Sec. 302/304: None
Sec. 311/312: Not applicable
Sec. 313: Not applicable
CERCLA RQ: Not applicable

California Prop 65: This product does not contain chemicals known to the State of California to cause cancer birth defects or other reproductive harm.

Canada

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all the information required by the *Controlled Products Regulations*.

WHMIS Classification: Not controlled

DSL Inventory: All substances are listed, as required, on Canada's DSL or are exempt.

NPRI Substances: Not applicable

Section 16: Other Information

Revision Date: October 26, 2010

Prepared by: LEHDER Environmental Services Limited (519) 336-4101
www.lehder.com

Disclaimer: While LEHDER Environmental Services Limited believes that the data set forth herein is accurate, as of the date hereof, LEHDER makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data is offered solely for your consideration, investigation and verification.

Manufacturer Disclaimer: The information contained herein is based on data available to us and is accurate and reliable to the best of our knowledge and belief. However, LA-CO Industries, Inc. makes no representations as to its completeness or accuracy. Information is supplied on condition that persons receiving such information will make their own determination as to its suitability for their purposes prior to use. In no event will LA-CO Industries, Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon the information contained herein.

MSDS 7605
7585: Air Tool Oil 4 Oz Bottle
7605: Air Tool Oil Quart
MSDS Last updated: 10/10/2005

June 9, 2005

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Marvel Air Tool Oil
PRODUCT CODE: MM080, MM085, MM85R, MM086, MM088R
MM089 MM
CHEMICAL FAMILY: Petroleum Distillates
CHEMICAL NAME: Complex Mixture of Hydrocarbons
FORMULA: Mixture
MANUFACTURER EMERGENCY TELEPHONE NUMBERS
Marvel Oil Company, Inc. Transportation;
5655 W. 73rd Street CHEM-TREC: 800-424-9300
Chicago, IL 60638 Medical:
Phone: 708-563-3766 ROCKY MTN POISON CTR; 800-332-3073
Fax: 708-563-3715

2. POSITION/INFORMATION ON INGREDIENTS

COMPONENT CAS NUMBER CONCENTRATION (wt %)
Naphthenic Hydrocarbons 64742-52-5 70 - 80
Mineral Spirits 08052-41-3 20 - 30
Chlorinated Hydrocarbons 00095-50-1 0 - 1

EXPOSURE LIMITS 8 hr. TWA (ppm)

	OSHA PEL	ACGIH TLV
Naphthenic Hydrocarbons	5 as oil mist	5 as oil mist
Mineral Spirits	100	100
Chlorinated Hydrocarbons	25	25

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

INHALATION; Can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, headache, possible unconsciousness and even asphyxiation.

INGESTION; Can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration into lungs can cause pneumonitis which can be fatal.

SKIN CONTACT: Prolonged or repeated contact can cause moderated irritation, defatting or dermatitis.

EYE CONTACT; Can cause severe irritation, redness, tearing or blurred vision.

4. FIRST AID MEASURES;

Oil Mist

OSHA

5 mg/m3

9. PHYSICAL AND CHEMICAL PROPERTIES;

PHYSICAL FORM; Thin liquid
COLOR: Red
ODOR; Petroleum
BOILING POINT: Not determined
MELT/FREEZE POINT: -60 F (-51 C)
PH: Not applicable
SOLUBILITY IN WATER: Insoluble
SPECIFIC GRAVITY: 0.876 @ 60 F (15.6 C)
% VOLATILE BY WEIGHT: 25 %
VAPOR PRESSURE: Not determined
VAPOR DENSITY: Not determined

10. REACTIVITY:

STABILITY: Stable
HAZARDOUS POLYMERIZATION; Will not occur.
INCOMPATIBILITIES; Strong oxidizing agents.
DECOMPOSITION PRODUCTS; Carbon monoxide, carbon dioxide and hydrocarbons.

11. TOXICOLOGICAL INFORMATION;

ACUTE INHALATION; Aspiration into lungs can cause pneumonitis which can be fatal.
CHRONIC INHALATION; Not determined.
ACUTE SKIN CONTACT: Prolonged or repeated contact can cause moderate irritation, defatting or dermatitis.

CHRONIC SKIN CONTACT; Not determined.
ACUTE EYE CONTACT: Can cause severe irritation, redness, tearing or blurred vision.

12. ECOLOGICAL INFORMATION;

No data available.

13. DISPOSAL CONSIDERATION;

Ignitable hazardous waste, EPA Hazardous Waste Number D001
WASTE DISPOSAL METHOD: Dispose of product in accordance with all local, state and federal laws and regulations.

14. TRANSPORT INFORMATION

DOT INFORMATION;
PROPER SHIPPING NAME: Non Bulk Not regulated
Bulk Petroleum distillates,
n.o.s.

TECHNICAL SHIPPING NAME: Fuel and oil additive

HAZARD CLASS: Non Bulk ORM-D
Bulk Class 3

UN NUMBER: UN 1268

PRODUCT RQ (lbs): None

LABEL: Non Bulk ORM-D
Bulk Flammable Liquid

PLACARD; Non Bulk None
Bulk Flammable Liquid

FREIGHT CLASS BULK; PG III

FREIGHT CLASS PACKAGE; None

PRODUCT LABEL: None

15. REGULATORY INFORMATION;

TSCA STATUS; All ingredients listed.

CERCLA REPORTABLE QUANTITY; None

SARA TITLE III:

SECTION 302 EXTREMELY
HAZARDOUS SUBSTANCES None

SECTION 311/312
HAZARD CATEGORIES

Acute Health	Yes
Chronic Health	Yes
Fire	Yes
Reactive	No
Sudden Release of Pressure	No

SECTION 313

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
Ortho-dichlorobenzene	00095-50-1	0-0.25 %

RCRA STATUS: If discarded in its purchased form, this product would be an ignitable waste with an EPA Hazardous Waste Number of D001. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product should be classified as a hazardous waste. (40CFR261.20-24)

CANADIAN STATUS; All materials contained in this product are listed on the Canadian Domestic Substances List.

EUROPEAN UNION; All materials contained in this product are listed on EINECS.

STATE REGULATORY INFORMATION

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

COMPONENT/ CAS NUMBER	CONCENTRATION	STATE CODE
--------------------------	---------------	------------

p-dichlorobenzene
00106-46-7

less than 150 ppm

CA

CA = Material known to the state of California to cause cancer and/or birth defects. (California Proposition 65).

16. OTHER INFORMATION;

HMIS CLASSIFICATION Health 2
 Flammability 2
 Reactivity 0
 PPI B

NFPA RATING Health 2
 Fire 2
 Reactivity 0
 Special None

REASON FOR ISSUE Add revised stock numbers
PREPARED BY; Richard P. Kelly
TITLE: Technical Manager
APPROVAL DATE: June 9, 2005
SUPERCEDES DATE November 4, 2004
REVISION NUMBER #06

This information is to the best of Marvel Oil Company's knowledge and belief, accurate and reliable. However, no representation, warranty, or guarantee is made to its accuracy, reliability or completeness. It is the users responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.

Msdsmm080-2.doc

The information contained in this MSDS was obtained from current and reliable sources, however, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of Imperial Supplies LLC, Imperial will not be responsible for loss, injury, or expense arising out of the products improper use. No warranty, expressed or inferred, regarding the product described in this MSDS shall be created or inferred by any statement in this MSDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.

For more product information by email, [click here](#)

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Material Safety Data Sheet



Revision Date 01-Feb-2006

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product code DA6152
 Product name Open & Shut
 Recommended Use Solvent
 Supplier Drummond American Corporation
 600 Corporate Woods Parkway
 Vernon Hills, IL 60061
 (847) 913-9313
 Emergency telephone number (888) 426-4851

2. HAZARDS IDENTIFICATION

Emergency Overview
 Irritant. May be harmful if swallowed. Harmful by inhalation.

Color Colorless	Odor Slight	Form Aerosol
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Aggravated Medical Conditions None Known.

Principal Routes of Exposure Inhalation. Eyes. Skin contact.

Potential health effects

Eyes	Irritation. Redness. Itching. Burning sensation.
Skin	Repeated or prolonged exposure may cause: Skin Irritation. Redness. Itching. Burning sensation.
Inhalation	Repeated or prolonged exposure may cause the following effects. Headaches. Dizziness. Nausea. Upper respiratory tract irritation. Central nervous system effects. Loss of coordination.
Ingestion	May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Weight %
Carbon Dioxide	124-38-9	1-5
Petroleum distillates, hydrotreated heavy naphthenic	64742-52-5	10-30
Tetrachloroethylene	127-18-4	60-100

4. FIRST AID MEASURES

Eye contact	Flush with plenty of water for at least 15 minutes. Seek medical attention.
Skin contact	Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing before re-use.
Ingestion	Do not induce vomiting. Immediate medical attention is required.
Inhalation	Remove from exposure. Restore breathing. Keep warm and quiet. Contact physician if breathing difficulty develops.

5. FIRE FIGHTING MEASURES

Flash point °C	> 93
Flash point °F	> 200
Method	Pensky-Martens C.C.

Autoignition temperature °C	No data available
Autoignition temperature °F	No data available

Flammability Limits (% in Air)

Upper	Not Applicable
Lower	Not Applicable

Specific Information for Aerosol Products

Suitable extinguishing media

Carbon dioxide (CO₂). Dry chemical. Foam.

Special protective equipment for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Special Fire-Fighting Procedures

Avoid breathing of vapors. Avoid skin and eye contact.

Specific hazards

Keep product and empty container away from heat and sources of ignition. In the event of fire and/or explosion do not breathe fumes.

Fire and Explosion Hazards

During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention. Firefighters should wear NIOSH/MSHA approved (or equivalent) self-contained pressure-demand breathing apparatus and full protective clothing. Water should be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. Water spray may be ineffective. If water is used, fog nozzles are preferable.

Sensitivity to shock
No information available.

Sensitivity to static discharge
No information available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment.

Methods for cleaning up
Eliminate all sources of ignition. Ventilate area to maintain exposure below permissible exposure limits. Soak up with inert absorbent material.

7. HANDLING AND STORAGE

Handling
Contents under pressure. Do not puncture or incinerate. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep in a well-ventilated place. Keep out of reach of children.

Storage
Store in temperatures below 120 degrees F.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

Chemical Name	OSHA PEL (TWA)	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Tetrachloroethylene	100 ppm	200 ppm	25 ppm	100 ppm
Petroleum distillates, hydrotreated heavy naphthenic	-	-	-	-
Carbon Dioxide	5000 ppm exposures < 10,000 ppm to be cited de minimus 9000 mg/m ³	-	5000 ppm	30000 ppm

Ventilation and Environmental Controls
Use enough ventilation, local exhaust at the work area, or both, to keep below the TLV's in the worker's breathing zone and the general area. General: as necessary.

Hygiene measures
Wash hands before breaks and immediately after handling the product.

Other precautions
Avoid contact with the skin and the eyes Avoid breathing vapors or mists

Personal protective equipment

Respiratory protection
If the exposure limits are exceeded, a NIOSH/MSHA approved respirator is recommended. Wear a NIOSH approved organic vapor/particulate respirator.

Hand Protection

Gloves are not required in normal use. For prolonged or repeated skin contact, use a chemically resistant glove such as nitrile or neoprene. Wash hands with soap and water after removing gloves. Dry hands thoroughly before re-applying gloves. .

Eye protection

Wear safety glasses with side shields.

Skin and body protection

None necessary under normal conditions

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Aerosol	Color	Colorless
Odor	Slight	Odor Threshold	No information available
pH	Not Applicable	Specific Gravity	1.37
Vapor pressure	No data available	Vapor density	>1 (air=1)
Evaporation Rate	>1 (ether = 1)	VOC Content	0 %
Water solubility	No data available	Partition Coefficient (n-octanol/water)	No data available
Boiling point/range °C	-18 - 122	Boiling point/range °F	0 - 252
Melting point/range °C	Not Applicable	Melting point/range °F	Not Applicable
Flash point °C	> 93	Flash point °F	> 200

10. STABILITY AND REACTIVITY

Stability

Stable.

Conditions to avoid

None known.

Incompatability

None known .

Hazardous Decomposition Products

Carbon dioxide. Carbon monoxide. Hydrogen chloride.

Polymerization

Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Component Information

Chemical Name	LD50 (oral, rat)	LD50 (dermal, rat/rabbit)	LC50 (inhalation, rat)
Tetrachloroethylene 127-18-4	2629 mg/kg	-	5200 mg/kg

Petroleum distillates, hydrotreated heavy naphthenic 64742-52-5	5000 mg/kg	2000 mg/kg	2.18 mg/L
Carbon Dioxide 124-38-9	-	-	836 ppm

Synergistic Products

None known

Potential health effects

Sensitization

None known .

Chronic toxicity

See Section 2 .

Mutagenic effects

None known .

Teratogenic effects

None known .

Reproductive toxicity

None known .

Target Organ Effects

None Known.

Carcinogenic effects

See table below

Chemical Name	ACGIH OEL - Carcinogens	IARC	NTP - Known Carcinogens	NTP - Suspected Human Carcinogens	OSHA/RTK Carcinogens
Tetrachloroethylene	A3 - Confirmed animal carcinogen with unknown relevance to humans	Group 2A	Not Listed	Listed	Listed
Petroleum distillates, hydrotreated heavy naphthenic	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Carbon Dioxide	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

12. ECOLOGICAL INFORMATION

Tetrachloroethylene

Microtox Data

Photobacterium phosphoreum EC50=120.0 mg/L (30 min)

13. DISPOSAL CONSIDERATIONS

Disposal Information

This product contains tetrachloroethylene, a highly volatile solvent which is a toxic waste as defined by RCRA ,40 CFR 261 (United States) . In normal use this chemical will quickly evaporate.However, grease or other residue removed by this product may contain sufficient tetrachloroethylene to be classified as a toxic waste. Do not puncture or incinerate. Depressurize before disposal.

Waste from residues / unused products

Dispose in accordance with federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT

Consumer commodity (Tetrachloroethylene, Carbon Dioxide),ORM-D

TDG

AEROSOLS(Tetrachloroethylene,Carbon Dioxide), Class 2.2,UN1950

IMDG/IMO

Aerosols(Tetrachloroethylene,Carbon Dioxide),Class 2.2, UN1950

IATA

UN1950 Aerosols, non-flammable(Tetrachloroethylene,Carbon Dioxide), Class 2.2

MEX

UN1950 Aerosols(Tetrachloroethylene,Carbon Dioxide),2.2,

15. REGULATORY INFORMATION

Chemical Name	US EPA SARA 313 Emission Reporting
Tetrachloroethylene	Listed

Chemical Name	New Jersey RTK	Pennsylvania RTK	California Prop. 65
Tetrachloroethylene	Listed	Listed	Carcinogen
Petroleum distillates, hydrotreated heavy naphthenic	Not Listed	Not Listed	Not Listed
Carbon Dioxide	Listed	Listed	Not Listed

Chemical Name	EINECS	DSL	NDSL	ITSCA
Tetrachloroethylene	X	X	-	X
Petroleum distillates, hydrotreated heavy naphthenic	X	X	-	X
Carbon Dioxide	X	X	-	X

CPRC

This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all of the information required by the Controlled Product Regulations

16. OTHER INFORMATION

NFPA		HMIS	
Health	-	Health	2
Flammability	-	Flammability	1
Reactivity	-	Physical Hazard	0

Prepared By

Michael Katz, Regulatory Affairs Specialist

The information accumulated herein is believed to be accurate, but is not warranted to be, whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.



WD-40

Serial # W1022
 Site - Crane NSWC2 Reactivity
 2 0
 Health 0 Special
 NFPA

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Manufacturer: WD-40 Company Telephone:
 Address: 1061 Cudahy Place (92110) Emergency only: 1-(800) 424-8300 (CHEMTREC)
 P.O. Box 80607 Information: (619) 275-1400
 San Diego, California Chemical Name: Organic Mixture
 92138-0607 Trade Name: WD-40 Bulk Liquid

II. HAZARDOUS INGREDIENTS

Chemical Name	CAS Number	%	Exposure Limit ACGIH/OSHA
Aliphatic Petroleum Distillates	8052-41-3	45-50	100 ppm PEL
Petroleum Base Oil	64742-65-0	30-35	5 mg/M ³ TWA (mist)
LVP Hydrocarbon Fluid	64742-47-8	12-18	1200 mg/M ³ TWA
Non-hazardous Ingredients		< 10	

III. PHYSICAL DATA

Boiling Point: 323°F (minimum) Evaporation Rate: Not determined
 Vapor Density (air=1): Greater than 1 Vapor Pressure: Not determined
 Solubility in Water: Insoluble Appearance: Cloudy light amber
 Specific Gravity (H₂O=1): 0.817 @ 72°F Odor: Characteristic odor
 Percent Volatile (volume): 74% VOC: 412 grams/liter (49.5%)

IV. FIRE AND EXPLOSION

Flash Point: 131°F Tag Closed Cup
 Flammable Limits: (Solvent Portion) [Le] 1.0% [Ue] 6.0%
 Extinguishing Media: CO₂, Dry Chemical, Foam.
 Special Fire Fighting Procedures: None
 Unusual Fire and Explosion Hazards: None

W1022

HEALTH HAZARD	1
FLAMMABLE	3
REACTIVITY	0
PERSONAL PROTECTION	2

V. HEALTH HAZARD / ROUTE(S) OF ENTRY

Threshold Limit Value Aliphatic Petroleum Distillates (Stoddard Solvent) lowest TLV (ACGIH 100 ppm.)
 Symptoms of Overexposure
 Inhalation (Breathing): May cause anesthesia, headache, dizziness, nausea and upper respiratory irritation.
 Skin contact: May cause drying of skin and/or irritation.
 Eye contact: May cause irritation, tearing and redness.
 Ingestion (Swallowed): May cause irritation, nausea, vomiting and diarrhea.

First Aid Emergency Procedures

Ingestion (Swallowed): Do not induce vomiting, seek medical attention.
 Eye Contact: Immediately flush eyes with large amounts of water for 15 minutes.
 Skin Contact: Wash with soap and water.
 Inhalation (Breathing): Remove to fresh air. Give artificial respiration if necessary.
 If breathing is difficult, give oxygen.
 Pre-existing medical conditions such as eye, skin and respiratory disorders may be aggravated by exposure.

DANGER!

Aspiration Hazard: If swallowed, can enter lungs and may cause chemical pneumonitis. Do not induce vomiting. Call physician immediately.

Suspected Cancer Agent

Yes ___ No X The components in this mixture have been found to be noncarcinogenic by NTP, IARC and OSHA

VI. REACTIVITY DATA

Stability: Stable X Unstable _____
Conditions to avoid: Heat and open flame.
Incompatibility: Strong oxidizing agents
Hazardous decomposition products: Thermal decomposition may yield carbon monoxide and/or carbon dioxide.
Hazardous polymerization: May occur _____ Will not occur X

VII. SPILL OR LEAK PROCEDURES

Spill Response Procedures
Absorb small quantities with sand, earth, sawdust. Large quantities pump into tank.
Waste Disposal Method
Incinerated liquid, bury saturated absorbent in land fill. Dispose of in accordance with local, state and federal regulations.

VIII. SPECIAL HANDLING INFORMATION

Ventilation: Sufficient to keep solvent vapor less than TLV.
Respiratory Protection: Advised when concentrations exceed TLV.
Protective Gloves: Advised to prevent possible skin irritation.
Eye Protection: Approved eye protections to safeguard against potential eye contact, irritation or injury.
Other Protective Equipment: None required.

IX. SPECIAL PRECAUTIONS

Keep from open flame, do not take internally. Avoid excessive inhalation of spray particles. Keep from children.

X. TRANSPORTATION DATA (49 CFR 172.101)

Domestic Surface
Description: WD-40 Bulk Lubricant
Hazard Class: Non-Regulated Per 49 CFR 173.150 (F)(2)
ID No: None
Label Required: None (Under 119 Gallons)

XI. REGULATORY INFORMATION

All ingredients for this product are listed on the TSCA inventory.
SARA Title III chemicals: None
California Prop 65 chemicals: None
CERCLA reportable quantity: None
RCRA hazardous waste no: D001 (Ignitable)

SIGNATURE: Peter Fougner Peter P. Fougner TITLE: Director of Global Quality Assurance
REVISION DATE: December, 2004 SUPERSEDES: November, 2003

NA: Not applicable NDA: No data available < = Less than > = More than

We believe the statements, technical information and recommendations contained herein are reliable. However, the data is provided without warranty, expressed or implied. It is the user's responsibility both to determine safe conditions for use of this product and assume loss, damage or expense, direct or consequential, arising from its use. Before using product, read label.

Case 6X798

Rubber, Foam
30000
For Glen, Michigan 48931

FAX-248-661-3944 248-661-0260
Telephone: (484) 661-0260/0261

8030-00-118-0666
MIL-C-16173E

SECTION 1 PRODUCT IDENTIFICATION AND USE

TRADE NAME:
3 Heavy-Duty Rust Inhibitor

CHEMICAL FAMILY:
Petroleum Hydrocarbons

PART NUMBERS:
00037, 00303, 00305, 00318, 00355, 00937, 03128

TELEPHONE NUMBER: 404-834-7800
EMERGENCY TELEPHONE NUMBER:
1-800-424-9300 Chemtrec

MANUFACTURER'S D-U-N-S NO.:
04-221-8549

HAZARDOUS MATERIALS DESCRIPTION AND PROPER SHIPPING NAME (49 CFR 172.101):
Compound, Boiler, Preserving Liquid NMFC 60683 SUB 2 BRL/BXS CLE5
CONSUMER COMMODITY ORM-D

TSCA INVENTORY:
All of the ingredients are listed on the TSCA Inventory

SECTION 2 HAZARDOUS INGREDIENTS

INGREDIENTS:	CAS NUMBERS	% WW	OSHA PEL	TLV (UNITS)
Aliphatic Hydrocarbon	64742-88-7	70-80	500 ppm	100 ppm
Petroleum Oil (Severely Hydro-treated)	70392-78-8	10-15	5mg/m ³	N.E.
Dipropylene Glycol Monomethyl Ether	20324-32-7	2-3	100 ppm (Skin)	100
Non-Hazardous Proprietary Blend		10-15	N.E.	N.E.
Carbon Dioxide Propellant (Aerosol Only)	124-38-9	2-3	N.E.	5,000

* oil mist

SECTION 3 PHYSICAL DATA

BOILING POINT (F°)	300*	SPECIFIC GRAVITY:	0.80
VAPOR PRESSURE:	<2.0	(H ₂ O = 1)	
(mmHg) 100°F		PERCENT VOLATILE BY VOLUME (%):	75
VAPOR DENSITY:	1	EVAPORATION RATE:	0.12
(Air = 1)		(n-Butyl Acetate = 1)	
SOLUBILITY IN WATER:	Nil		
APPEARANCE AND ODOR:	Dark brown liquid with sweet, mild odor.		

SECTION 4 FIRE AND EXPLOSION HAZARD

FLASH POINT:	112°F	FLAMMABLE LIMITS:	LEL	UEL
		of diluent	0.7%	8.0%
EXTINGUISHING MEDIA:	Foam, dry chemical or carbon dioxide			
SPECIAL FIRE FIGHTING PROCEDURES:	Do not use water. Treat as combustible petroleum distillates.			
UNUSUAL FIRE AND EXPLOSIVE HAZARDS:	Excessive heat created by fire will cause aerosols to burst.			

N.E. = Not Established

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SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTE(S) OF ENTRY: Inhalation, eyes.

EFFECTS OF OVEREXPOSURE:
Eyes: Irritation.
Skin: Repeated or prolonged contact may cause drying of skin.
Inhalation: Headache, dizziness, nausea and anesthetic effects.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None from normal exposure.

CHEMICALS LISTED AS POTENTIAL CARCINOGENS: NTP: No IARC: No OSHA: No

EMERGENCY AND FIRST AID PROCEDURES:
Eyes: Flush with copious amounts of cold water and contact physician.
Skin: Wash with soap and water and then apply medicated skin cream.
Inhalation: Move to fresh air and contact physician.
Ingestion: Contains aliphatic hydrocarbons and petroleum oil. Do not induce vomiting. Contact physician immediately. Minute amount aspirated into lungs during ingestion may cause severe pulmonary injury.

SECTION 6 - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Avoid sparks or open flames. (See handling and storage precautions.)

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizing agents such as liquid chlorine, concentrated oxygen or sodium hypochlorite.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may yield carbon monoxide.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 7 - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Ventilate area by opening doors and windows. Remove ignition sources. Remove leaking container and transfer remaining product to another vessel. Prevent product from going into sewers and water courses by diking or impounding. Using appropriate safety equipment, mop up or soak up with absorbent material, such as sand or clay.

WASTE DISPOSAL METHODS: Dispose of in accordance with local, state and federal regulations for petroleum distillates.

RCRA HAZARDOUS WASTE NO.: D001

CERCLA REPORTABLE QUANTITY: N.A.

SARA TITLE III CHEMICALS: None

SECTION 8 - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: None required if good ventilation is maintained. For enclosed areas, use NIOSH approved organic vapor cartridge respirator or self-contained breathing apparatus.

VENTILATION: Local exhaust is usually adequate. However, mechanical ventilation should be used when spraying in enclosed areas. Vapor concentration should be minimized as much as possible.

PROTECTIVE GLOVES: Use solvent resistant gloves for liquid handling.

EYE PROTECTION: Use face shield or goggles when spraying or splashing.

OTHER PROTECTIVE EQUIPMENT: None.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store aerosols below 120°F and above 32°F. Store bulk below 150°F and above 32°F. Store away from ignition sources and avoid breathing vapors. Wash hands with soap and water after use or before breaks and lunch and at the end of work periods. Remove contaminated clothing and laundry before reuse.

H.M.I.S. LABELING:
 Fire: 2 Health: 1 Reactivity: 0

Joe Tarpley, Technical Service Manager
 March 1, 1988

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NATIONWIDE INDUSTRIES CORP -- SNAP STARTING FLUID --

===== Product Identification =====

Product ID:SNAP STARTING FLUID
 MSDS Date:09/25/1990
 FSC:NIIN:Submitter:F BT
 Status Code:A
 MSDS Number: CLRCX
 === Responsible Party ===
 Company Name:NATIONWIDE INDUSTRIES CORP
 Address:501 S BASINGER RD
 City:PANDORA
 State:OH
 ZIP:45877-9749
 Country:US
 Emergency Phone Num:919-286-4446
 CAGE:74438

==== Contractor Identification ====
 Company Name:NATIONWIDE INDUSTRIES CORP
 Address:501 S BASINGER RD
 Box:City:PANDORA
 State:OH
 ZIP:45877-9749
 Country:US
 CAGE:74438

===== Composition/Information on Ingredients =====

Ingred Name:LIGHT PETROLEUM DISTILLATES
 Minumum % Wt:30.
 Maxumum % Wt:65.
 ACGIH TLV:300

Ingred Name:ETHYL ETHER
 CAS:60-29-7
 RTECS #:KI5775000
 Minumum % Wt:20.
 Maxumum % Wt:45.
 ACGIH TLV:400 PPM
 EPA Rpt Qty:100 LBS
 DOT Rpt Qty:100 LBS

===== Hazards Identification =====

Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO
 Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
 Effects of Overexposure:INHALATION: MAY CAUSE IRRITATION, NAUSEA,
 HEADACHE, DROWSINESS, AND UNCONSCIOUSNESS. EYE: MAY CAUSE
 IRRITATION. INGESTION: MAY CAUSE IRRITATION, DIARRHEA, VOMITING,
 CHEMICAL PNEUMONITIS. SKIN: MAY CAUSE IRRITATION.
 Medical Cond Aggravated by Exposure:NONE KNOWN.

===== First Aid Measures =====

First Aid:INHALATION: MOVE VICTIM TO FRESH AIR, GIVE CPR IF NECESSARY.
 INGESTION: DO NOT INDUCE VOMITING. SKIN: WASH WITH SOAP AND WATER.
 EYES: FLUSH WITH LARGE QUANTITIES OF WATER. IN ALL CASES, SEEK
 IMMEDIATE MEDICAL ATTENTION!

=====
Fire Fighting Measures
=====

Flash Point Method:TOC
Flash Point:=-45.C, -49.F
Lower Limits:1.4
Upper Limits:36
Extinguishing Media:WATER FOG, STANDARD FOAM, CARBON DIOXIDE
Fire Fighting Procedures:KEEP CONTAINERS COOL. USE EQUIPMENT OR SHIELDING TO PROTECT PERSONNEL AGAINST BURSTING, RUPTURING, OR VENTING CONTAINERS.
Unusual Fire/Explosion Hazard:AT ELEVATED TEMPERATURES, CONTAINERS MAY VENT, RUPTURE, OR BURST. VAPORS ARE HEAVIER THAN AIR AND WILL REMAIN FLAMMABLE UNTIL VAPOR CONCENTRATION IS REDUCED BELOW FLAMMABLE LIMITS.

=====
Accidental Release Measures
=====

Spill Release Procedures:REMOVE IGNITION SOURCES, AVOID BREATHING VAPORS, AVOID SKIN CONTACT WITH LIQUID.

=====
Handling and Storage
=====

Handling and Storage Precautions:DO NOT STORE WHERE TEMPERATURES COULD EXCEED 54C.
Other Precautions:VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL SOME DISTANCE TO AN IGNITION SOURCE.

=====
Exposure Controls/Personal Protection
=====

Respiratory Protection:NOT APPLICABLE IN NORMAL USE.
Ventilation:LOCAL EXHAUST SHOULD BE SUFFICIENT TO REMOVE SOLVENT.
Protective Gloves:NOT APPLICABLE IN NORMAL USE.
Eye Protection:NOT APPLICABLE IN NORMAL USE.
Other Protective Equipment:DO NOT WEAR CLOTHING SOAKED BY SPRAY.
Work Hygienic Practices:USE GOOD PERSONAL HYGIENE.
Supplemental Safety and Health

=====
Physical/Chemical Properties
=====

Boiling Pt:B.P. Text:N/D
Vapor Pres:150 PSIG
Vapor Density:>AIR
Spec Gravity:0.76
Evaporation Rate & Reference:>1.0 (NBUAC=1)
Solubility in Water:<1
Appearance and Odor:CLEAR SPRAY, DRIES QUICKLY LEAVING VERY LITTLE RESIDUE W/ ETHER ODOR, AEROSOL
Percent Volatiles by Volume:99

=====
Stability and Reactivity Data
=====

Stability Indicator/Materials to Avoid:YES
STRONG OXIDIZING AGENTS.
Stability Condition to Avoid:NONE
Hazardous Decomposition Products:CARBON MONOXIDE.

=====
Disposal Considerations
=====

Waste Disposal Methods:DO NOT PUNCTURE OR INCINERATE CONTAINERS. GIVE

EMPTY, LEAKING OR FULL CONTAINERS TO A DISPOSAL SERVICE EQUIPPED TO SAFELY HANDLE AND DISPOSE OF PRESSURIZED CONTAINERS.

===== MSDS Transport Information =====

Transport Information:DOT REGULATIONS: DOT NAME: ENGINE STARTING FLUID,
UN1960, FLAMMABLE GAS.

===== Other Information =====

Disclaimer (provided with this information by the compiling agencies):
This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.

EPA Rpt Qty: 5000 LBS

DOT Rpt Qty: 5000 LBS

Ozone Depleting Chemical: N

Cas: 108-88-3

Code: M

RTECS #: XS5250000 Code: M

Name: TOLUENE (SARA III)

% Text: 30

Environmental Wt:

Other REC Limits: N/P

OSHA PEL: 200 PPM/150 STEL

Code: M

OSHA

Code:

ACGIH TLV: 50 PPM; 9293

Code: M

ACGIH N/P

Code:

EPA Rpt Qty: 1000 LBS

DOT Rpt Qty: 1000 LBS

Ozone Depleting Chemical: N

Health Hazards Data

TOP

LD50 LC50 Mixture N/P

Route Of Entry Inds - Inhalation: N/P

Skin: N/P

Ingestion: N/P

Carcinogenicity Inds - NTP: N/P

IARC: N/P

OSHA: N/P

Health Hazards Acute And Chronic

N/P

Explanation Of Carcinogenicity

N/P

Signs And Symptoms Of Overexposure

VAPORS MAY IRRITATE EYES, NOSE & THROAT & CAUSE NAUSEA, HEADACHES & NARCOSIS. EYE & SKIN IRRITANT.

Medical Cond Aggravated By Exposure

N/P

First Aid

EYES: FLUSH IMMEDIATELY WITH PLENTY OF WATER. SEEK MEDICAL ATTENTION.
SKIN: WASH WITH SOAP & WATER. INHALATION: PROVIDE FRESH AIR.

Spill Release Procedures

EXTINGUISH ALL IGNITION SOURCES. COLLECT SPILLED MATERIAL. CLEAN UP RESIDUE.

Neutralizing Agent

N/P

Waste Disposal Methods

INCINERATE PROPERLY. DO NOT LANDFILL.

Handling And Storage Precautions

KEEP AWAY FROM HEAT, SPARKS, & FLAMES. USE IN WELL-VENTILATED AREAS. AVOID PROLONGED OR REPEATED SKIN CONTACT.

Other Precautions

N/P

Fire and Explosion Hazard Information

TOP

Flash Point Method: N/P

Flash Point:
Autoignition Temp:
Lower Limits:

Flash Point Text: 25F (TOC)
Autoignition Temp Text: N/A
Upper Limits:

Extinguishing Media

CARBON DIOXIDE, FOAM, DRY CHEMICAL

Fire Fighting Procedures

N/P

Unusual Fire/Explosion Hazard

N/P

Control Measures

TOP

Respiratory Protection

N/P

Ventilation

LOCAL EXHAUST

Protective Gloves

N/P

Eye Protection

GOGGLES

Other Protective Equipment

N/P

Work Hygienic Practices

N/P

Supplemental Safety and Health

N/P

Physical/Chemical Properties

TOP

HCC: F2

NRC/State LIC No: N/R

Net Prop WT For Ammo:

Boiling Point: =26.1C, 79.F

B.P. Text:

Melt/Freeze Pt:

M.P/F.P Text: N/A

Decomp Temp:

Decomp Text: N/A

Vapor Pres: N/P

Vapor Density: N/P

Volatile Org Content %:

Spec Gravity: 0.89

VOC Pounds/Gallon:

PH: N/P

VOC Grams/Liter:

Viscosity: N/P

Evaporation Rate & N/P

Reference:

Solubility in Water: INSOLUBLE

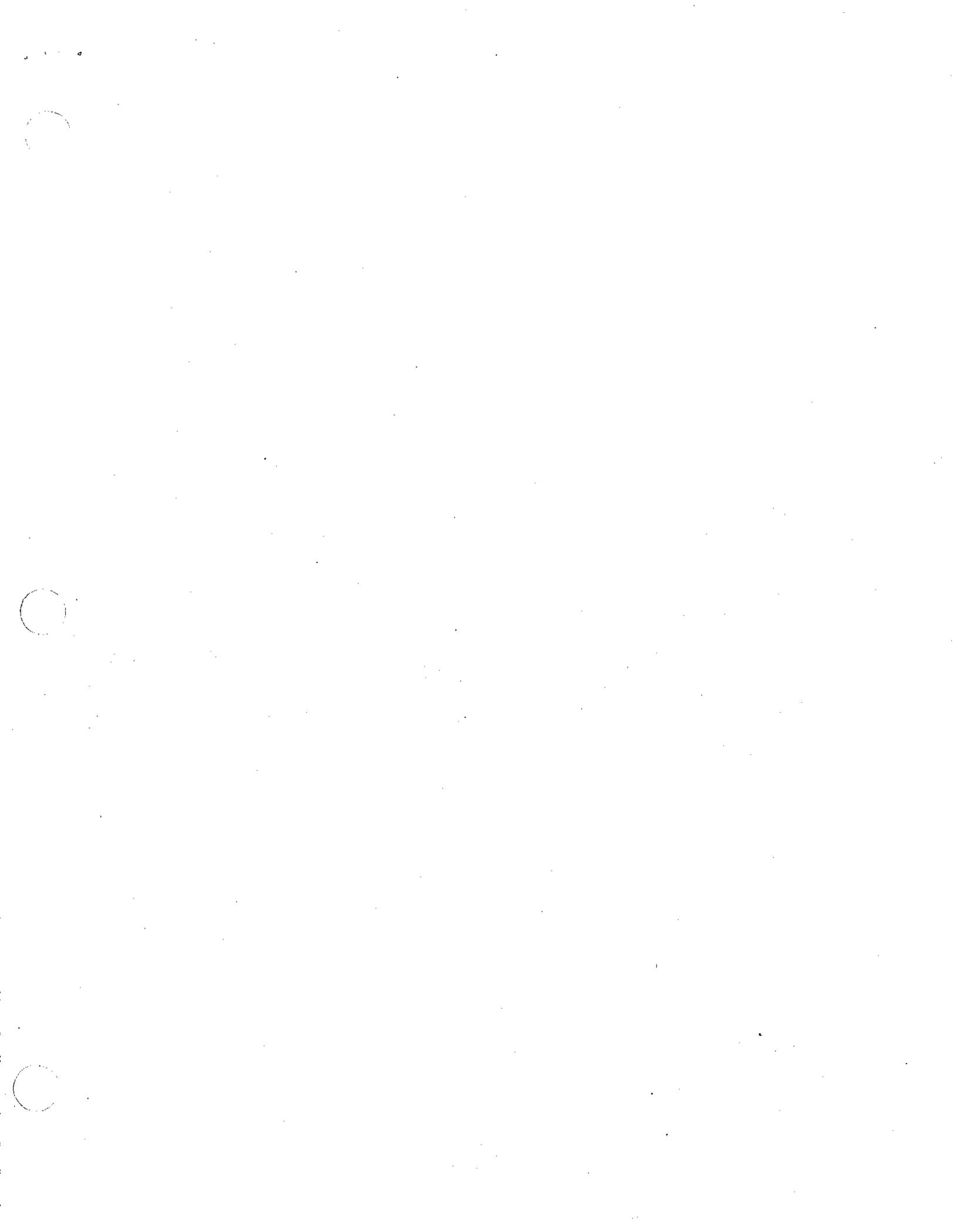
Appearance and Odor: BROWN, VISCOUS LIQUID, KETONE ODOR

Percent Volatiles by Volume: 81

Corrosion Rate: N/P

Reactivity Data

TOP



Stability Indicator: YES

Stability Condition To Avoid: N/P

Materials To Avoid: N/P

Hazardous Decomposition Products: N/P

Hazardous Polymerization Indicator: NO

Conditions To Avoid Polymerization: N/P

Toxicological Information

[TOP](#)

Toxicological Information: N/P

Ecological Information

[TOP](#)

Ecological: N/P

MSDS Transport Information

[TOP](#)

Transport Information: N/P

Regulatory Information

[TOP](#)

Sara Title III Information: N/P

Federal Regulatory Information: N/P

State Regulatory Information: N/P

Other Information

[TOP](#)

Other Information: N/P

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MATERIAL SAFETY DATA SHEET

MSDS Number: 1100E

Section 1 PRODUCT AND COMPANY IDENTIFICATION

Trade Name: OATEY PVC REGULAR CLEAR CEMENT
Product Nos.: Clear - 31012, 31013, 31014, 31015, 31016, 31958, 31959, 31960, 31961
Product Use: Cement for PVC Plastic Pipe
Formula: PVC Resin in Solvent Solution
Synonyms: PVC Plastic Pipe Cement
Firm Name & Address: Oatey Company 4700 West 160th Street, Cleveland, Ohio 44135 www.oatey.com
Firm Phone No: (216) 267-7100
Emergency Phone Nos.: For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared by: Technical Department
Preparation Date: 10/01/2009

Section 2 HAZARDS IDENTIFICATION

Emergency Overview: Clear
liquid with an ether-like odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.

Section 3 COMPOSITION/INFORMATION ON INGREDIENTS

Table with 6 columns: INGREDIENTS, %wt/wt, CAS NUMBER, ACGIH TLV TWA, OSHA PEL TWA, OTHER. Rows include Tetrahydrofuran, Methyl Ethyl Ketone, Acetone, PVC Resin (Non-hazardous), and Cyclohexanone.

OSHA Hazard Classification: Flammable, irritant, organ effects

Section 4 FIRST AID MEASURES

Skin: Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with hand cleaner or baby oil.
Eyes: If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get

medical attention immediately.

Inhalation: If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

Ingestion: **DO NOT INDUCE VOMITING.** Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

Section 5 FIRE FIGHTING MEASURES

Flashpoint / Method: 14 - 23 Degrees F. (-10 to -5 Degrees C) / CCCFP

Flammability: LEL = 1.8 % Volume, UEL = 11.8 % Volume

Extinguishing Media: Use dry chemical, CO₂, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.

Special Fire Fighting Procedure: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored

Unusual Fire And Explosion Hazards: Extremely flammable liquid. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

Hazardous Decomposition Products: Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

Section 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Remove all sources of ignition and ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with an inert absorbent such as sand, earth or other non-combusting material. Put absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 13 for disposal information.

Section 7 HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.

Storage: Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.

Other: "Empty" containers retain product residue and can be hazardous. Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.

Respiratory Protection: For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment

selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

Skin Protection: Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.

Eye Protection: Safety glasses with side shields or safety goggles.

Section 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 151 Degrees F / 66 Degrees C
Melting Point: Not applicable
Vapor Pressure: 145 mmHg @ 20 Degrees C
Vapor Density: (Air = 1) 2.5
Volatile Components: 84-88%
Solubility In Water: Negligible
pH: Not applicable
Specific Gravity: 0.90 +/- 0.02 @ 20 Degrees C
Evaporation Rate: (BUAC = 1) = 5.5 - 8.0
Appearance: Clear Liquid
Odor: Ether-Like
Will Dissolve In: Tetrahydrofuran
Material Is: Liquid

Section 10 STABILITY AND REACTIVITY

Stability: Stable.
Conditions To Avoid: Avoid heat, sparks, flames and other sources of ignition.
Hazardous Decomposition Products: Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.
Incompatibility/ Materials To Avoid: Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.
Hazardous Polymerization: Will not occur.

Section 11 TOXICOLOGICAL INFORMATION

Inhalation: Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.
Skin: May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.
Eye: Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.
Ingestion: Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.
Chronic Toxicity: Prolonged or repeated overexposure cause dermatitis and damage to the kidney, liver, lungs and central nervous system.
Toxicity Data: Acetone: Oral rat LD50: 5,800 mg/kg
Inhalation rat LC50: 50,100 mg/m3/8 hours
Cyclohexanone: Oral rat LD50: 1,620 mg/kg
Inhalation rat LC50: 8,000 ppm/4 hours

Tetrahydrofuran: Skin rabbit LD50: 1 mL/kg
 Oral rat LD50: 1,650 mg/kg
 Inhalation rat LC50: 21,000 ppm/3 hours

Methyl Ethyl Ketone: Oral rat LD50: 2,737 mg/kg
 Inhalation rat LC50: 23,500 mg/m3/8 hours
 Skin rabbit LD50: 6,480 mg/kg

Sensitization: None of the components are known to cause sensitization.

Carcinogenicity: None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. The National Toxicology Program has reported that exposure of mice and rats to tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetime caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health is unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF. ACGIH has classified cyclohexanone (CYH) and tetrahydrofuran as "A3," Confirmed Animal Carcinogens with Unknown Relevance to Humans.

Mutagenicity: Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.

Reproductive Toxicity: Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Medical Conditions Aggravated By Exposure: Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.

Section 12 ECOLOGICAL INFORMATION

This product is not expected to be toxic to aquatic organisms.
 Cyclohexanone: 96 hour LC50 values for fish is over 100 mg/l.
 Tetrahydrofuran: 96 hour LC50 fathead minnow: 2160 mg/L.
 Acetone: 96 hour LC50 for fish is greater than 100 mg/L.
 Methyl Ethyl Ketone: 96 hour LC50 for fish is greater than 100 mg/L.

VOC Information: This product emits VOC's (volatile organic compounds) in its use. Make sure that use of this product complies with local VOC emission regulations, where they exist.

VOC Level: Maximum 510 g/L per SCAQMD Test Method 316A.

Section 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose in accordance with current local, state and federal regulations.

RCRA Hazardous Waste Number: U002, U057, U159, U213

EPA Hazardous Waste ID Number: D001, D035, F003, F0005

EPA Hazard Waste Number: Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content)

Section 14 TRANSPORT INFORMATION

DOT	<u>Less than 1 Liter (0.3 gal)</u>	<u>Greater than 1 Liter (0.3 gal)</u>
UN/NA Number:	None	UN1133
Proper Shipping Name:	Consumer Commodity	Adhesives
Hazard Class:	ORM-D	3
Packing Group:	None	PGII

Hazard Labels:	None	Flammable Liquid
IMDG		
UN Number:	UN1133	UN1133
Proper Shipping Name:	Adhesives	Adhesives
Hazard Class:	3	3
Packing Group:	II	II
Label:	None (Limited Quantities are expected from labeling)	Class 3 (Flammable Liquid)
Flashpoint (deg C)	-10 to -5 Degrees C	-10 to -5 Degrees C

2008 North American Emergency Response Guidebook Number: 127

Section 15 REGULATORY INFORMATION

Hazard Category for Acute Health, Chronic Health, Flammable
Section 311/312:

Section 302 This product does not contain chemicals regulated under SARA Section 302.
Extremely Hazardous
Substances (TPQ):

Section 313 Toxic Chemicals: This product does not contain chemicals subject to SARA Title III Section 313 Reporting requirements.
CERCLA 103 Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Tetrahydrofuran (40% maximum) of 1,000 lbs, is 2,500 lbs.
Reportable Quantity:

Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

California Proposition 65: This product contains trace amounts of chemicals known to the State of California to cause cancer. Under normal use conditions, exposure to these chemicals at levels above the State of California "No Significant Risk Level" (NSRL) are unlikely. The use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 8 will minimize exposure to these chemicals.

TSCA Inventory Canadian WHIMS Classification: All of the components of this product are listed on the TSCA inventory. Class B, Division 2; Class D, Division 2, Subdivision B; Class D, Division 2, Subdivision A. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Section 16 OTHER INFORMATION

NFPA and HMIS:

NFPA Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 Special: None

HMIS Hazard Signal: Health: 2* Flammability: 3 Reactivity: 1 PPE: G

Disclaimer:

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, we cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.

Template: tmpl-us-e1



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MATERIAL SAFETY DATA SHEET

MSDS Number: 1401E

Section 1 PRODUCT AND COMPANY IDENTIFICATION

Trade Name: OATEY PURPLE PRIMER/CLEANER
Product Nos.: 30768, 30780, 30783, 30796, 30806, 31966, 31967, 31968, 31969
Product Use: Primer/Cleaner for cementing PVC and CPVC pipe
Formula: See Section 2
Synonyms: Primer, Cleaner
Firm Name & Address: Oatey Company 4700 West 160th Street, Cleveland, Ohio 44135
Firm Phone No: (216) 267-7100
Emergency Phone Nos.: For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared by: Technical Department
Preparation Date: 11/01/2009

Section 2 HAZARDS IDENTIFICATION

Emergency Overview: Purple
liquid with an ether-like odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.

Section 3 COMPOSITION/INFORMATION ON INGREDIENTS

Table with 6 columns: INGREDIENTS, %wt/wt, CAS NUMBER, ACGIH TLV TWA, OSHA PEL TWA, OTHER. Rows include Tetrahydrofuran, Methyl Ethyl Ketone, Acetone, and Cyclohexanone.

OSHA Hazard Classification: Flammable, irritant, organ effects

Section 4 FIRST AID MEASURES

Skin: Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with hand cleaner or baby oil.
Eyes: If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.
Inhalation: If symptoms of exposure develop, remove to fresh air. If breathing becomes

difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

Ingestion: DO NOT INDUCE VOMITING. Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

Section 5 FIRE FIGHTING MEASURES

Flashpoint / Method: 14 - 23 Degrees F. (-10 to -5 Degrees C) / CCCFP

Flammability: LEL = 1.8 % Volume, UEL = 11.8 % Volume

Extinguishing Media: Use dry chemical, CO2, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.

Special Fire Fighting Procedure: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored

Unusual Fire And Explosion Hazards: Extremely flammable liquid. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

Hazardous Decomposition Products: Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

Section 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Remove all sources of ignition and ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with an inert absorbent such as sand, earth or other non-combusting material. Put absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 13 for disposal information.

Section 7 HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.

Storage: Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.

Other: "Empty" containers retain product residue and can be hazardous. Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.

Respiratory Protection: For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting,

use self-contained breathing apparatus.
Skin Rubber gloves are suitable for normal use of the product. For long exposures
Protection: chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm)
to avoid prolonged skin contact.
Eye Safety glasses with side shields or safety goggles.
Protection:

Section 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 151 Degrees F / 66 Degrees C
Melting Point: Not applicable
Vapor Pressure: 145 mmHg @ 20 Degrees C
Vapor Density: (Air = 1) 2.5
Volatile Components: 99.96%
Solubility In Water: Negligible
pH: Not applicable
Specific Gravity: 0.81 +/- 0.02 @ 20 Degrees C
Evaporation Rate: (BUAC = 1) = 5.5 - 8.0
Appearance: Purple Liquid
Odor: Ether-Like
Will Dissolve In: Tetrahydrofuran
Material Is: Liquid

Section 10 STABILITY AND REACTIVITY

Stability: Stable.
Conditions To Avoid: Avoid heat, sparks, flames and other sources of ignition.
Hazardous Decomposition Products: Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.
Incompatibility/ Materials To Avoid: Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.
Hazardous Polymerization: Will not occur.

Section 11 TOXICOLOGICAL INFORMATION

Inhalation: Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.
Skin: May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.
Eye: Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.
Ingestion: Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.
Chronic Toxicity: Prolonged or repeated overexposure cause dermatitis and damage to the kidney, liver, lungs and central nervous system.
Toxicity Data:
Acetone: Oral rat LD50: 5,800 mg/kg
Inhalation rat LC50: 50,100 mg/m3/8 hours
Cyclohexanone: Oral rat LD50: 1,620 mg/kg
Inhalation rat LC50: 8,000 ppm/4 hours
Skin rabbit LD50: 1 mL/kg
Tetrahydrofuran: Oral rat LD50: 1,650 mg/kg

Methyl Ethyl Ketone: Inhalation rat LC50: 21,000 ppm/3 hours
Oral rat LD50: 2,737 mg/kg
Inhalation rat LC50: 23,500 mg/m3/8 hours
Skin rabbit LD50: 6,480 mg/kg

Sensitization: None of the components are known to cause sensitization.
Carcinogenicity: None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. The National Toxicology Program has reported that exposure of mice and rats to tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetime caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health is unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF. ACGIH has classified cyclohexanone (CYH) and tetrahydrofuran as "A3," Confirmed Animal Carcinogens with Unknown Relevance to Humans.
Mutagenicity: Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.
Reproductive Toxicity: Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.
Medical Conditions Aggravated By Exposure: Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.

Section 12 ECOLOGICAL INFORMATION

This product is not expected to be toxic to aquatic organisms.
Cyclohexanone: 96 hour LC50 values for fish is over 100 mg/l.
Tetrahydrofuran: 96 hour LC50 fathead minnow: 2160 mg/L.
Acetone: 96 hour LC50 for fish is greater than 100 mg/L.
Methyl Ethyl Ketone: 96 hour LC50 for fish is greater than 100 mg/L.

VOC Information: This product emits VOC's (volatile organic compounds) in its use. Make sure that use of this product complies with local VOC emission regulations, where they exist.
VOC Level: Maximum 550 g/L per SCAQMD Test Method 316A.

Section 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose in accordance with current local, state and federal regulations.
RCRA Hazardous Waste Number: U002, U057, U159, U213
EPA Hazardous Waste ID Number: D001, D035, F003, F0005
EPA Hazard Waste Number: Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content)

Section 14 TRANSPORT INFORMATION

DOT	<u>Less than 1 Liter (0.3 gal)</u>	<u>Greater than 1 Liter (0.3 gal)</u>
UN/NA Number:	None	UN1993
Proper Shipping Name:	Consumer Commodity	Flammable Liquid, NOS (Methyl Ethyl Ketone, Acetone)
Hazard Class:	ORM-D	3
Packing Group:	None	PGII

Hazard Labels:	None	Flammable Liquid
IMDG		
UN Number:	UN1993	UN1993
Proper Shipping Name:	Flammable Liquid, NOS (Limited Quantity)	Flammable Liquid, NOS (Methyl Ethyl Ketone, Acetone)
Hazard Class:	3	3
Packing Group:	II	II
Label:	None (Limited Quantities are expected from labeling)	Class 3 (Flammable Liquid)
Flashpoint (deg C)	-10 to -5 Degrees C	-10 to -5 Degrees C

2008 North American Emergency Response Guidebook Number: 127

Section 15 REGULATORY INFORMATION

Hazard Category for Acute Health, Chronic Health, Flammable
Section 311/312:

Section 302 This product does not contain chemicals regulated under SARA Section 302.
Extremely Hazardous
Substances (TPQ):

Section 313 Toxic This product does not contain chemicals subject to SARA Title III Section
Chemicals: 313 Reporting requirements.
CERCLA 103 Spills of this product over the RQ (reportable quantity) must be reported
Reportable to the National Response Center. The RQ for the product, based on the RQ
Quantity: for Acetone (100% maximum) of 5,000 lbs, is 5,000 lbs.
Many states have more stringent release reporting requirements. Report
spills required under federal, state and local regulations.

California This product does not contain any chemicals subject to California
Proposition 65: Proposition 65 regulations.

TSCA Inventory All of the components of this product are listed on the TSCA inventory.
Canadian WHIMS Class B, Division 2; Class D, Division 2, Subdivision B; Class D,
Classification: Division 2, Subdivision A. This product has been classified in accordance
with the hazard criteria of the Controlled Products Regulations (CPR) and
the MSDS contains all the information required by the CPR.

Section 16 OTHER INFORMATION

NFPA and HMIS:
NFPA Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 Special: None
HMIS Hazard Signal: Health: 2* Flammability: 3 Reactivity: 1 PPE: G

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Template: tmpl-us-e1

NONE SPECIFIED BY MANUFACTURER (FP N).

Explanation Of Carcinogenicity

N/P

Signs And Symptions Of Overexposure

NO SIGNS DUE TO OVER EXPOSURE HAVE BEEN DETECTED.

Medical Cond Aggravated By Exposure

NONE.

First Aid

INGESTION: DO NOT INDUCE VOMITING. CONSULT A PHYSICIAN IMMEDIATELY. FOR EYE CONTACT: FLUSH EYES WITH WATER FOR AT LEAST 15 MINUTES. SKIN CONTACT: WIPE OFF AND WASH WITH SOAP AND WATER. CONSULT A PHY SICIAN IF IRRITATION DEVELOPS. INHALATION: REMOVE TO FRESH AIR. SUPPORT BREATHING. CONTACT A PHYSICIAN IMMEDIATELY (FP N).

Spill Release Procedures

WIPE UP WITH RAGS, WASH WITH SOAP AND WATER.

Neutralizing Agent

N/P

Waste Disposal Methods

DISPOSE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS (FP N). NON-HAZARDOUS LANDFILL.

Handling And Storage Precautions

STORE IN A DRY, COOL PLACE.

Other Precautions

NONE.

Fire and Explosion Hazard Information

TOP

Flash Point Method: N/A

Flash Point:

Flash Point Text: N/A

Autoignition Temp:

Autoignition Temp Text: N/P

Lower Limits: N/A

Upper Limits: N/A

Extinguishing Media

DRY CHEMICAL OR CO2.

Fire Fighting Procedures

USE NIOSH APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT (FP N).

Unusual Fire/Explosion Hazard

NONE.

Control Measures

TOP

Respiratory Protection

A NIOSH APPROVED RESPIRATOR APPROPRIATE FOR THE EXPOSURE OF CONCERN (FP N). NOT REQUIRED (MFR).

Ventilation

LOCAL EXHAUST - NORMAL VENTILATION.

Protective Gloves

IMPERVIOUS GLOVES (FP N). RECOMMENDED FOR CONTINUOUS USE (MFR).

Eye Protection

ANSI APPROVED SAFETY GLASSES (FP N). RECOMMENDED FOR CONTINUOUS USE (MFR).

Other Protective Equipment

EYEWASH MEETING ANSI DESIGN CRITERIA (FP N).

Work Hygienic Practices

WASH SKIN AFTER HANDLING MATERIAL.

Supplemental Safety and Health

N/P

Physical/Chemical Properties

TOP

HCC:

NRC/State LIC No:

Net Prop WT For Ammo:

Boiling Point:

B.P. Text: N/A

Melt/Freeze Pt:

M.P/F.P Text: N/P

Decomp Temp:

Decomp Text: N/P

Vapor Pres: N/A

Vapor Density: N/A

Volatile Org Content %:

Spec Gravity: 1.87

VOC Pounds/Gallon:

PH: N/P

VOC Grams/Liter:

Viscosity: N/P

Evaporation Rate & N/A

Reference:

Solubility in Water: INSOLUBLE

Appearance and Odor: GRAY COLORED. ODOR: NONE.

Percent Volatiles by Volume: N/A

Corrosion Rate: N/P

Reactivity Data

TOP

Stability Indicator: YES

Stability Condition To Avoid: DIRECT CONTACT WITH OPEN FLAME.

Materials To Avoid: NONE.

Hazardous Decomposition CO2 AND CO MAY FORM ON BURNING.

Products:

Hazardous Polymerization NO

Indicator:

Conditions To Avoid NONE.

Polymerization:

Toxicological Information

TOP

Toxicological Information: N/P

Ecological Information

TOP

Ecological: N/P

MSDS Transport Information

TOP

Transport Information: SHIPPING INFORMATION: NOT HAZARDOUS FOR SHIPPING PURPOSES.

Regulatory Information

TOP

Sara Title III Information: TITLE III SECTION 313 SUPPLIER NOTIFICATION:
THIS PRODUCT CONTAINS TOXIC CHEMICALS
SUBJECT TO THE REPORTING REQUIREMENTS OF
SECTION 313 OF THE EMERGENCY PLANNING AND
COMMUNITY RIGHT-TO-KNOW ACT OF 196 6 & OF
40CFR372. THIS INFORMATION MUST BE INCLUDED
ON ALL MSDS'S THAT ARE COPIED & DISTRIBUTED
FOR THIS MATERIAL.

Federal Regulatory Information: HAZARDOUS COMPONENTS: NONE OF THE
INGREDIENTS IN THIS PRODUCT ARE CLASSIFIED
AS HAZARDOUS ACCORDING WITH OSHA 1910.1200.

State Regulatory Information: N/P

Other Information

TOP

Other Information: HMIS: HEALTH - 0, FLAMMABILITY - 0, REACTIVITY 0,
PROTECTIVE EQUIPMENT - A. HAZARD RATING: 0 -
MINIMAL, 1 - SLIGHT, 2 - MODERATE, 3 - SERIOUS, 4 -
SEVERE. FAX (773) 227-3705. CHEMICAL EMERGENCIES DUR
ING TRANSPORTATION ONLY, CALL INFOTRAC 1-800-535-
5053 (24HRS A DAY; 7 DAYS A WEEK).

NONE SPECIFIED BY MANUFACTURER (FP N).

Explanation Of Carcinogenicity

N/P

Signs And Symptions Of Overexposure

NO SIGNS DUE TO OVER EXPOSURE HAVE BEEN DETECTED.

Medical Cond Aggravated By Exposure

NONE.

First Aid

INGESTION: DO NOT INDUCE VOMITING. CONSULT A PHYSICIAN IMMEDIATELY. FOR EYE CONTACT: FLUSH EYES WITH WATER FOR AT LEAST 15 MINUTES. SKIN CONTACT: WIPE OFF AND WASH WITH SOAP AND WATER. CONSULT A PHY SICIAN IF IRRITATION DEVELOPS. INHALATION: REMOVE TO FRESH AIR. SUPPORT BREATHING. CONTACT A PHYSICIAN IMMEDIATELY (FP N).

Spill Release Procedures

WIPE UP WITH RAGS, WASH WITH SOAP AND WATER.

Neutralizing Agent

N/P

Waste Disposal Methods

DISPOSE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS (FP N). NON-HAZARDOUS LANDFILL.

Handling And Storage Precautions

STORE IN A DRY, COOL PLACE.

Other Precautions

NONE.

Fire and Explosion Hazard Information

TOP

Flash Point Method: N/A

Flash Point:

Flash Point Text: N/A

Autoignition Temp:

Autoignition Temp Text: N/P

Lower Limits: N/A

Upper Limits: N/A

Extinguishing Media

DRY CHEMICAL OR CO2.

Fire Fighting Procedures

USE NIOSH APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT (FP N).

Unusual Fire/Explosion Hazard

NONE.

Control Measures

TOP

Respiratory Protection

A NIOSH APPROVED RESPIRATOR APPROPRIATE FOR THE EXPOSURE OF CONCERN (FP N). NOT REQUIRED (MFR).

Ventilation

LOCAL EXHAUST - NORMAL VENTILATION.

Protective Gloves

IMPERVIOUS GLOVES (FP N). RECOMMENDED FOR CONTINUOUS USE (MFR).

Eye Protection

ANSI APPROVED SAFETY GLASSES (FP N). RECOMMENDED FOR CONTINUOUS USE (MFR).

Other Protective Equipment

EYEWASH MEETING ANSI DESIGN CRITERIA (FP N).

Work Hygienic Practices

WASH SKIN AFTER HANDLING MATERIAL.

Supplemental Safety and Health

N/P

Physical/Chemical Properties

[TOP](#)

HCC:

NRC/State LIC No:

Net Prop WT For Ammo:

Boiling Point:

B.P. Text: N/A

Melt/Freeze Pt:

M.P/F.P Text: N/P

Decomp Temp:

Decomp Text: N/P

Vapor Pres: N/A

Vapor Density: N/A

Volatile Org Content %:

Spec Gravity: 1.87

VOC Pounds/Gallon:

PH: N/P

VOC Grams/Liter:

Viscosity: N/P

Evaporation Rate & N/A

Reference:

SoIubility in Water: INSOLUBLE

Appearance and Odor: GRAY COLORED. ODOR: NONE.

Percent Volatiles by Volume: N/A

Corrosion Rate: N/P

Reactivity Data

[TOP](#)

Stability Indicator: YES

Stability Condition To Avoid: DIRECT CONTACT WITH OPEN FLAME.

Materials To Avoid: NONE.

Hazardous Decomposition CO2 AND CO MAY FORM ON BURNING.

Products:

Hazardous Polymerization NO

Indicator:

Conditions To Avoid NONE.

Polymerization:

Toxicological Information

[TOP](#)

Toxicological Information: N/P

Ecological Information

[TOP](#)

Ecological: N/P

MSDS Transport Information

TOP

Transport Information: SHIPPING INFORMATION: NOT HAZARDOUS FOR SHIPPING PURPOSES.

Regulatory Information

TOP

Sara Title III Information: TITLE III SECTION 313 SUPPLIER NOTIFICATION:
THIS PRODUCT CONTAINS TOXIC CHEMICALS
SUBJECT TO THE REPORTING REQUIREMENTS OF
SECTION 313 OF THE EMERGENCY PLANNING AND
COMMUNITY RIGHT-TO-KNOW ACT OF 196 6 & OF
40CFR372. THIS INFORMATION MUST BE INCLUDED
ON ALL MSDS'S THAT ARE COPIED & DISTRIBUTED
FOR THIS MATERIAL.

Federal Regulatory Information: HAZARDOUS COMPONENTS: NONE OF THE
INGREDIENTS IN THIS PRODUCT ARE CLASSIFIED
AS HAZARDOUS ACCORDING WITH OSHA 1910.1200.

State Regulatory Information: N/P

Other Information

TOP

Other Information: HMIS: HEALTH - 0, FLAMMABILITY - 0, REACTIVITY 0,
PROTECTIVE EQUIPMENT - A. HAZARD RATING: 0 -
MINIMAL, 1 - SLIGHT, 2 - MODERATE, 3 - SERIOUS, 4 -
SEVERE. FAX (773) 227-3705. CHEMICAL EMERGENCIES DUR
ING TRANSPORTATION ONLY, CALL INFOTRAC 1-800-535-
5053 (24HRS A DAY; 7 DAYS A WEEK).

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KANO LABORATORIES, INC.
SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Manufacturer: Kano Laboratories, Inc.
1000 E. Thompson Lane
Nashville, TN 37211
Information Phone Number: (615) 833-4101
Fax: (615) 833-5790 **Emergency:** 800-424-9300 (Chemtrec)
Website: www.kanolaboratories.com

HMIS Hazard Rating

HEALTH	1
FLAMMABILITY	2
REACTIVITY	0
PERSONAL PROTECTION	X

Product Name: AEROKROIL
MSDS Date of Preparation: 6/7/09
Product Use: Penetrant/Lubricant for Industrial Use

SECTION 2: HAZARDS IDENTIFICATION

Slightly reddish liquid with a refreshing odor packaged as an aerosol.

EMERGENCY OVERVIEW

WARNING! Contents under pressure. Heated can may rupture. Combustible Liquid and Vapor. May cause eye and skin irritation. May be harmful if absorbed through the skin. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects such as headache, dizziness, nausea and vomiting. Harmful or fatal if swallowed. Aspiration into the lungs during ingestion or vomiting may cause lung damage. May cause chronic effects.

Potential Health Effects:

Eye: May cause eye irritation with redness, tearing and stinging. Corneal injury is possible if not promptly removed.

Skin: May cause mild irritation with redness, rash, swelling. Prolonged or repeated contact may result in defatting and dermatitis. May be absorbed through the skin with effects similar to inhalation and ingestion.

Inhalation: Inhalation of vapors or mists may cause mucous membrane and upper respiratory tract irritation and central nervous system depression. Symptoms may include burning sensation, coughing, wheezing, sore throat, shortness of breath, headache, dizziness, drowsiness, nausea, vomiting, depressed respiration and heart rate, heart rhythm irregularities and unconsciousness.

Ingestion: Ingestion is an unlikely route of exposure for aerosol products. Swallowing may cause gastrointestinal irritation with abdominal pain, nausea, vomiting and diarrhea and central nervous system depression with symptoms including headache, dizziness, intoxication, weakness, respiratory failure, convulsions, cardiovascular collapse and pulmonary edema. Aspiration into the lungs during ingestion or vomiting may cause lung damage.

Chronic Hazards: Prolonged or repeated exposure may cause damage to the central nervous system, blood, kidney and liver. This product contains chemicals that in animal studies caused harm to the developing fetus, but only at exposure levels that harm the pregnant animal. There is no evidence of adverse fetal or reproductive effects in humans.

Carcinogen Status: None of the components of this product at greater than 0.1% are listed as carcinogens by OSHA, IARC or NTP.

Medical Conditions Aggravated by Exposure: Pre-existing eye, skin, respiratory, heart, central nervous system, liver and kidney disorders.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	%
Severely Hydrotreated Petroleum Distillates	64742-52-5	30-50
Light Petroleum Distillates	64742-95-6/64742-88-7/ 64742-47-8	30-50
Aliphatic Alcohols	78-92-2/123-42-2	1-5
Glycol Ether	111-76-2	1-5
Proprietary Ingredients	Proprietary	5-15
Carbon Dioxide Propellant	124-38-9	1-15

SECTION 4: FIRST AID MEASURES

Eye: Rinse thoroughly with water for at least 15 minutes, holding the eye lids open to be sure the material is washed out. Get immediate medical attention.

Skin: Remove contaminated clothing. Wash contact area thoroughly with soap and water. Get medical attention if irritation or symptoms of exposure develop. Launder clothing before re-use.

Inhalation: Remove victim to fresh air. Give artificial respiration if needed. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

Ingestion: Ingestion is an unlikely route of exposure for aerosol products. DO NOT induce vomiting. Keep the victim calm and warm. Never give anything by mouth to an unconscious or drowsy person. Get immediate medical attention.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point: 124°F (51°C) COC (concentrate)

Flammable Limits: LEL: 0.9%
UEL: 10.6%

Autoignition Temperature: Not Determined

Aerosol Flame Extension: None

Aerosol Flashback: None

Aerosol Protection Level (NPPA 30B): Level 3

Extinguishing Media: Use carbon dioxide, dry chemical or foam. Water may be ineffective but can be used to cool containers and structures.

Special Fire Fighting Procedures: Wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing. Cool fire exposed containers with water. Protect against bursting cans.

Unusual Fire Hazards: Contents under pressure. Keep away from heat and open flames. Container may rupture or explode in the heat of a fire. Prolonged exposure to temperatures above 120°F may cause cans to burst. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back. Never use welding or cutting torch on or near containers (even empty) because product can ignite explosively. Combustion products may be hazardous.

Hazardous Decomposition Products: Oxides of carbon, organic compounds, smoke and fumes.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Spill: Remove all ignition sources such as open flames, spark producing equipment, pilot lights, etc. Wear appropriate protective clothing to prevent eye and skin contact including impervious gloves, safety goggles and respirator if needed (refer to Section 8 for specific recommendations). Ventilate area. Cover with an inert absorbent material and collect into an appropriate container for disposal. Report spills and releases as required to appropriate authorities.

SECTION 7: HANDLING AND STORAGE

Handling: Avoid breathing vapors, aerosols and mists. Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Wash exposed skin thoroughly with soap and water after use. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Do not cut, braze, solder, grind or weld on or near containers. Contents under pressure. Do not puncture or incinerate container.

Storage Store in a cool, well ventilated area at temperatures below 120°F. Do not store in direct sunlight. Store as a Level 3 aerosol.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	Exposure Limits
Severely Hydrotreated Petroleum Distillates	5 mg/m3 OSHA PEL-TWA 5 mg/m3 ACGIH TLV-TWA 10 mg/m3 ACGIH TLV-STEL
Light Petroleum Distillates	100 ppm OSHA PEL-TWA 100 ppm ACGIH TLV-TWA
Aliphatic Alcohol	150 ppm OSHA PEL-TWA 100 ppm ACGIH TLV-TWA
Aliphatic Alcohol	50 ppm OSHA PEL-TWA 50 ppm ACGIH TLV-TWA
Glycol Ether	50 ppm OSHA PEL-TWA 20 ppm ACGIH TLV-TWA
Proprietary Ingredients	None Established
Carbon Dioxide Propellant	5000 ppm OSHA PEL-TWA 5000 ppm ACGIH TLV-TWA 30000 ppm ACGIH TLV-STEL

Ventilation: Use with adequate general or local exhaust ventilation to maintain concentrations below the occupational exposure limits. Use explosion proof electrical equipment and wiring where required.

Respiratory Protection: If needed, a NIOSH approved respirator with organic vapor cartridges may be used. For higher exposures, a supplied air respirator may be required. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.

Skin Protection Impervious gloves are recommended when needed to avoid skin contact. Based on available test data, 4H or Silver Shield gloves are suggested.

Eye Protection: Chemical safety goggles recommended.

Other Protective Equipment: Impervious clothing as required to prevent skin contact and contamination of personal clothing. Suitable eye wash and washing facilities should be available in the work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Slightly reddish liquid with a refreshing odor packaged as an aerosol.

pH: 6-7

Boiling Point: 258°F

Vapor Pressure: 12 mm Hg @ 20°C (aliphatic alcohol)

Vapor Density (air =1): Greater than 1

Specific Gravity: 0.87

Melting Point: Not applicable

Water Solubility: Negligible

Evaporation Rate (ether=1): Less than 1

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage or use.

Incompatibility/Conditions to Avoid: Avoid strong oxidizing agents, reducing agents, acids, bases, amines, alkanolamines, ammonia, chlorinated compounds. Avoid heat, sparks, flames and all other sources of ignition.

Hazardous Decomposition Products: Combustion will produce oxides of carbon, organic compounds, smoke and fumes.

Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological testing has not been performed on this product as a mixture.

The calculated acute toxicity values, as determined by the DOT and other agency standard formula are: Oral LD50 = 2270; Dermal LD50 = 1500 mg/kg. Aerokroil is not classified as toxic under workplace or transportation criteria.

SECTION 12: ECOLOGICAL INFORMATION

No data available.

SECTION 13: DISPOSAL INFORMATION

Dispose in accordance with all local, state and federal regulations. Do not puncture or incinerate containers. When contents are depleted, continue to depress button until all gas is expelled.

SECTION 14: TRANSPORT INFORMATION

DOT Proper Shipping Name: Consumer Commodity

DOT Technical Name: None

DOT Hazard Class: ORM-D

UN Number: None

DOT Labels Required (49CFR172.101): None

Hazardous Substance (49CFR172.101): None

Reportable Quantity: None

DOT Marine Pollutants: This product does not contain marine pollutants as defined in 49CFR 171.8.

IMDG Shipping Description: Aerosols, 2, UN1950, FP 51 C, Limited Quantity

ID Number: UN1950

Hazard Class: 2

Packing Group: None

Labels Required: None

Marking Required: Aerosol Marking On Carton

Placards Required: Limited Quantities On Transport Containers

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA TITLE III:

Hazard Category for Section 311/312: Acute Health, Chronic Health, Fire Hazard, Sudden Release of Pressure

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements:

Aliphatic Alcohol	78-92-2	1-5%
Glycol Ether	111-76-2	1-5%
1,2,4-Trimethylbenzene	95-63-6	.5 - <5%

Section 302 Extremely Hazardous Substances (TPQ): None

EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.

SECTION 16: OTHER INFORMATION

HMIS Ratings: Health - 1 Flammability - 2 Reactivity - 0
NFPA Ratings: Health - 1 Flammability - 2 Reactivity - 0

The information contained herein has been developed based upon current available scientific data. New information may be developed from time to time which may render the conclusions of this report obsolete. Therefore, no warranty is extended as to the applicability of this information to the user's intended purpose or the consequences of its use or misuse.

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GLOSSARY

Permatex®

View MSDS : 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: **PERMATEX® #99 HIGH TACK™ SPRAY-A-GASKET® Sealant - 12 oz. aero. can, 9 oz. net wt.**

Product Code: 80065

MSDS Manufacturer Number: 80065

Manufacturer Name: Permatex, Inc.

Address: 10 Columbus Blvd.
Hartford, CT 06106

General Phone Number: 1-87-Permatex, (877) 376-2839

Emergency Phone Number: 800-255-3924

CHEMTREC: For emergencies in the US, call CHEMTREC: 800-424-9300

Canutec: In Canada, call CANUTEC: (613) 996-6666 (call collect)

MSDS Creation Date: 9/25/2010

MSDS Revision Date: 9/28/2010

HMS

Health Hazard	3
Fire Hazard	4
REACTIVITY	1
Personal Protection	X

* Chronic Health Effects:

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent
Light aliphatic petroleum solvent naphtha	64742-89-8	< 5 by weight
Ethyl acetate	141-78-6	< 5 by weight
N-Butane	106-97-8	15 - 40 by weight
Methylene Chloride	75-09-2	10 - 30 by weight
Propane	74-98-6	10 - 30 by weight
Acetone	67-64-1	10 - 30 by weight

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview: **WARNING!** Extremely flammable aerosol. Irritant. Contents under pressure. Harmful.

Route of Exposure: Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

Eye: Can cause moderate irritation, burning sensation, tearing, redness, and swelling. Overexposure may cause lacrimation, conjunctivitis, corneal damage and permanent injury.

Skin: Can cause skin irritation; itching, redness, rashes, hives, burning, and swelling. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material.

Inhalation: Respiratory tract irritant. High concentration may cause dizziness, headache, and anesthetic effects. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals.

Ingestion: Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.

Chronic Health Effects: Prolonged skin contact may lead to burning associated with severe reddening, swelling, and possible tissue destruction.

Signs/Symptoms: Overexposure can cause headaches, dizziness, nausea, and vomiting.

Target Organs: Eyes. Skin. Respiratory system. Digestive system. Central nervous system.

Aggravation of Pre-Existing Conditions: Individuals with pre-existing skin disorders, asthma, allergies or known sensitization may be more susceptible to the effects of this product.

SECTION 4 - FIRST AID MEASURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.
Skin Contact:	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
Other First Aid:	Due to possible aspiration into the lungs, DO NOT induce vomiting if ingested. Provide a glass of water to dilute the material in the stomach. If vomiting occurs naturally, have the person lean forward to reduce the risk of aspiration.

SECTION 5 - FIRE FIGHTING MEASURES

Flammable Properties:	Extremely Flammable.
Flash Point:	Not determined.
Auto Ignition Temperature:	Not determined.
Lower Flammable/Explosive Limit:	Not determined.
Upper Flammable/Explosive Limit:	Not determined.
Fire Fighting Instructions:	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
Extinguishing Media:	Use carbon dioxide (CO2) or dry chemical when fighting fires involving this material.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Spill Cleanup Measures:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Collect spill with a non-sparking tool. Place into a suitable container for disposal. Clean up spills immediately observing precautions in the protective equipment section. After removal, flush spill area with soap and water to remove trace residue. Flammable, eliminate ignition sources. Vapors can form an ignitable mixture with air. Vapors can flow along surfaces to distant ignition sources and flash back. Ventilate area. Use proper personal protective equipment as listed in section 8.
Other Precautions:	Pump or shovel to storage/salvage vessels.

SECTION 7 - HANDLING and STORAGE

Handling:	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist. Material will accumulate static charges which may cause an electrical spark (ignition source). Use proper grounding procedures. Do not reuse containers without proper cleaning or reconditioning.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, direct sunlight, and incompatible substances. Keep container tightly closed when not in use.
Special Handling Procedures:	Hazardous liquid or vapor residue may remain in emptied container. Do not reuse, heat, burn, pressurize, cut, weld, braze, solder, drill, grind, expose to sparks, flame, or ignition sources of empty containers without proper commercial cleaning or reconditioning.
Hygiene Practices:	Wash thoroughly after handling.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Skin Protection Description:	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.

EXPOSURE GUIDELINES
Ethyl acetate :

Guideline ACGIH:	400 ppm TLV-TWA: 400 ppm
Guideline OSHA:	400 ppm PEL-TWA: 400 ppm

N-Butane :

Guideline ACGIH:	TLV-TWA: 1000 ppm
------------------	-------------------

Methylene Chloride :

Guideline ACGIH:	TLV-TWA: 50 ppm
Guideline OSHA:	PEL-TWA: 25 ppm PEL-STEL: 125 ppm

Propane :

Guideline ACGIH:	TLV-TWA: 1000 ppm
Guideline OSHA:	OSHA-TWA: 1000 ppm

Acetone :

Guideline ACGIH:	500 ppm TLV-STEL: 750 ppm TLV-TWA: 500 ppm
Guideline OSHA:	1000 ppm PEL-TWA: 1000 ppm

Notes : Only established PEL and TLV values for the ingredients are listed.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance:	Liquid.
Color:	Red
Odor:	Solvent.
Boiling Point:	Not determined.
Melting Point:	Not determined.
Specific Gravity:	0.9 - 0.99
Solubility:	negligible
Vapor Density:	> 1 (air = 1)
Vapor Pressure:	Not determined.
Evaporation Rate:	<1 (ethyl ether = 1)
pH:	Not determined.
Molecular Formula:	Mixture
Molecular Weight:	Mixture
Flash Point:	Not determined.

Auto Ignition Temperature: Not determined.
 VOC Content: 44.5 % by weight
 Percent Solids by Weight: Not determined.

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.
 Hazardous Polymerization: Not reported.
 Conditions to Avoid: Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions.
 Incompatible Materials: Oxidizing agents. Strong acids and alkalis.

SECTION 11 - TOXICOLOGICAL INFORMATION

Ethyl acetate :

RTECS Number: AH5425000
 Eye: Eye - Human Standard Draize Test.: 400 ppm
 Skin: Oral - Mouse LD50: 4100 mg/kg [Behavioral - Somnolence (general depressed activity) Behavioral - Changes in motor activity (specific assay) Behavioral - Coma]
 Intraperitoneal. - Mouse LD50: 709 mg/kg [Details of toxic effects not reported other than lethal dose value.]
 Oral - Rabbit LD50: 4935 mg/kg [Details of toxic effects not reported other than lethal dose value.]
 Administration onto the skin - Rabbit LD50: >20 mL/kg [Details of toxic effects not reported other than lethal dose value.]
 Oral - Guinea pig LD50: 5500 mg/kg [Behavioral - Somnolence (general depressed activity) Behavioral - Changes in motor activity (specific assay) Behavioral - Coma]
 Subcutaneous - Guinea pig LD50: 3 gm/kg [Behavioral - Somnolence (general depressed activity)]
 Oral - Mouse LD50: 4.1 gm/kg [Details of toxic effects not reported other than lethal dose value.]
 Oral - Guinea pig LD50: 5.5 gm/kg [Details of toxic effects not reported other than lethal dose value.]
 Oral - Rat LD50: 5620 mg/kg [Details of toxic effects not reported other than lethal dose value.]
 Inhalation: Inhalation - Mouse LC50: 45 gm/m3/2H [Details of toxic effects not reported other than lethal dose value.]
 Inhalation - Rat LC50: 1600 ppm/8H [Details of toxic effects not reported other than lethal dose value.]
 Inhalation - Rat LC50: >6000 ppm/6H [Details of toxic effects not reported other than lethal dose value.]
 Inhalation - Rat LC50: 200 gm/m3 [Behavioral - Somnolence (general depressed activity) Lungs, Thorax, or Respiration - Acute pulmonary edema Gastrointestinal - Changes in structure or function of salivary glands]
 Ingestion: Oral - Mouse LD50: 4100 mg/kg [Behavioral - Somnolence (general depressed activity) Behavioral - Changes in motor activity (specific assay) Behavioral - Coma]
 Oral - Mouse LD50: 4.1 gm/kg [Details of toxic effects not reported other than lethal dose value.]
 Oral - Rat LD50: 5620 mg/kg [Details of toxic effects not reported other than lethal dose value.]

N-Butane :

RTECS Number: EJ4200000
 Inhalation: Ingestion - Rat LC50: 658000 mg/m3/4H - [Details of toxic effects not reported other than lethal dose value.] (RTECS)

Methylene Chloride :

Eye: Eye - Rabbit TDLo: 0.25 mL/kg [Sense Organs and Special Senses (Eye) - Increased Intraocular pressure Sense Organs and Special Senses (Eye) - Conjunctive Irritation Sense Organs and Special Senses (Eye) - Corneal damage]
 Eye - Rabbit Standard Draize Test.: 162 mg
 Eye - Rabbit Standard Draize Test.: 10 mg
 Eye - Rabbit Standard Draize Test.: 500 mg/24H (RTECS)
 Skin: Administration onto the skin - Rabbit Standard Draize Test.: 810 mg/24H
 Administration onto the skin - Rabbit Standard Draize Test.: 100 mg/24H (RTECS)
 Inhalation: Inhalation - Mouse LC50: 14400 ppm/7H [Details of toxic effects not reported

	other than lethal dose value.] Inhalation - Rat LC50: 52000 mg/m3/6H [Details of toxic effects not reported other than lethal dose value.] Inhalation - Mouse LC50: 49100 mg/m3/6H [Details of toxic effects not reported other than lethal dose value.] Inhalation - Mouse LC50: 54000 mg/m3/2H [Details of toxic effects not reported other than lethal dose value.] Inhalation - Mouse LC50: 25 gm/m3/2H [Behavioral - Alteration of classical conditioning Liver - Fatty liver degeneration Kidney/Ureter/Bladder - Changes in tubules (including acute renal failure, acute tubular necrosis)] Inhalation - Mouse LC50: 56220 mg/m3/7H [Details of toxic effects not reported other than lethal dose value.] Inhalation - Rat LC50: 76000 mg/m3/4H [Details of toxic effects not reported other than lethal dose value.] (RTECS)
Ingestion:	Oral - Rat LD50: 1600 mg/kg [Behavioral - Ataxia] Oral - Mouse LD50: 873 mg/kg [Details of toxic effects not reported other than lethal dose value.] Oral - Rat LD50: 985 mg/kg [Details of toxic effects not reported other than lethal dose value.] (RTECS)
Carcinogenicity:	IARC: Group 2B: Possibly carcinogenic to humans. NTP: Reasonably anticipated to be a human carcinogen.
Acetone :	
RTECS Number:	AL3150000
Eye:	Eye - Human Standard Draize Test.: 500 ppm Eye - Rabbit Standard Draize Test.: 20 mg/24H Eye - Rabbit Standard Draize Test.: 10 uL Eye - Human Standard Draize Test.: 186300 ppm Eye - Rabbit Standard Draize Test.: 20 mg
Skin:	Oral - Rat LD50: 5800 mg/kg [Details of toxic effects not reported other than lethal dose value.] Oral - Rat LD50: 5800 mg/kg [Behavioral - Altered sleep time (including change in righting reflex) Behavioral - Tremor] Intravenous. - Rat LD50: 5500 mg/kg [Details of toxic effects not reported other than lethal dose value.] Oral - Mouse LD50: 3 gm/kg [Details of toxic effects not reported other than lethal dose value.] Intraperitoneal. - Mouse LD50: 1297 mg/kg [Details of toxic effects not reported other than lethal dose value.] Oral - Rabbit LD50: 5340 mg/kg [Details of toxic effects not reported other than lethal dose value.] Administration onto the skin - Guinea pig LD50: >9400 uL/kg [Details of toxic effects not reported other than lethal dose value.] Administration onto the skin - Rabbit Open irritation test: 395 mg
Inhalation:	Inhalation - Rat LC50: 50100 mg/m3 [Details of toxic effects not reported other than lethal dose value.] Inhalation - Rat LC50: 50100 mg/m3/8H [Details of toxic effects not reported other than lethal dose value.] Inhalation - Mouse LC50: 44 gm/m3/4H [Details of toxic effects not reported other than lethal dose value.]
Ingestion:	Oral - Rat LD50: 5800 mg/kg [Details of toxic effects not reported other than lethal dose value.] Oral - Rat LD50: 5800 mg/kg [Behavioral - Altered sleep time (including change in righting reflex) Behavioral - Tremor] Oral - Mouse LD50: 3 gm/kg [Details of toxic effects not reported other than lethal dose value.]

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:	No ecotoxicity data was found for the product.
Environmental Fate:	No environmental information found for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal:	Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.
RCRA Number:	D001, D035
Important Disposal Information:	DANGER! Rags, steel wool and waste soaked with this product may spontaneously catch fire if improperly discarded or stored. To avoid a spontaneous combustion fire, immediately after use, place rags, steel wool or waste in a sealed, water-filled, metal container.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: Non regulated.
 DOT UN Number: No Data
 DOT Hazard Class: No Data

SECTION 15 - REGULATORY INFORMATION

Light aliphatic petroleum solvent naphtha :

TSCA Inventory Status: Listed
 Canada DSL: Listed

Ethyl acetate :

TSCA Inventory Status: Listed
 Massachusetts: Listed: Massachusetts Oil and Hazardous List
 Pennsylvania: Listed
 Canada DSL: Listed

N-Butane :

TSCA Inventory Status: Listed
 State Regulations: Listed in the Pennsylvania State Hazardous Substances List.
 Listed in the New Jersey State Right to Know List.
 Canada DSL: Listed

Methylene Chloride :

TSCA Inventory Status: Listed
 California PROP 65: Listed: cancer
 Canada DSL: Listed

Propane :

TSCA Inventory Status: Listed
 Canada DSL: Listed

Acetone :

TSCA Inventory Status: Listed
 Massachusetts: Listed: Massachusetts Oil and Hazardous List
 Pennsylvania: Listed
 Canada DSL: Listed
 Canadian Regulations: WHMIS Hazard Class(es): B2; D2B
 All components of this product are on the Canadian Domestic Substances List.

WHMIS Pictograms

SECTION 16 - ADDITIONAL INFORMATION

HMIS Fire Hazard: 4
 HMIS Health Hazard: 3
 HMIS Reactivity: 1
 HMIS Personal Protection: X
 MSDS Creation Date: 9/25/2010
 MSDS Revision Date: 9/28/2010
 MSDS Author: Actio Corporation
 Disclaimer:

This Health and Safety Information is correct to the best of our knowledge and belief at the date of its publication but we cannot accept liability for any loss, injury or damage which may result from its use. The information given in the Data Sheet is designed only as a guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment.

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MSDS 4601

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All MSDS

4601: 4-Way Lube 1 Gallon [2]
 4701: 4 Way Lube 16 Oz Trigger [12]
 MSDS Last updated: 07/27/2010

IMPERIAL SUPPLIES LLC MSDS SHEET FOR 4601

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : 4601-0 & 4701-0 4-WAY LUBE
 IDENTIFICATION NUMBER: 0147-103 DATE PRINTED: 08/06/09
 PRODUCT USE/CLASS : LUBRICANT
 SUPPLIER/DISTRIBUTOR
 MANUFACTURED BY:

IMPERIAL SUPPLIES LLC
 IMPERIAL SUPPLIES LLC

789 ARMED FORCES DRIVE
 789 ARMED FORCES DRIVE

GREEN BAY, WI 54304
 GREEN BAY, WI 54304

INFORMATION#: 800-558-2808
 INFORMATION#: 800-558-2808

EMERGENCY#: 800-255-3924
 EMERGENCY#: 800-255-3924

CHEM-TEL
 CHEM-TEL

PREPARER: CUSTOMER SERVICE, PHONE: , PREPARE DATE:
 08/06/09

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WEIGHT %
01	PARAFFINIC SOLVENT	64742-47-8	30-40
02	KEROSENE	8008-20-6	20-30
03	HYDROTREATED, SEVERE, LT. NAPHTHENIC DIST.	64742-52-5	10-20
04	PETROLEUM HYDROCARBON SOLVENT	64742-47-8	10-20
05	HIGHLY REFINED MINERAL OILS	64742-65-0	1-10
06	METAL SULFONATE	57855-77-3	1-10

EXPOSURE LIMITS

ACGIH ITEM	TLV-TWA	TLV-STEL	OSHA		COMPANY	
			PEL-TWA	PEL-CEILIN G	TLV-TWA	SKIN
01	N.E.	N.E.	N.E.	N.E.	N.E.	NO
02	400 PPM	N.E.	N.E.	N.E.	N.E.	NO
03	5 MG/M3 (MIST 10	MG/M3 MIS 5	MG/M3 MIST	N.E.	N.E.	NO
04	100 PPM	N.E.	100 PPM	500 PPM	N.E.	YES
05	5 MG/M3	10 MG/M3	N.E.	N.E.	N.E.	NO
06	N.E.	N.E.	N.E.	N.E.	N.E.	NO

(See Section 16 for abbreviation legend)

SECTION 3 - HAZARDS IDENTIFICATION

*** EMERGENCY OVERVIEW ***:

Vapors irritating to eyes and respiratory tract. Vapors may cause flash fire or explosion.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

EFFECTS OF OVEREXPOSURE - INHALATION: Headaches, dizziness, nausea, decreased blood pressure, changes in heart rate and cyanosis may result from over-exposure to vapor or skin exposure. Prolonged inhalation may be harmful.

EFFECTS OF OVEREXPOSURE - INGESTION: This material may be harmful or fatal if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure may cause nervous system damage. Overexposure may cause lung damage. Overexposure may cause kidney damage.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT SKIN ABSORPTION
INHALATION
INGESTION EYE CONTACT

SECTION 4 - FIRST AID MEASURES

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

FIRST AID - SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

FIRST AID - INGESTION: If swallowed, do NOT induce vomiting. Call physician immediately.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: 148 F LOWER EXPLOSIVE LIMIT: 0.7 %
UPPER EXPLOSIVE LIMIT: 8.0 %

AUTOIGNITION TEMPERATURE: N.D.

EXTINGUISHING MEDIA: CO2 DRY CHEMICAL FOAM WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors can travel to a source of ignition and flash back. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.

SPECIAL FIREFIGHTING PROCEDURES: Containers can build up pressure if exposed to heat (fire). As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Absorb spill with inert material (e.g. dry sand or earth), then place in a

chemical waste container.

SECTION 7 - HANDLING AND STORAGE

AEROSOL N/A
 LEVEL:
 HANDLING: Wash thoroughly after handling.
 STORAGE: Keep away from heat, sparks and flame. Keep from freezing.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Good general ventilation should be sufficient to control airborne levels. Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product.

RESPIRATORY PROTECTION: A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

SKIN PROTECTION: Where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.

EYE PROTECTION: Wear safety glasses with side shields (or goggles) and a face shield.

OTHER PROTECTIVE EQUIPMENT: STANDARD INDUSTRIAL CLOTHING STANDARDS SHOULD BE FOLLOWED.

HYGIENIC PRACTICES: Wash hands before eating. Remove contaminated clothing and wash before reuse. Use only in a well ventilated area. Follow all MSDS/label precautions even after container is emptied because they may retain product residues. Avoid prolonged or repeated contact with skin. Avoid breathing vapors from heated material. Avoid contact with eyes, skin, and clothing.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE :	312 - 550 F	VAPOR DENSITY :	Is heavier than air
ODOR :	SOLVENT ODOR	THRESHOLD :	N.D.
APPEARANCE :	CLEAR	EVAPORATION RATE:	Is slower than Butyl Acetate
SOLUBILITY IN H2O :	NEGLIGIBLE	SPECIFIC GRAVITY:	0.8282
FREEZE POINT :	N.D.	pH @ 0.0 % :	N.A.
VAPOR PRESSURE :	N.D.	VISCOSITY :	N.D.
PHYSICAL STATE :	LIQUID	COEFFICIENT OF WATER/OIL DISTRIBUTION:	N.D.
VOLATILE ORGANIC COMPOUNDS (VOCs):	2.44 lbs/gal, 293 grams/ltr		
VOC, % (wt):	35.45%		

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: ALL SOURCES OF IGNITION, WELDING ARCS, AND OPEN FLAMES.

INCOMPATIBILITY: MAY REACT WITH OXYGEN AND STRONG OXIDIZING AGENTS SUCH AS CHLORATES, NITRATES, PEROXIDES, ETC.

HAZARDOUS DECOMPOSITION PRODUCTS: No Information.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

PRODUCT LD50:	5000 mg/kg	PRODUCT LC50:	5000 ppm
COMPONENT TOXICOLOGICAL INFORMATION:			
CHEMICAL NAME	LD50	LC50	
PARAFFINIC SOLVENT	ND	ND	
KEROSENE	>5000 MG/KG/RAT	>5000 MG/M3/4H/RAT	
HYDROTREATED, SEVERE, LT. NAPHTHENIC DI	NE	NE	
PETROLEUM HYDROCARBON SOLVENT	>5000 MG/KG/RAT	>5500 MG/M3/4H/RAT	
HIGHLY REFINED MINERAL OILS	>5000 MG/KG/RAT	NE	
METAL SULFONATE	NE	NE	

SECTION 12 - ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No Information.

SECTION 13 - DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: DISPOSE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME:	CONSUMER COMMODITY
DOT TECHNICAL NAME:	
DOT HAZARD CLASS: ORM-D	HAZARD SUBCLASS:
DOT UN/NA NUMBER:	PACKING GROUP: . RESP. GUIDE PAGE:
DOT EXEMPTIONS:	
DOT SPECIAL INSTRUCTIONS:	
IMDG SHIPPING INFORMATION:	
UN1993	
IMDG PROPER SHIPPING NAME:	FLAMMABLE LIQUID, N.O.S.
IMDG TECHNICAL NAME:	MINERAL SPIRITS
IMDG HAZARD CLASS: 3	HAZARD SUBCLASS:
PACKING GROUP: III	FLASH POINT, C: 64
IMDG EXEMPTIONS:	LIMITED QUANTITY
IMDG SPECIAL INSTRUCTIONS:	
MARINE POLLUTANT (YES/NO):	
IATA SHIPPING INFORMATION:	
UN1993	
IATA PROPER SHIPPING NAME:	FLAMMABLE LIQUID, N.O.S.
IATA TECHNICAL NAME:	MINERAL SPIRITS
IATA HAZARD CLASS:	3 HAZARD SUBCLASS:
PACKING GROUP:	III
IATA EXEMPTIONS:	LIMITED QUANTITY
IATA SPECIAL INSTRUCTIONS:	

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL AS FOLLOWS -
REGULATIONS:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

CERCLA - SARA HAZARD CATEGORY:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD CHRONIC HEALTH HAZARD FIRE HAZARD

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	WT/WT % IS LESS THAN
---------------	------------	----------------------

EPA Rpt Qty:

DOT Rpt Qty:

Ozone Depleting Chemical:

Cas: Code: X RTECS #: 9999999ZZ Code: M
 Name: **ING 2: SPILLS SHOULD BE COLLECTED & PLACED IN A RCRA/DOT APPRVD STORAGE CNTNR FOR IGNITABLE WASTES. SPILLED/ (ING 4)**
 % Text: N/K Environmental Wt:
 Other REC Limits: N/K
 OSHA PEL: NOT APPLICABLE Code: M OSHA STEL: Code:
 ACGIH TLV: NOT APPLICABLE Code: M ACGIH N/P STEL: Code:
 EPA Rpt Qty: DOT Rpt Qty:

Ozone Depleting Chemical:

Cas: Code: X RTECS #: 9999999ZZ Code: M
 Name: **ING 3: LEAKED PROD WHICH REACHES A DITCH OR OTHER WATERWAY SHOULD BE REPORTED TO THE APPROP LOC, STATE & FED AGENCIES.**
 % Text: N/K Environmental Wt:
 Other REC Limits: N/K
 OSHA PEL: NOT APPLICABLE Code: M OSHA STEL: Code:
 ACGIH TLV: NOT APPLICABLE Code: M ACGIH N/P STEL: Code:
 EPA Rpt Qty: DOT Rpt Qty:

Ozone Depleting Chemical:

Cas: Code: X RTECS #: 9999999ZZ Code: M
 Name: **WASTE DISP METH: SHOULD BE DIRECTED TO THE APPROPRIATE GOVERNMENT AGENCY.**
 % Text: N/K Environmental Wt:
 Other REC Limits: N/K
 OSHA PEL: NOT APPLICABLE Code: M OSHA STEL: Code:
 ACGIH TLV: NOT APPLICABLE Code: M ACGIH N/P STEL: Code:
 EPA Rpt Qty: DOT Rpt Qty:

Ozone Depleting Chemical:

Health Hazards Data

TOP

LD50 LC50 Mixture NONE SPECIFIED BY MANUFACTURER.

Route Of Entry Inds - Inhalation: YES Skin: YES Ingestion: YES
 Carcinogenicity Inds - NTP: NO IARC: NO OSHA: NO

Health Hazards Acute And Chronic

INHALATION: PROLONGED EXPOSURE TO HIGH VAPOR CONCENTRATIONS OR PRODUCT MIST CAN CAUSE IRRITATION TO NOSE, THROAT & LUNGS; CAN CAUSE HEADACHE, NAUSEA, CNS DEPRESSION & STUPOR. SKIN: MAY CAUSE PRIMARY IRRITATION OF EXPOSED SKIN. PROLONGED CONTACT MAY CAUSE DEFATTING &/OR DERMATITIS. EYES: EXPOSURE TO (EFTS OF OVEREXP)

Explanation Of Careinogenicity

NOT RELEVANT

Signs And Symptoms Of Overexposure

HLTH HAZ: HIGH VAPOR CONCENTRATIONS OR PRODUCT MIST CAN CAUSE IRRITATION, REDNESS, TEARING &/OR BLURRED VISION. INGESTION: SLIGHTLY TOXIC BY INGESTION CAUSING IRRITATION OF STOMACH & INTESTINES W/NAUSEA & VOMITING. MISCELLANEOUS TOXICOLOGICAL INFO: A POISON BY INTRAVENOUS ROUTE. TARGET ORGANS: SKIN, CNS, EYES, LUNGS.

Medical Cond Aggravated By Exposure

NONE SPECIFIED BY MANUFACTURER.

First Aid

INHAL: REMOVE TO FRESH AIR. IF VICTIM EXHIBITS DEFCLTY BRTHG ADMIN OXYGEN. IF BRTHG STOPS ADMIN CPR & GET IMMEDIATE MED ATTN. SKIN: REMOVE PROD-WETTED, NON-IMPERVIOUS CLTHG & SHOES. THOROUGHLY WASH EXPOSED SKIN W/ SOAP & WATER. EYES: FLUSH W/LG QTY OF WATER FOR AT LEAST 15 MIN. GET IMMEDIATE MED ATTN. INGEST: GET IMMEDIATE MED ATTN. DO NOT INDUCE VOMIT. ASPIRATION OF VOMITUS CAN CAUSE SERIOUS CHEM &/OR LIPOIDAL (SUPDAT)

Spill Release Procedures

SHUT OFF IGNITION SOURCES: NO FLARES, SMOKING OR FLAMES IN SPILL AREA. STOP LEAK IF SAFELY FEASIBLE. SMALL QTY: COLLECT PROD USING ABSORBENT MATLS & PLACE IN PROPER CONTAINERS. LARGE QTY: DIKE AREA TO CONTAIN PROD & TO PREVENT MIGRATION OFFSITE. RECOVER (ING2)

Neutralizing Agent

NONE SPECIFIED BY MANUFACTURER.

Waste Disposal Methods

WASTE MATLS SHOULD BE TREATED AS D001 HAZ WASTE (IGNIT) UNTIL WASTE CHARACTERIZATION IS COMPLETED. FOLLOW ALL LOCAL, STATE & FEDERAL REGS FOR STORAGE & DISPOSAL OF THIS WASTE. QUESTIONS REGARDING REGULATIONS CONCERNING WASTE CHARACTERIZATION & PROPER DISPOSAL (ING 5)

Handling And Storage Precautions

KEEP CONTAINERS TIGHTLY CLOSED. GROUND CONTAINERS/VEHICLES WHEN TRANSFERRING PRODUCT. AVOID FREE FALL OF LIQUID.

Other Precautions

EMPTY CONTAINERS VERY HAZARDOUS! DO NOT FLAME CUT, BRAZE OR WELD. CONTINUE ALL LABEL PRECAUTIONS.

Fire and Explosion Hazard Information

TOP

Flash Point Method: TCC

Flash Point:

Flash Point Text: 135F,57C

Autoignition Temp:

Autoignition Temp Text: N/A

Lower Limits: 0.9%

Upper Limits: 5.0%

Extinguishing Media

USE NFPA CLASS B EXTINGUISHER (CARBON DIOXIDE OR FOAM).

Fire Fighting Procedures

USE NIOSH/MSHA APPROVED SCBA & FULL PROTECTIVE EQUIPMENT (FP N). MOVE CONTAINER FROM FIRE AREA IF SAFELY FEASIBLE. APPLY COOLING WATER TO SIDES OF CONTAINERS THAT ARE (SUPDAT)

Unusual Fire/Explosion Hazard

CLOSED CONTAINERS MAY EXPLODE IF EXPOSED TO EXTREME HEAT.

Control Measures

TOP

Respiratory Protection

USE NIOSH/MSHA APPROVED ORGANIC VAPOR RESPIRATOR FOR CONCENTRATIONS ABOVE 50 PPM. EMERGENCY ENTRY TO CONFINED SPACE REQUIRES NIOSH/MSHA APPROVED SELF-CONTAINED, POSITIVE PRESSURE BREATHING APPARATUS (SCBA).

Ventilation

NONE SPECIFIED BY MANUFACTURER.

Protective Gloves

IMPERVIOUS GLOVES.

Eye Protection

ANSI APPRVD CHEM WORKERS GOGGLES (FP N).

Other Protective Equipment

ANSI APPROVED EYE WASH & DELUGE SHOWER (FP N). WEAR SLEEVES, APRON AND FOOTWEAR IMPERVIOUS TO THIS PRODUCT.

Work Hygienic Practices

WASH CONTAMINATED PROTECTIVE CLOTHING BEFORE REUSE.

Supplemental Safety and Health

FIRE FIGHT PROC: EXPOS TO FLAMES UNTIL FIRE IS WELL OUT. STAY AWAY FROM ENDS OF TANKS. IF WATER IS USED, FOG NOZZS ARE PREF. WATER SPRAY MAY BE INEFTIVE ON FIRE BUT CAN PROTECT FIRE FIGHTERS & COOL CL SD CNTNRS. FIRST AID PROC: PNEUM, PARTICULARLY IN YOUNG CHILDREN. KEEP VICTIM QUIET & WARM UNTIL AID ARRIVES.

Physical/Chemical Properties

TOP

HCC:

NRC/State LIC No:

Net Prop WT For Ammo:

Boiling Point:

B.P. Text: 353F,178C

Melt/Freeze Pt:

M.P/F.P Text: N/K

Decomp Temp:

Decomp Text: N/K

Vapor Pres: 15.1

Vapor Density: 6.0

Volatile Org Content %:

Spec Gravity: 0.7857

VOC Pounds/Gallon:

PH: N/K

VOC Grams/Liter:

Viscosity: N/P

Evaporation Rate & N/K

Reference:

Solubility in Water: NEGLIGIBLE

Appearance and Odor: WATER-WHITE LIQUID; MILD PETROLEUM ODOR.

Percent Volatiles by Volume: N/K

Corrosion Rate: N/K

Reactivity Data

TOP

Stability Indicator: YES

Stability Condition To Avoid: ISOLATE FROM OXIDIZERS, EXTREME HEAT AND OPEN FLAME.

Materials To Avoid: ISOLATE FROM STRONG OXIDIZERS SUCH AS PERMANGANATES, CHROMATES AND

PEROXIDES.

Hazardous Decomposition CARBON DIOXIDE AND CARBON MONOXIDE
Products: FROM COMBUSTION.

Hazardous Polymerization NO
Indicator:

Conditions To Avoid NOT RELEVANT
Polymerization:

Toxicological Information

TOP

Toxicological Information: N/P

Ecological Information

TOP

Ecological: N/P

MSDS Transport Information

TOP

Transport Information: N/P

Regulatory Information

TOP

Sara Title III Information: N/P

Federal Regulatory Information: N/P

State Regulatory Information: N/P

Other Information

TOP

Other Information: N/P

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	Material Safety Data Sheet	An RPM Company	24 Hour Emergency Phone Numbers: Medical/Poison Control: 1-800-327-3874 1-513-558-5111 Transportation/National Response Center: 1-800-535-5053 1-352-323-3500
			<p>.....</p> <p>◆NOTE: The National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.</p> <p>.....</p>
<p>IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.</p>			

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in Canadian French and Hispanic American Spanish upon request.
 On peut demander cette fiche signalétique (MSDS) à la langue française-canadienne.
 Los Datos de Seguridad del Producto pueden obtenerse en Español si lo requiere.

Product Name:	DAP BEATS THE NAIL General Purpose Construction Adhesive	Revision Date:	08/29/2007
Product UPC Number:	070798250826, 070798250840, 070798254848, 070798254985, 070798310162, 070798310209, 070798342002, 070798352001	Supercedes:	08/29/2002
Product Use/Class:	General Purpose Construction Adhesive	MSDS Number:	00077084001
Manufacturer:	DAP Inc. 2400 Boston Street Suite 200 Baltimore, MD 21224-4723 888-327-8477 (non-emergency matters)		

Section 2 - Hazards Identification

Emergency Overview: A gray paste product with a solvent odor. DANGER! Vapors may ignite explosively. Keep away from heat, sparks and flame. Do not breathe dust, vapors or spray mist. Use only with adequate ventilation. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Aspiration hazard if swallowed. Aspiration may cause pulmonary edema and pneumonitis.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: Causes eye irritation. May cause eye irritation.

Effects Of Overexposure - Skin Contact: Causes skin irritation. Prolonged and repeated skin contact may cause dermatitis, drying and defatting due to the solvent properties.

Effects Of Overexposure - Inhalation: Vapor harmful. May affect the brain or nervous system causing

dizziness, headache or nausea. Vapors are harmful when inhaled. Inhalation of vapors in high concentration may cause irritation of respiratory system. Inhalation may cause irritation to the respiratory tract (nose, mouth, mucous membranes). Can cause nerve damage to arms and legs. Effects may be permanent.

Effects Of Overexposure - Ingestion: Harmful or fatal if swallowed. If ingested, may cause vomiting, diarrhea, and depressed respiration. May be harmful if swallowed. Aspiration into lungs may cause pulmonary edema and chemical pneumonitis.

Effects Of Overexposure - Chronic Hazards: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Symptoms include: loss of memory, loss of intellectual ability and loss of coordination. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Prolonged or repeated contact with acetone can cause defatting of the skin, which may lead to dermatitis. Overexposure or misuse of toluene can cause liver, kidney, and brain damage as well as cardiac abnormalities. There have been cases of aplastic anemia from toluene in industrial exposures (ACGIH, 1992). Increased coagulation time and reduced clotting factors have also been found, which are indicators of damage to the bone marrow (Clayton & Clayton, 1994).

n-Hexane exposure can cause nerve damage to arms and legs causing numbness of the fingers and toes, effect may be permanent. Symptoms include: loss of memory, loss of intellectual ability and loss of coordination.

Primary Route(s) Of Entry: Skin Contact, Inhalation, Ingestion, Eye Contact

Medical Conditions which May be Aggravated by Exposure: None known.

Carcinogenicity: None Known

Section 3 - Composition / Information On Ingredients		
Chemical Name	CASRN	Wt%
Calcium Carbonate	471-34-1	30-60
n-Hexane	110-54-3	5-10
Magnesite	546-93-0	5-10
2-Methylpentane	107-83-5	3-7
3-Methylpentane	96-14-0	3-7
Methylcyclopentane	96-37-7	1-5
Isoheptane	591-76-4	0.5-1.5
2,3-Dimethylbutane	79-29-8	0.1-1.0
2,4-Dimethylpentane	108-08-7	0.1-1.0
3-Methylhexane	589-34-4	0.1-1.0
2,2-Dimethylpentane	590-35-2	0.1-1.0
Cyclohexane	110-82-7	0.1-1.0
2,3-Dimethylpentane	565-59-3	0.1-1.0
3,3-Dimethylpentane	562-49-2	0.1-1.0
Neohexane	75-83-2	<0.09

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention.

First Aid - Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

First Aid - Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is

difficult, give oxygen. Get medical attention immediately.

First Aid - Ingestion: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

Note to Physician: None.

COMMENTS: Call Medical Emergency at 1-800-327-3874 if any irritation or complication arises from any of the above routes of entry.

Section 5 - Fire Fighting Measures

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam

Unusual Fire And Explosion Hazards: Store away from caustics and oxidizers. Material will readily ignite at room temperature. Extremely Flammable! Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Containers may explode if exposed to extreme heat. Eliminate sources of ignition: heat, electrical equipment, sparks and flames. Vapors may form explosive mixtures with air. Vapors can flow along surfaces to a distant ignition source and flash back. Flammable liquid. Vapors can form an ignitable mixture with air. Vapors can flow along surfaces to a distant ignition source and flash back.

Special Firefighting Procedures: Use a self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode. Cool containers and/or tanks with spray water.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. None known.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN! DO NOT TAKE INTERNALLY. Avoid breathing vapors. Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal. Vapors may cause flash fire. Use only with adequate ventilation. Do not get in eyes, on skin or clothing. Wash thoroughly after handling. Construction and repair activities can adversely affect indoor air quality. Consult with occupants or a representative (i.e. maintenance, building manager, industrial hygienist, or safety officer) to determine ways to minimize impact.

Storage: Keep away from heat and sources of ignition. Do not store at temperatures above 120 degrees F. Store containers away from excessive heat and freezing. Keep containers closed when not in use. Store away from caustics and oxidizers.

Section 8 - Exposure Controls / Personal Protection

Chemical Name	CASRN	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Calcium Carbonate	471-34-1	10 MGM3	N.E.	N.E.	5 MGM3 (respirable fraction)	N.E.	N.E.	No
n-Hexane	110-54-3	50 PPM	N.E.	N.E.	500 PPM	N.E.	N.E.	Yes
Magnesite	546-93-0	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
2-Methylpentane	107-83-5	500 PPM	1000 PPM	N.E.	N.E.	N.E.	N.E.	No
3-Methylpentane	96-14-0	500 PPM	1000 PPM	N.E.	N.E.	N.E.	N.E.	No
Methylcyclopentane	96-37-7	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Isoheptane	591-76-4	400 PPM	500 PPM	N.E.	500 PPM	N.E.	N.E.	No
2,3-Dimethylbutane	79-29-8	500 PPM	1000 PPM	N.E.	N.E.	N.E.	N.E.	No
2,4-Dimethylpentane	108-08-7	400 PPM	500 PPM	N.E.	500 PPM	N.E.	N.E.	No
3-Methylhexane	589-34-4	400 PPM	500 PPM	N.E.	500 PPM	N.E.	N.E.	No

2,2-Dimethylpentane	590-35-2	400 PPM	500 PPM	N.E.	500 PPM	N.E.	N.E.	No
Cyclohexane	110-82-7	100 PPM	N.E.	N.E.	300 PPM	N.E.	N.E.	No
2,3-Dimethylpentane	565-59-3	400 PPM	500 PPM	N.E.	500 PPM	N.E.	N.E.	No
3,3-Dimethylpentane	562-49-2	400 PPM	500 PPM	N.E.	500 PPM	N.E.	N.E.	No
Neohexane	75-83-2	500 PPM	1000 PPM	N.E.	N.E.	N.E.	N.E.	No

Exposure Notes:

Precautionary Measures: Please refer to other sections and subsections of this MSDS.

Engineering Controls: Provide sufficient general and/or local exhaust ventilation to maintain exposure below recommended exposure limit. Check all low areas for presence of vapor. Vapors are heavier than air and may spread along floors. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use.

Respiratory Protection: If concentrations exceed the exposure limits specified, use of a NIOSH-approved supplied air respirator is recommended. Where the protection factor is exceeded, use of a Self Contained Breathing Apparatus (SCBA) may be necessary. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Wear solvent impervious gloves.

Eye Protection: Goggles or safety glasses with side shields.

Other protective equipment: Provide eyewash and solvent impervious apron if body contact may occur.

Hygienic Practices: Remove and wash contaminated clothing before re-use.

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	Vapor Density:	Heavier Than Air
Odor:	Solvent	Odor Threshold:	Not Established
Color:	Gray	Evaporation Rate:	Faster Than n-Butyl Acetate
Solubility in H2O:	Not Established	Specific Gravity:	1.4
Freeze Point:	Not Established	pH:	Not Established
Vapor Pressure:	125 mm Hg @ 68 F	Viscosity:	Not Established
Physical State:	Paste	Flammability:	Flammable
Flash Point, F:	80 degrees F	Method:	(Pensky-Martens Closed Cup)
Lower Explosive Limit, %:	Not Established	Upper Explosive Limit, %:	Not Established

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Strong acids and oxidizing agents.

Hazardous Decomposition Products: Normal decomposition products, i.e., COx, NOx.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established

Product LC50: Not Established

CASRN	Chemical Name	LD50	LC50
471-34-1	Calcium Carbonate	Rat:6450 mg/kg	-----
110-54-3	n-Hexane	Rat:28710 mg/kg	Rat:48000 ppm/4H
110-82-7	Cyclohexane	Rat:12705 mg/kg	-----

Significant Data with Possible Relevance to Humans: None.

Section 12 - Ecological Information

Ecological Information: None known.

Section 13 - Disposal Information

Disposal Information: Do not re-use empty containers. Liquids cannot be disposed of in a landfill. Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): D001

Section 14 - Transportation Information

DOT Proper Shipping Name:	Adhesive (Consumer Commodity)	Packing Group:	None (III if not domestic by ground)
DOT Technical Name:	N.A.	Hazard Subclass:	N.A.
DOT Hazard Class:	None (3 for non-domestic / or air)	DOT UN/NA Number:	None (UN1133 when not domestic ground)

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and/or to non-domestic destinations.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard, Fire Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
n-Hexane	110-54-3

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number
Petroleum hydrocarbon resin	TSRN-1223370035031P
Cross-linked styrene-butadiene rubber	TSRN-618608-5085P

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number
Petroleum hydrocarbon resin	Proprietary
Cross-linked styrene-butadiene rubber	Proprietary

California Proposition 65:

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Section 16 - Other Information

HMIS Ratings:

Health: 2 Flammability: 3 Reactivity: 1 Personal Protection: X

Volatile Organic Compounds (VOC), less water less exempts: g/L: 312.6 lb/gal: 2.6 wt:wt%: 23.0

Volatile Organic Compounds (VOC), less water less exempts, less LVP-VOCs: wt:wt%: 23.0

REASON FOR REVISION: Periodic Update

Legend:

N.A. – Not Applicable

N.E. – Not Established

N.D. – Not Determined

VOC – Volatile Organic Compound

PEL – Permissible Exposure Limit

TLV – Threshold Limit Value

CEIL – Ceiling Exposure Limit

LD50 – Lethal Dose 50

F – Degree Fahrenheit

C – Degree Celsius

ACGIH – American Conference of Governmental Industrial Hygienists

SARA – Superfund Amendments and Reauthorization Act of 1986

NJRTK – New Jersey Right-to-Know Law

OSHA – Occupational Safety and Health Administration

HMIS – Hazardous Materials Identification System

NTP – National Toxicology Program

STEL – Short Term Exposure Limit

LC50 – Lethal Concentration 50

MSDS – Material Safety Data Sheet

CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>

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Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



WINDEX® ORIGINAL GLASS CLEANER

Version 1.

Print Date 01/22/2009

Revision Date 01/16/2009

MSDS Number 350000004274

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Trade name : WINDEX® ORIGINAL GLASS CLEANER

Use of the Substance/Preparation : Hard Surface Cleaner

Company : S.C. Johnson & Son, Inc.
1525 Howe Street
Racine WI 53403-2236

Emergency telephone : 24 Hour Transport & Medical Emergency Phone (866) 231-5406
24 Hour International Emergency Phone (952) 852-4647

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance / Odor : blue / liquid / characteristic

Immediate Concerns : Avoid contact with skin, eyes and clothing.

Potential Health Effects

Routes of exposure : Eye, Skin, Inhalation, Ingestion.

Eyes : None known.

Skin : None known.

Inhalation : None known.

Ingestion : None known.

Aggravated Medical Condition : None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight %
Water	7732-18-5	60.00 - 100.00
Isopropanol	67-63-0	1.00 - 5.00
Ethyleneglycol Monohexylether	112-25-4	0.10 - 1.00

4. FIRST AID MEASURES

Eye contact : Rinse with plenty of water. Get medical attention if irritation

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- develops and persists.
- Skin contact : Wash off with soap and water. Get medical attention if irritation develops and persists.
- Inhalation : Remove to fresh air.
- Ingestion : Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Alcohol foam, carbon dioxide, dry chemical, water fog
- Specific hazards during fire fighting : Container may melt and leak in heat of fire.
- Further information : Although this product has a flash point below 200 Deg F, it is an aqueous solution containing an alcohol and does not sustain combustion. Standard procedure for chemical fires. Wear full protective clothing and positive pressure self-contained breathing apparatus.
- Flash point : 130 °F
Method: Tag Closed Cup (TCC)
- Flash point : 54 °C
Method: Tag Closed Cup (TCC)
- Lower explosion limit : Note: no data available
- Upper explosion limit : Note: no data available

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Remove all sources of ignition.
- Methods for cleaning up : Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Dike large spills.

7. HANDLING AND STORAGE

- Handling
- Advice on safe handling : KEEP OUT OF REACH OF CHILDREN AND PETS.

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Use only as directed.

Advice on protection against fire and explosion : Keep away from heat and sources of ignition.

Storage

Requirements for storage areas and containers : Keep container closed when not in use. Keep in a dry, cool and well-ventilated place. Do not freeze.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components	CAS No.	mg/m ³	ppm	Basis
Isopropanol	67-63-0	-	400 ppm	ACGIH STEL
Isopropanol	67-63-0	-	200 ppm	ACGIH TWA
Isopropanol	67-63-0	980 mg/m ³	400 ppm	OSHA TWA

Personal protective equipment

Respiratory protection

Industrial setting : No personal respiratory protective equipment normally required.

Household setting : No personal respiratory protective equipment normally required.

Hand protection

Industrial setting : not required under normal use

Household setting : not required under normal use

Eye protection

Industrial setting : No special requirements.

Household setting : No special requirements.

Hygiene measures

: Use only with adequate ventilation. Wash thoroughly after handling. Substantial amounts of mist/vapors can be controlled with local exhaust ventilation or respiratory protection. Wear suitable protective clothing.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	liquid
Color	:	blue
Odor	:	characteristic
pH	:	10.5 - 11.0
Melting point	:	no data available
Boiling point	:	no data available
Freezing point	:	no data available
Flash point	:	130 °F Method: Tag Closed Cup (TCC) *
Flash point	:	54 °C Method: Tag Closed Cup (TCC)
Evaporation rate	:	no data available
Autoignition temperature	:	no data available
Lower explosion limit	:	no data available
Upper explosion limit	:	no data available
Vapour pressure	:	similar to water
Water solubility	:	completely soluble
Partition coefficient: n-octanol/water	:	no data available
Specific Gravity	:	1.0 estimated

10. STABILITY AND REACTIVITY

Conditions to avoid	:	None known.
Materials to avoid	:	Strong oxidizing agents
Hazardous decomposition products	:	When exposed to fire, produces normal products of combustion.

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Hazardous reactions : Stable

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50
Dose: estimated > 5,000 mg/kg

Acute inhalation toxicity : LC50 rat
Dose: > 2.5 mg/l

Acute dermal toxicity : LD50 rabbit
Dose: estimated > 2,000 mg/kg

Chronic effects
Carcinogenicity : no data available

Mutagenicity : no data available

Reproductive effects : no data available

Teratogenicity : no data available

Sensitisation : Not known to be a sensitizer.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects : Not Available

13. DISPOSAL CONSIDERATIONS

Industrial setting : Observe all applicable Federal, Provincial and State regulations and Local/Municipal ordinances regarding disposal.

Household setting : Consumer may discard empty container in trash, or recycle where facilities exist.

14. TRANSPORT INFORMATION

Land transport

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U.S. DOT and Canadian TDG Surface Transportation:

NA number 1993
Proper shipping name Combustible Liquid, N.O.S.
Class: Combustible liquid
Packaging group: III

Note: SC Johnson ships this product as "Non-Regulated" per DOT exception for Combustible Liquids. (49 CFR 173.150)

Sea transport

IMDG:

UN-Number: None.
Packaging group: None.
Proper shipping name not regulated
Class: None.

Air transport

ICAO/IATA:

Class: None.
Packaging group: None.
Proper shipping name not regulated
UN/ID No.: None.

15. REGULATORY INFORMATION

Global Chemical Inventories

- Notification status : All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.
- : All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

- California Prop. 65 : This product is not subject to the reporting requirements under California's Proposition 65.
- : This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

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16. OTHER INFORMATION

HMIS Ratings

Health	0
Flammability	2
Reactivity	0

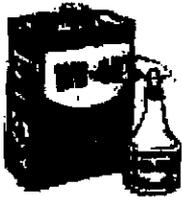
NFPA Ratings

Health	0
Fire	2
Reactivity	0
Special	

Further information

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by:	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)
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WD-40

Serial # W1022
 Site - Crane (SW) C₂ Reactivity
 2 0
 Health 0 Special
 NFPA

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Manufacturer: WD-40 Company
 Address: 1061 Cudahy Place (92110)
 P.O. Box 80607
 San Diego, California
 92138-0607

Telephone:
 Emergency only: 1-(800) 424-9300 (CHEMTREC)
 (619) 275-1400
 Information: Organic Mixture
 Chemical Name: WD-40 Bulk Liquid
 Trade Name:

II. HAZARDOUS INGREDIENTS

Chemical Name	CAS Number	%	Exposure Limit ACGIH/OSHA
Aliphatic Petroleum Distillates	8052-41-3	45-50	100 ppm PEL
Petroleum Base Oil	64742-65-0	30-35	5 mg/M ³ TWA (mist)
LVP Hydrocarbon Fluid	64742-47-8	12-18	1200 mg/M ³ TWA
Non-hazardous Ingredients		< 10	

III. PHYSICAL DATA

Boiling Point:	323°F (minimum)	Evaporation Rate:	Not determined
Vapor Density (air=1):	Greater than 1	Vapor Pressure:	Not determined
Solubility in Water:	Insoluble	Appearance:	Cloudy light amber
Specific Gravity (H ₂ O=1):	0.817 @ 72°F	Odor:	Characteristic odor
Percent Volatile (volume):	74%	VOC:	412 grams/liter (49.5%)

IV. FIRE AND EXPLOSION

Flash Point: 131°F Tag Closed Cup
 Flammable Limits: (Solvent Portion) [Le] 1.0% [Uel] 6.0%
 Extinguishing Media: CO₂, Dry Chemical, Foam.
 Special Fire Fighting Procedures: None
 Unusual Fire and Explosion Hazards: None

W1022

HEALTH HAZARD	1
FIRE HAZARD	3
REACTIVITY	0
PERSONAL PROTECTION	X

V. HEALTH HAZARD / ROUTE(S) OF ENTRY

Threshold Limit Value: Aliphatic Petroleum Distillates (Stoddard Solvent) lowest TLV (ACGIH 100 ppm.)
 Symptoms of Overexposure:
 Inhalation (Breathing): May cause anesthesia, headache, dizziness, nausea and upper respiratory irritation.
 Skin contact: May cause drying of skin and/or irritation.
 Eye contact: May cause irritation, tearing and redness.
 Ingestion (Swallowed): May cause irritation, nausea, vomiting and diarrhea.

First Aid Emergency Procedures

Ingestion (Swallowed): Do not induce vomiting, seek medical attention.
 Eye Contact: Immediately flush eyes with large amounts of water for 15 minutes.
 Skin Contact: Wash with soap and water.
 Inhalation (Breathing): Remove to fresh air. Give artificial respiration if necessary.
 If breathing is difficult, give oxygen.
 Pre-existing medical conditions such as eye, skin and respiratory disorders may be aggravated by exposure.

DANGER!

Aspiration Hazard: If swallowed, can enter lungs and may cause chemical pneumonitis. Do not induce vomiting. Call physician immediately.

Suspected Cancer Agent

Yes ___ No X
 The components in this mixture have been found to be noncarcinogenic by NTP, IARC and OSHA

VI. REACTIVITY DATA

Stability:	Stable <u>X</u>	Unstable <u> </u>
Conditions to avoid:	Heat and open flame.	
Incompatibility:	Strong oxidizing agents	
Hazardous decomposition products:	Thermal decomposition may yield carbon monoxide and/or carbon dioxide.	
Hazardous polymerization:	May occur <u> </u>	Will not occur <u>X</u>

VII. SPILL OR LEAK PROCEDURES

Spill Response Procedures

Absorb small quantities with sand, earth, sawdust. Large quantities pump into tank.

Waste Disposal Method

Incraterated liquid, bury saturated absorbent in land fill. Dispose of in accordance with local, state and federal regulations.

VIII. SPECIAL HANDLING INFORMATION

Ventilation:	Sufficient to keep solvent vapor less than TLV.
Respiratory Protection:	Advised when concentrations exceed TLV.
Protective Gloves:	Advised to prevent possible skin irritation.
Eye Protection:	Approved eye protections to safeguard against potential eye contact, irritation or injury.
Other Protective Equipment:	None required.

IX. SPECIAL PRECAUTIONS

Keep from open flame, do not take internally. Avoid excessive inhalation of spray particles. Keep from children.

X. TRANSPORTATION DATA (49 CFR 172.101)

Domestic Surface

Description:	WD-40 Bulk Lubricant
Hazard Class:	Non-Regulated Per 49 CFR 173.150 (F)(2)
ID No:	None
Label Required:	None (Under 119 Gallons)

XI. REGULATORY INFORMATION

All ingredients for this product are listed on the TSCA inventory.

SARA Title III chemicals:	None
California Prop 65 chemicals:	None
CERCLA reportable quantity:	None
RCRA hazardous waste no:	D001 (Ignitable)

SIGNATURE: Peter Eugner  TITLE: Director of Global Quality Assurance

REVISION DATE: December, 2004 SUPERSEDES: November, 2003

NA: Not applicable NDA: No data available < = Less than > = More than

We believe the statements, technical information and recommendations contained herein are reliable. However, the data is provided without warranty, expressed or implied. It is the user's responsibility both to determine safe conditions for use of this product and assume loss, damage or expense, direct or consequential, arising from its use. Before using product, read label.

8030-00-243-3285
8030-00-087-8630

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MATERIAL SAFETY DATA SHEET
TO COMPLY WITH 29 CFR 1910.1200

I. NAME: THREAD COMPOUND ANTISEIZE
MIL-PRF-83483C NSN: 8030-00-087-8630, 8030-00-243-3285

II. MANUFACTURER: MAKOOR PRODUCTS MFG INC.
TEL. 631-727-4445 makoor@earthlink.net
PO BOX 492 RIVERHEAD, NY 11901

III. INGREDIENTS	CAS#	PEL/TLV
PETROLATUM USP	8009-03-8	NO LIMIT
MOLYBDENUM DISULFIDE	1317-33-5	15 mg/cu

IV. PHYSICAL CHARACTERISTICS
Grayish black paste, non-pourable consistency at room temperature. Insoluble at room temperature. Disperses in petroleum solvents.
M.P.= approx 130 F Flash Point= > 400 F D= approx 1.5 Vapor Density= dna
LEL= does not apply % volatile=0 odor= none UEL= does not apply
VOC=0

V. FIRE AND EXPLOSION HAZARD: None Known

VI. REACTIVITY: Stable

VII. INCOMPATIBILITY: May react to strong oxidizers

VIII. HEALTH HAZARDS: None known from overexposure at this time.

IX. CARCINOGENICITY:
NTP: Not Listed IARC: Not Listed OSHA: Not Listed

X. CONDITIONS TO AVOID: None known

XI. MEDICAL CONDITIONS AGGRAVATED: None Known

XII. SAFE HANDLING PROCEDURES: Not Applicable

XIII. WASTE DISPOSAL METHODS: Recycle spilled material where possible.
Dispose of according to local and state regulations as a non-toxic material.

XIV. DOT RESTRICTIONS: None. Shippable USPS, UPS, Fed Ex.

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MATERIAL SAFETY DATA SHEET

U. S. DEPARTMENT OF LABOR

SPECIAL NFPA RATING

Toxicity....2

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standards must be consulted for specific requirements.

Occupational Safety & Health Administration Non-Mandatory Form Form Approved OMB No. 1218-0072

- A - Safety Glasses
- B - A + Gloves
- C - B + Apron
- D - C + Face Shield
- E - B + Dust Mask
- F - C + Dust Mask
- G - B + Respirator
- H - F + Goggles
- I - B + Respirator
- X - Ask supervisor

- 4 - Extreme
- 3 - High
- 2 - Moderate
- 1 - Slight
- 0 - Insignificant

Fire.....1.
Reactivity..0.
Special.....C

IDENTIFY (As Used on Label & List) PART # 1064009

CAGE CODE: 1A864

Product Name: DETERGENT, GENERAL PURPOSE - NONIONIC

CONTRACT NUMBER OR ORDER NUMBER: 65-10F-4022B

Type Grade and/or class: Type II National Stock or Local Stock Number: NSN 7930-00-531-9715

MTC License Number: NA Specifications: MIL-D-16791B EPA REG. NO: NA Hazardous Material? Y

Chemical Name and Synonyms: Nonylphenol Ethoxylate Chemical Family: Nonionic Surfactant Formula: See Below

SECTION I

Manufacturer's Name: LHB INDUSTRIES Emergency Telephone Number: (314) - 423-4333 CHEMTREC (800) - 424-9300

10440 TRENTON AVENUE New or revised: Revised

St. Louis, Missouri 63132 Date Prepared: 01/11/95

Point of contact: Edward R. Lanser Prepared by: Rudolf Oppenheim

SECTION II - Hazardous Ingredients/Identity Information

HAZARDOUS COMPONENTS	NIOSH NUMBER	WCAS NUMBER	OSHA PEL	ACGIH TLV	WT%
Nonylphenoxypolyethoxyethanol	W24500000	9016-45-9	NE	NE	99.925

The information & recommendations set forth herein are presented in good faith & believed to be correct & reliable. LHB Industries makes no representation as to the completeness or accuracy thereof & supplies information upon the condition that the persons receiving same will make their own determination as to its suitability for their purpose prior to use. In no event will LHB Industries be responsible for any damage of any nature whatsoever resulting from the use of or reliance upon this information. No representation or warranty, either expressed or implied, of merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which it refers.

SECTION III - Physical/Chemical Characteristics

Boiling Point (F)/(C)	212+F/100+C	Specific Gravity (Water = 1.0)	1.026	LBS per Gallon Density	8.55 lbs/gal
Vapor Pressure (mm Hg.)	<1	pH	7.0	% Volatile	Negligible
Vapor Density (AIR = 1)	>1	Evaporation Rate (Water = 1)			NE
Solubility in Water	Insoluble	Freezing Point	NE	Viscosity: 96cst/100F	Corrosion rate: NA
Appearance & Odor	Clear, straw colored liquid; slight odor				

SECTION IV - Fire & Explosion Hazard Data

Flash Point (F)/(C) (Method Used)	360F/182C PMCC	Flammable Limits	LEL NA	UEL NA
Extinguishing Media	CO2, Dry Chemical, foam, water spray. Water of foam may cause frothing.			
Special Fire Fighting Procedures	Keep fire exposed containers cool with water spray. If a leak or spill has not ignited, use water spray to disperse vapors to provide protection for personnel.			
Unusual Fire & Explosion Hazards	None			

(Reproduce Locally) NE = Not Established NA = Not Applicable GT = Greater Than OSHA 174, Sept. 1985

SECTION V --- Reactivity Data | To Maintain Product Integrity

Stability | Unstable | Conditions to Avoid: NA
 | Stable | X |

Incompatibility: (Materials to Avoid) NA

Hazardous Decomposition or Byproducts: Heating in air may produce irritating aldehydes, acids and ketones. Monoxide.

Hazardous Polymerization | May Occur | Conditions to Avoid: NA
 | Will Not Occur | X |

SECTION VI --- Health Hazard Data

Routes of Entry: Eyes? Yes Inhalation? yes Skin? yes Ingestion? Yes Other?

Health Hazards (Acute & Chronic): ORAL: 2.5g/Kg (rat); slightly toxic
 DERMAL: 1-3 g/Kg (Rabbit) Slightly toxic
 SKIN: 5.9/8.0 (Rabbit); severely irritating.
 EYES: 33.2/110 (Rabbit); moderately irritating.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Signs & Symptoms of Exposure: Eyes: causes moderate eye irritation. Skin: Primary skin irritant; severely irritating with redness and edema. Ingestion: Harmful.

Medical Conditions Generally Aggravated by Exposure: Open cuts and sores.

Emergency First Aid Procedures: For contact with skin or clothes, wash with soap and water; wash clothes before reuse. For contact with eyes, flush with water for 15 minutes and consult a physician/ophthalmologist immediately. If swallowed, give large amounts of water or milk and get immediate medical aid. If inhaled, remove to fresh air and get medical aid if necessary.

SECTION VII --- Precautions for Safe Handling & Use:

Steps to Be Taken in Case Material Is Released or Spilled: Pick up spillage with absorbent material. Flush area with water. Floors may be slippery. Take caution to avoid falls.

Waste Disposal Method: Dispose of in accordance with applicable Federal, State & Local regulations.

Precautions to Be Taken in Handling & Storage: KEEP OUT OF REACH OF CHILDREN ! Store in dry cool place. Avoid contact with skin, eyes and clothes.

Other Precautions: Wash thoroughly after handling product. Avoid exposure to high temperature. Do not contaminate water, feed or food.

SECTION VIII --- Control Measures Always maintain TLV

Respiratory Protection (Specify Type) None needed with normal room ventilation.

Ventilation | Local Exhaust: Preferable | Special: NA
 | Mechanical (General) Acceptable

Protective Gloves: Rubber Gloves ; Eye Protection: Chemical splash goggles. Do not wear contact lenses.

Other Protective Clothing or Equipment: Eyewash stations. Impervious clothes to protect skin.

Work/Hygienic Practices: Wash hands after handling. Do not eat or smoke while handling product.

SECTION IX --- Transportation

Applicable Regulations: 49 CFR: IMCO: IATA: MILITARY AIR (AFR 71-4): Not Regulated: X

PROPER SHIPPING NAME: NA DOT HAZARD CLASS: NA ID #: NA Unit Container: 1 Gal Metal Can



Toll Free: 87 PERMATEX
(877-376-2839)

10 Columbus Blvd., Hartford,
Connecticut 06106

6875 Parkland Boulevard, Solon
Ohio 44139

Technical Data Sheet

Permatex® Black Silicone Adhesive Sealant

INDUSTRIAL

PRODUCT DESCRIPTION

Permatex® Black Silicone Adhesive Sealant (new low odor formula) is a general purpose, single component, room temperature vulcanizing (RTV) adhesive sealant compound, designed for the sealing of mechanical assemblies. Upon curing from the exposure to moisture in the air, this non-sagging paste forms a tough, flexible, waterproof seal of silicone rubber, which resists aging, weathering and thermal cycling without hardening, shrinking or cracking. Conforms to MIL-A-46106B, Type I. Note: Not recommended for gasketing applications.

PRODUCT BENEFITS

- Low odor formula
- Easy application
- Applied to horizontal or vertical surfaces
- Superior adhesion and flexibility
- Waterproofs
- Insulates
- Unaffected by vibration
- Non-flammable

TYPICAL APPLICATIONS

Permatex® Black Silicone Adhesive Sealant is an excellent all-purpose adhesive/sealant for the following materials:

- Metal
- Glass
- Wood
- Plastic
- Silicone resin
- Vulcanized silicone rubber
- Ceramics
- Natural and synthetic fibers
- Painted surfaces

DIRECTIONS FOR USE

For Assembly

1. Remove all previous material from mating surfaces. Permatex®
2. For best results, clean and dry all surfaces with a residue-free solvent, such as Permatex® Brake and Parts Cleaner.
3. Cut nozzle to desired bead size, 1/16" to 1/4" in diameter. An 1/8" bead is usually sufficient for most applications.
4. Remove cap, puncture tube or cartridge seal and attach extension nozzle.
5. Apply a continuous and even bead of silicone to one surface, as shown below:
6. Assemble parts immediately while silicone is still wet. Secure or tighten as required, avoiding excessive squeeze-out.

7. Re-torque will not be necessary after the product has cured.

For Storage and Cleanup

1. Allow excess material to extend beyond the extension nozzle to cure, sealing and protecting the remaining product from moisture. For reuse, simply remove the cured product from the tip.
2. Remove uncured product from parts and hand-tools with a dry cloth, if skinned over, break film with a dry cloth to remove as much as possible, and remove the remaining material with Permatex® Gasket Remover.
3. Clean hands with a dry cloth or Permatex® Fast Orange® hand cleaner.

PROPERTIES OF UNCURED MATERIAL

	Typical Value
Chemical Type	Oxime silicone rubber
Appearance	Black non-sag paste
Odor	Mild
Specific Gravity	1.42
Extrusion rate @ 25°C, (grams/min)	>250
Flash Point TCC °C (°F)	>93 (>200)

TYPICAL CURING PERFORMANCE

Permatex® Black Silicone Adhesive Sealant cures on exposure to moisture in the air. The product dries tack free in 1 hour and fully cures in 24 hours. Cure times will vary with temperature, humidity and gap.

PERFORMANCE OF CURED MATERIAL

After 7 days at 25°C (77°F), 50% Relative Humidity

	Typical Values
Hardness (Shore A)	>18
Elongation, %*	>350
Tensile Strength, N/mm ² (psi)**	>1.2 (>170)

*Material will stretch 3.5 times its original length before breaking.

**Amount of force required to break material.

TYPICAL ENVIRONMENTAL RESISTANCE

Temperature Resistance Typical Values

Continuous, °C (°F)	-59 to 232	(-75 to 450)
Intermittent, °C (°F)	-59 to 260	(-75 to 500)

Chemical / Solvent Resistance

The product retains effective properties in contact with automotive fluids, such as motor oil, transmission fluids, alcohol and antifreeze solutions. Note: Not recommended for parts in contact with gasoline.

NOT FOR PRODUCT SPECIFICATIONS.

THE TECHNICAL DATA CONTAINED HEREIN ARE INTENDED AS REFERENCE ONLY.

PLEASE CONTACT PERMATEX, INC., TECHNICAL SERVICE DEPARTMENT FOR ASSISTANCE AND RECOMMENDATIONS FOR YOUR SPECIFIC APPLICATION.
PERMATEX, INC., HARTFORD SQUARE NORTH, 10 COLUMBUS BOULEVARD, HARTFORD, CT 06106 PHONE - (1-87PERMATEX) Revised 02/09

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

ORDERING INFORMATION

Part Number	Container Size
81158 (16BR)	3 oz. tube, carded
81173 (16C)	11 oz. cartridge

STORAGE

Products shall be ideally stored in a cool, dry location in unopened containers at a temperature between 8° and 28°C (46° and 82°F) unless otherwise labeled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused product, do not return any material to its original container.

NOTE

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Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ Scotch-Weld™ Neoprene High Performance Contact Adhesive 1357
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division
ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 03/09/11
Supersedes Date: 11/12/10

Document Group: 10-2789-5

Product Use:
Specific Use: Contact Adhesive
Intended Use: Industrial use

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
Magnesium resinate	68037-42-3	7 - 13
Petroleum distillate	64741-84-0	30 - 60
Acetone	67-64-1	10 - 30
Polychloroprene	9010-98-4	7 - 13
Methyl ethyl ketone	78-93-3	7 - 13
n-Hexane	110-54-3	5 - 20
Toluene	108-88-3	3 - 7
Rosin	8050-09-7	0.1 - 1
Zinc oxide	1314-13-2	0.1 - 1

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: Grey/green, strong petroleum odor.

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. May cause allergic skin reaction. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Prolonged or repeated exposure may cause:

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure may cause:

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision.

Olfactory Effects: Signs/symptoms may include decreased ability to detect odors and/or complete loss of smell.

Peripheral Neuropathy: Signs/symptoms may include tingling or numbness of the extremities, incoordination, weakness of the hands and feet, tremors and muscle atrophy.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	404 °C
Flash Point	-14 °F [Test Method: Closed Cup] [Details: Acetone]
Flammable Limits(LEL)	1.0 % volume
Flammable Limits(UEL)	12.8 % volume
OSHA Flammability Classification:	Class IB Flammable Liquid

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard.

6.2. Environmental precautions

For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Clean-up methods

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Cover spill area with a fire-extinguishing foam. An aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Seal the container.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Contents may be under pressure, open carefully. Ground containers securely when transferring contents. Wear low static or properly grounded shoes. Vapors may ignite explosively. May cause flash fire. Prevent build-up of vapors - open all windows and doors. Maintain vapor concentrations below recommended exposure limits. Use only with cross-ventilation. Without adequate ventilation, vapors may settle in low-lying areas. Keep away from heat, sparks, and open flame. Do not smoke or ignite matches, lighters, etc. Extinguish pilot lights and turn off stoves, ovens and other gas and electric appliances (space and water heaters, furnaces, etc.), electric motors, and other sources of ignition during adhesive use and until all vapors are gone; i.e., until the odor of vapors at the floor level has disappeared. Do not use electric light switches. Do not generate static sparks (such as by walking on carpet, etc.). Use the same precautions in the work area and all connected areas. Be sure that any people in the area follow the precautions. Attach a copy of the precautions to any other container to which this product may be transferred. Avoid prolonged breathing of vapors. Avoid eye and skin contact. Keep container closed when not in use. If work area conditions prevent compliance with any of the above precautions, do not use the product. Keep out of the reach of children. For industrial or professional use only. Not intended for consumer sale or use. Do not breathe vapors.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area. Keep container tightly closed. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Provide local exhaust ventilation at transfer points. Provide appropriate local exhaust

ventilation on open containers. Use in an enclosed process area is recommended. If exhaust ventilation is not available, use appropriate respiratory protection. Do not use in a confined area or areas with little or no air movement. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.
The following eye protection(s) are recommended: Indirect Vented Goggles

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.
Gloves made from the following material(s) are recommended: Butyl Rubber
Polymer laminate

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray. Do not breathe vapors.
Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges
Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
Acetone	ACGIH	TWA	500 ppm	
Acetone	ACGIH	STEL	750 ppm	
Acetone	OSHA	TWA	2400 mg/m3	
n-Hexane	ACGIH	TWA	50 ppm	Skin Notation*
n-Hexane	OSHA	TWA	1800 mg/m3	
Methyl ethyl ketone	ACGIH	TWA	200 ppm	
Methyl ethyl ketone	ACGIH	STEL	300 ppm	
Methyl ethyl ketone	OSHA	TWA	590 mg/m3	
Toluene	ACGIH	TWA	20 ppm	
Toluene	CMRG	STEL	75 ppm	Skin Notation*
Toluene	OSHA	TWA	200 ppm	
Toluene	OSHA	CEIL	300 ppm	
Zinc oxide	ACGIH	TWA, respirable fraction	2 mg/m3	
Zinc oxide	ACGIH	STEL, respirable fraction	10 mg/m3	
Zinc oxide	OSHA	TWA, as fume	5 mg/m3	
Zinc oxide	OSHA	TWA, respirable fraction	5 mg/m3	
Zinc oxide	OSHA	TWA, as total dust	15 mg/m3	

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists
 CMRG: Chemical Manufacturer Recommended Guideline
 OSHA: Occupational Safety and Health Administration
 AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color, Grade:	Grey/green, strong petroleum odor.
General Physical Form:	Liquid
Autoignition temperature	404 °C
Flash Point	-14 °F [<i>Test Method: Closed Cup</i>] [<i>Details: Acetone</i>]
Flammable Limits(LEL)	1.0 % volume
Flammable Limits(UEL)	12.8 % volume
Boiling Point	>=80 °C [<i>Details: Acetone</i>]
Density	0.815 g/ml
Vapor Density	2.0 [<i>Ref Std: AIR=1</i>]
Vapor Pressure	<=185 mmHg [<i>@ 68 °F</i>]
Specific Gravity	.815 [<i>Ref Std: WATER=1</i>]
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Solubility in Water	Slight (less than 10%)
Evaporation rate	>=2.0 [<i>Ref Std: WATER=1</i>]
Hazardous Air Pollutants	<=13.2 % weight [<i>Test Method: Calculated</i>]
Volatile Organic Compounds	<=674 g/l [<i>Details: EU VOC content</i>]
Kow - Oct/Water partition coef	<i>No Data Available</i>
Percent volatile	70 - 80 %
VOC Less H2O & Exempt Solvents	<=582 g/l [<i>Test Method: tested per EPA method 24A</i>]
VOC Less H2O & Exempt Solvents	<=5.44 lb/gal [<i>Test Method: calculated SCAQMD rule 443.1</i>]
VOC Less H2O & Exempt Solvents	<=66.2 % [<i>Test Method: calculated per CARB title 2</i>]
Viscosity	200 - 450 centipoise [<i>@ 73.4 °F</i>]
Solids Content	>=16.8 %

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

Heat
 Sparks and/or flames

10.2 Materials to avoid

Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of completely cured (or polymerized) wastes in a sanitary landfill. Incinerate uncured product in a permitted hazardous waste incinerator.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable), D035 (Methyl ethyl ketone)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

62-1357-2630-5, 62-1357-2631-3, 62-1357-5530-4, 62-1357-5535-3, 62-1357-6530-3, 62-1357-7530-2, 62-1357-8530-1, 62-1357-8540-0, 62-1357-9530-0, 62-1357-9531-8, 62-1357-9532-6, 78-8990-0393-9

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Toluene	108-88-3	3 - 7
n-Hexane	110-54-3	5 - 20

STATE REGULATIONS

Contact 3M for more information.

CALIFORNIA PROPOSITION 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
Toluene	108-88-3	*Female reproductive toxin
Toluene	108-88-3	*Developmental Toxin

* WARNING: contains a chemical or chemicals which can cause birth defects or other reproductive harm.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

WHMIS: Hazardous

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 3 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Copyright was modified.

Section 4: First aid for eye contact - decontamination - was modified.

Section 4: First aid for eye contact - medical assistance - was modified.

Section 3: Potential effects from eye contact was modified.

Section 8: Skin protection - recommended gloves information was modified.

Section 3: Other health effects information was modified.

Section 15: Inventories information was modified.

Section 9: Boiling point information was modified.

Section 5: Flammable limits (UE) information was modified.

Section 5: Flammable limits (LEL) information was modified.

Section 9: Flammable limits (LEL) information was modified.

Section 9: Flammable limits (UEL) information was modified.

Section 2: Ingredient table was modified.

Section 15: EPCRA 313 information was modified.

Section 8: Exposure guidelines ingredient information was modified.

Section 6: 6.2. Environmental precautions heading was modified.

Section 6: 6.1. Personal precautions, protective equipment and emergency procedures heading was modified.

Section 3: Immediate eye hazard(s) was deleted.

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3M MSDSs are available at www.3M.com

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MATERIAL SAFETY DATA SHEET

HMIS CODES:

H	F	R	P
2	1	0	0

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administrator
(Non-Mandatory Form)
Form Approved OMB No. 1218-0072

IDENTITY (AS USED ON LABEL AND LIST): 100% RTV CLEAR SILICONE ADHESIVE SEALANT SIC	NOTE: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.
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Section I

Manufacturer's Name: J.C. WHITLAM MANUFACTURING COMPANY	Emergency Telephone Number: (330) 334 - 2524
Address (Number, Street, City, State, and ZIP Code): 200 WEST WALNUT STREET	Telephone Number for Information: (330) 334 - 2524
P.O. BOX 380	Date Prepared: March 9, 2010
WADSWORTH, OHIO 44282-0380	Signature of Preparer (optional):

Section II - Hazardous Ingredients/Identity Information

HAZARDOUS COMPONENTS (SPECIFIC CHEMICAL IDENTITY: COMMON NAME(S))	OSHA PEL	ACGIH TLV	OTHER LIMITS Recommended	% (optional)
METHYLTRIACETOXYSILANE (CAS#4253-34-3)	TWA 10 ppm	TWA 10 ppm	OSHA STEL: 15 ppm	0.3
ETHYLTRIACETOXYSILANE (CAS#17689-77-9)	TWA 10 ppm	TWA 10 ppm	OSHA STEL: 15 ppm	0-3

Section III - Physical/Chemical Characteristics

Boiling Point:	N/A	Specific Gravity (H ₂ O =1):	.98
Vapor Pressure (at 77°F/25°C)	< 5 mm	Melting Point:	N/A
Vapor Density (AIR = 1):	N/A	Evaporation Rate (Butyl Acetate = 1):	N/A

Solubility in Water: < 0.1

Appearance and Odor: CLEAR PASTE, ACETIC ACID ODOR

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used): 212°F/100°C (OPEN CUP)	Flammable Limits:	LEL: N/D	UEL: N/D
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Extinguishing Media: ON LARGE SCALE FIRES USE DRY CHEMICAL FOAM OR WATER SPRAY. ON SMALL FIRES USE CARBON DIOXIDE (CO₂), DRY CHEMICAL OR WATER SPRAY.

Special Fire Fighting Procedures: SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING SHOULD BE WORN IN FIGHTING LARGE FIRES INVOLVING CHEMICALS.

Unusual Fire and Explosion Hazards: NONE KNOWN

Section V - Reactivity Data		100% RTV CLEAR SILICONE ADHESIVE SEALANT		SIC
Stability:	Unstable:		Conditions to Avoid: EXPOSURE TO AIR OR MOISTURE UNTIL READY TO USE.	
	Stable:	X		
Incompatibility (Materials to Avoid): OXIDIZING MATERIAL CAN CAUSE A REACTION. WATER, MOISTURE, OR HUMID AIR CAN CAUSE HAZARDOUS VAPORS TO FORM.				
Hazardous Decomposition or Byproducts: SILICON DIOXIDE, CARBON OXIDES, FORMALDEHYDE, AND TRACES OF INCOMPLETELY BURNED CARBON COMPOUNDS.				
Hazardous Polymerization:	May Occur:		Conditions to Avoid: N/A	
	Will Not Occur:	X		
Section VI - Health Hazard Data				
Route(s) of Entry:	Inhalation? YES	Skin? YES	Ingestion? YES	
Health Hazards (Acute and Chronic): NONE KNOWN				
Carcinogenicity:	NTP? NO	IARC Monographs? NO	OSHA Regulated? NO	
Signs and Symptoms of Exposure: INGESTION: LOW INGESTION HAZARD IN NORMAL USE. SKIN CONTACT: UNCURED PRODUCT MAY CAUSE MODERATE IRRITATION. EYE CONTACT: UNCURED PRODUCT CONTACT IRRITATES EYES. INHALATION: IRRITATES RESPIRATORY PASSAGES VERY SLIGHTLY.				
Medical Conditions Generally Aggravated by Exposure: NONE KNOWN				
Emergency and First Aid Procedures: EYES: FLUSH WITH WATER FOR 15 MINUTES. OBTAIN MEDICAL ATTENTION. SKIN: WIPE OFF AND FLUSH WITH WATER. IF IRRITATION DEVELOPS GET MEDICAL ATTENTION. INHALATION: NO FIRST AID SHOULD BE NEEDED. ORAL: NO FIRST AID IS NEEDED.				
Section VII - Precautions for Safe Handling and Use				
Steps to Be Taken in Case Material is Released or Spilled: REMOVE PRODUCT AND USE ABSORBENT MATERIAL TO TAKE CARE OF ANY OIL-LIKE RESIDUES.				
Waste Disposal Method: REVIEW ALL LOCAL, STATE AND FEDERAL REGULATIONS CONCERNING HEALTH AND POLLUTION TO DETERMINE APPROVED DISPOSAL METHOD.				
Precautions to Be Taken in Handling and Storing: USE REASONABLE CARE. STORE AWAY FROM OXIDIZING MATERIALS, WATER OR MOISTURE.				
Other Precautions: PRODUCT FORMS ACETIC ACID WHEN EXPOSED TO WATER OR HUMID AIR. PROVIDE VENTILATION DURING USE TO CONTROL ACETIC ACID EXPOSURE WITHIN 10 ppm (CURRENT TLV) OR USE RESPIRATORY PROTECTION.				
Section VIII - Control Measures				
Respiratory Protection (Specify Type): ACID GAS/ORGANIC VAPOR TYPE				
Ventilation:	Local Exhaust: RECOMMENDED		Special: N/A	
	Mechanical (General): RECOMMENDED		Other: N/A	
Protective Gloves: RUBBER OR PLASTIC GLOVES		Eye Protection: SAFETY GLASSES		
Other Protective Clothing or Equipment: NONE				
Work/Hygienic Practices: GROSS AMOUNTS OF MATERIAL SHOULD BE REMOVED FROM THE SKIN AS SOON AS PRACTICAL, ESPECIALLY BEFORE EATING OR SMOKING.				

MATERIAL SAFETY DATA SHEET

State Chemical Division – State Industrial Products 3100 Hamilton Avenue, Cleveland, OH 44114 (216) 861-7114
State Chemical Ltd. 1745 Meyerside Dr., Unit #1, Mississauga, Ontario L5T 1C6 (905) 670-4669

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **RAPID WRENCH** 24 Hour Emergency CHEMTREC Number: 800-424-9300

Product Description: A formulated aerosol lubricant sealer and anti-seize compound.

MSDS Number: M00919

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>CAS Number</u>	<u>Weight</u>	<u>ACGIH</u>	<u>OSHA</u>
Propane	74-98-6	< 20%	2500 ppm	1000 ppm
Butane	106-97-8	< 10%	800 ppm	800 ppm
Heptane	142-82-5	< 45%	400 ppm	400 ppm
Paraffinic Mineral Oil	8042-47-5	< 5.0%	5 mg/m3 as mist	5 mg/m3 as mist
Paraffin Oil	64742-62-7	< 10%	5 mg/m3 as mist	5 mg/m3 as mist
Petroleum Distillates	64742-65-0	< 10%	5 mg/m3 as mist	5 mg/m3 as mist
Graphite	7782-42-5	< 5.0%	2 mg/m3	2.5 mg/m3
Copper	7440-50-8	< 10%	1 mg/m3	1 mg/m3

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Extremely flammable. Contents under pressure. Do not puncture, incinerate or expose to temperature above 120°F(49°C). Vapor harmful. Eye, skin and respiratory irritant.

POTENTIAL HEALTH EFFECTS Routes of Exposure: Exposure may be by inhalation and/or skin or eye contact, depending on conditions of use. To minimize exposure, follow recommendations for proper use, ventilation and personal protective equipment. Eye Contact: May cause eye irritation. Redness and itching or burning sensation may indicate excessive exposure. Skin Contact: May cause skin irritation. Redness and itching or burning sensation may indicate excessive exposure. Inhalation: May cause irritation of the respiratory system. May cause nervous system depression. Headache, nausea, dizziness and loss of coordination are indications of excessive exposure to vapors or spray mists. Extreme overexposure may result in unconsciousness and possibly death. General: Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Prolonged overexposure to solvent ingredients may cause adverse effects to the liver, urinary and reproductive systems.

4. FIRST AID MEASURES

Eye Contact: Promptly flush with a large amount of water for at least 15 minutes. If irritation persists, consult a physician. Skin Contact: Promptly wash affected area thoroughly with soap and water. Remove contaminated clothing and launder before reuse. If irritation persists, consult a physician. Inhalation: Remove to fresh air. Restore breathing if necessary. If irritation persists, consult a physician. Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

Flashpoint: Propellant < 0°F. Lower Explosive Limit(LEL): 1.0 Upper Explosive Limit(UEL): 9.5 Autoignition Temperature: NA Fire and Explosion Hazards: Vapors will accumulate readily and may ignite explosively. Isolate from heat, electrical equipment, sparks and open flame. Closed containers may explode (due to build-up of pressure) when exposed to extreme heat. Application to hot surfaces requires special precautions. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention. Extinguishing Media: Carbon dioxide, dry chemical, foam. Fire Fighting Instructions: Full protective equipment including self-contained breathing apparatus should be used. Water spray maybe ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

6. ACCIDENTAL RELEASE MEASURES

Remove all sources of ignition. Ventilate area and remove with inert absorbent. Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers. Dispose of in accordance with all Federal, State and Local Regulations regarding waste disposal.

7. HANDLING AND STORAGE

Keep away from heat, flames, sparks or other sources of ignition. Consult NFPA Code. Use approved bonding and grounding procedures. Contents under pressure. Do not puncture, incinerate or expose to temperature above 120°F(49°C). Heat from sunlight, radiators, stoves, hot water and other heat sources could cause container to burst. Do not take internally. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Keep out of reach of children. Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Local exhaust preferable. General exhaust acceptable if the exposure to materials is maintained below applicable exposure limits. Personal Protective Equipment: Respiratory: If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted NIOSH-approved organic vapor/particulate

respirator. Eye: Wear approved safety glasses with unperforated sideshields. Skin: None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemically resistant gloves. Other: An emergency eyewash station or source of clean potable water should be available in case of accidental eye contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Copper. Odor: Solvent. Physical State: Liquid aerosol. pH: NA
Product Weight: 6.05 lb/gal; 724 g/l. Specific Gravity: 0.73 Boiling Point: < 0 - 238°F; < -18 - 114°C
Volatile Volume: 81% Melting Point: NA Vapor Density: Heavier than air. Evaporation Rate: Faster than Ether.
Solubility in Water: NA Vapor Pressure@70°F: NA VOC Content: 70.00% (less Federally Exempt Solvents).

10. STABILITY AND REACTIVITY

Stability: Stable. Hazardous Polymerization: Will not occur. Conditions to Avoid: Heat, sparks, flames or other sources of ignition. Incompatibility: None expected. Hazardous Decomposition Products: By Fire: Carbon Dioxide, Carbon Monoxide.

11. TOXICOLOGICAL INFORMATION

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

<u>Hazardous Ingredients</u>	<u>CAS Number</u>	<u>LD50</u>	<u>LC50</u>
Propane	74-98-6	NE	NE
Butane	106-97-8	NE	658 mg/l/4 hr (rat)
Heptane	142-82-5	4 mg/l/24 hr (goldfish)	4924 mg/l/24-96 hr (mosquito fish)
Paraffinic Mineral Oil	8042-47-5	NE	NE
Paraffin Oil	64742-62-7	NE	NE
Petroleum Distillates	64742-65-0	NE	NE
Graphite	7782-42-5	NE	NE
Copper	7440-50-8	NE	NE

12. ECOLOGICAL INFORMATION

NA

13. DISPOSAL CONSIDERATIONS

Do not incinerate. Depressurize container. Dispose of in accordance with all Federal, State and Local Regulations regarding pollution and waste disposal. Product as supplied is a D001 unspecified ignitable waste.

14. TRANSPORT INFORMATION

DOT Shipping Data: Consumer Commodity, ORM-D. Canadian TDG: Shipped in accordance with 49 CFR as part of a transborder shipment authorized under Section 5.2 (1) of the Canadian Transportation of Dangerous Goods.

For International Shipments by Air: Aerosols, Flammable, 2.1, UN1950. For International Shipments by Vessel:

Aerosols, Flammable, 2.1, UN1950, Limited Quantity

15. REGULATORY INFORMATION

TSCA: All ingredients in this product are listed or exempt from listing on the TSCA Chemical Inventory. CEPA: All ingredients in this product are listed or exempt from listing on the Canadian DSL/NDL. Proposition 65: This product may contain trace amounts of the following chemicals that are known to the state of California to cause cancer, birth defects or other reproductive harm:

Benzene	71-43-2	0.009%
Toluene	108-88-3	0.435%

SARA 313: This product contains the following toxic chemicals that are subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372.65C):

Copper Compound	7440-50-8	8%
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HMIS Classification: Health = 2 Flammability = 4 Reactivity = 0 Personal Protection = B

WHMIS Classification: Class A; Class B, Division 5; Class D, Division 2B

16. OTHER INFORMATION

NA = Not Available or Not Applicable.

NE = Not Established

Read and follow all label directions and precautions before using the product. These products are intended for industrial and institutional use only. NOT FOR HOUSEHOLD USE OR RESALE. KEEP OUT OF THE REACH OF CHILDREN. While we believe that the data contained herein is factual and the opinions expressed are those of qualified experts, the data are not to be taken as a warranty or representation for which the company assumes legal responsibility. They are offered solely for your consideration, investigation, and verification. Any use of these data and information must be determined by the user to be in accordance with applicable Federal, State, and Local Laws and regulations.

HEALTH AND SAFETY INFORMATION: (216) 861-7114

Prepared On: October 2008

Replaces: October 2005

Completed By: Regulatory Affairs Specialist.



A Brand of **rrwDevcon**

30 Endicott St.
Danvers, MA 01923 USA
Telephone: 978-777-1100
Toll Free: 800-933-8266

Technical Data Sheet

Penetrating Grade Threadlocker GREEN

INDUSTRIAL

PRODUCT DESCRIPTION

S.I.N.: 834-300

Permatex® Penetrating Grade Threadlocker GREEN is a **medium strength** anaerobic threadlocking material, which cures between engaged threads to form a unitized assembly that helps resist leakage, shock and vibration. The product is a single component, anaerobic liquid that cures in the absence of air and when confined between close fitting metal surfaces. Because of its low viscosity and capillary action, the product *wicks* between engaged threads and eliminates the need to disassemble, apply product and then reassemble. The high prevailing torque provides vibration resistance to adjustment screws. Ideal for all threaded engagements less than or equal to 1/2 inch in diameter. The product can also fill porosity in welds, castings and powder metal parts. Excellent chemical resistance and temperature range of -54°C to +149°C (-65°F to +300°F). Meets or exceeds the requirements of Military Specification Mil-S-46163A Type II, Grade R. NSF White Book registered.

PRODUCT BENEFITS

Improved Reliability

- Eliminates vibration issues
- Seals against leakage
- Prevents rusting of threads
- Cures without cracking or shrinking
- Can be adjusted or disassembled
- Seals porosity

Easy Application

- No mixing
- No disassembly
- No curing outside of joint

TYPICAL APPLICATIONS

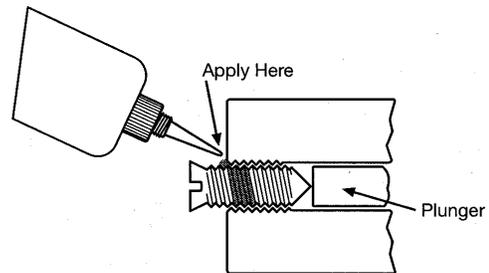
Prevents loosening and leakage of pre-assembled threaded fasteners and as a porosity sealant. Particularly suitable for applications such as:

- Pre-assembled fasteners
- Adjustment screws
- Seal porous welds
- Seal porosity on brake unit housings
- Seal brazed joints in cooling systems

DIRECTIONS FOR USE

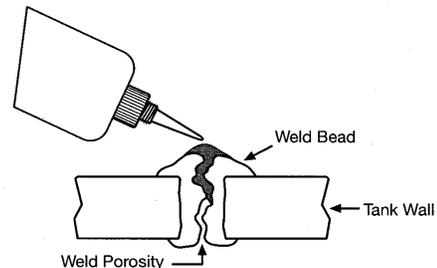
For Pre-assembled Threaded Parts with Thru Hole

1. Prior to assembly, clean all threads (Bolt and Hole) with a cleaning solvent such as Permatex® Brake and Parts Cleaner and allow to dry.
2. **For Thru Holes**, apply several drops of product at screw and body juncture as shown:



Avoid touching the bottle tip to the metal surface. Not recommended for pre-assembled threads in a blind hole.

3. **For Porosity Sealing**, clean area and apply localized heat to the area to approximately 121°C (250°F). Allow to cool to approximately 85°C (185°F) and apply the product.



Maximum porosity sealed: .005".

For Cleanup

1. Residual liquid films and/or fillets outside the joint are readily soluble in Permatex® Brake and Parts Cleaner.
2. Cured product can be removed with a combination of soaking in Permatex® Gasket Remover and mechanical abrasion such as a wire brush.

For Disassembly

1. Remove with standard hand tools.
2. In the rare instance where hand tools do not work, because of excessive engagement length, apply localized heat to nut or bolt to approximately 232°C (450°F). Disassemble while hot.

For Reassembly

1. Remove loose product from nut and bolt.
2. Apply primer to all threads, regardless of metal type.
3. Assemble and tighten as usual.

NOT FOR PRODUCT SPECIFICATIONS.

THE TECHNICAL DATA CONTAINED HEREIN ARE INTENDED AS REFERENCE ONLY.

PLEASE CONTACT PERMATEx, INC., TECHNICAL SERVICE DEPARTMENT FOR ASSISTANCE AND RECOMMENDATIONS FOR YOUR SPECIFIC APPLICATION.
PERMATEx, INC., HARTFORD SQUARE NORTH, 10 COLUMBUS BOULEVARD, HARTFORD, CT 06106 PHONE - (1-87PERMATEx) 08/02

PROPERTIES OF UNCURED MATERIAL

	Typical Value
Chemical Type	Anaerobic Dimethacrylate Ester
Appearance	Green Fluorescent Liquid
Specific Gravity	1.08
Viscosity @ 25°C, mPa.s (cP)	20 - 55
Brookfield RVF, spindle #1 @ 50 RPM	
Flash Point (TCC), °C (°F)	>93 (>200)

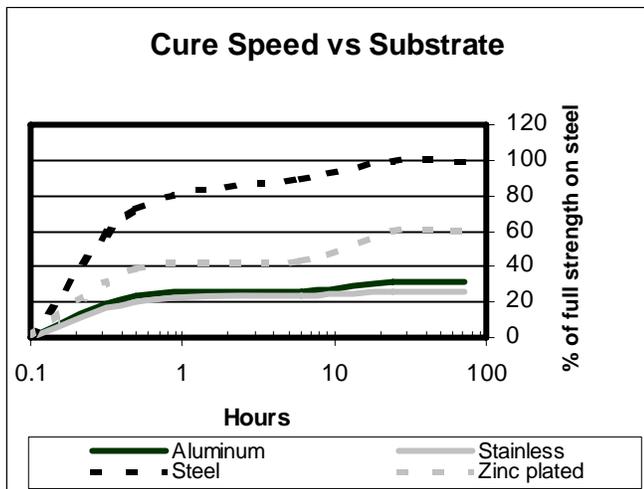
TYPICAL CURING PERFORMANCE

Cure speed vs. substrate

The rate of cure will depend on the material used. Permatex® Penetrating Grade Threadlocker GREEN will react faster and stronger with **Active Metals**. However, **Inactive Metals** will require the use of an activator (Surface Prep) to obtain maximum strength and cure speed at room temperature.

Active Metals	Inactive Metals
Soft Steel Iron	Bright Platings
Copper	Anodized Surfaces
Brass	Titanium
Manganese	Zinc
Bronze	Pure Aluminum
Nickel	Stainless Steel
Aluminum Alloy	Cadmium

The graph below shows the breakaway strength developed with time on 3/8" - 16 Grade 5 bolts and Grade 8 nuts compared to different materials.



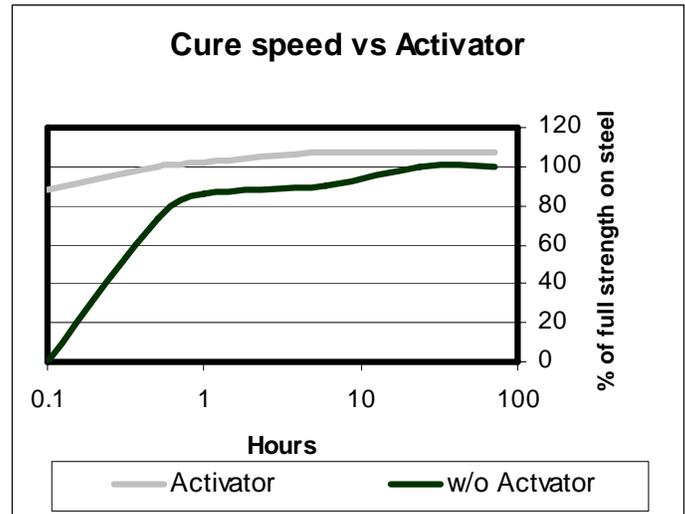
Cure speed vs. temperature

The rate of cure will depend on the ambient temperature. **Full cure** is attainable in 24 hours at room temperature, 22°C (72°F), or 1 hour at 93°C (200°F).

Cure speed vs. activator

Where cure speed is unacceptably long, or large gaps are present, applying an activator (Surface Prep) to the surface will improve cure speed. A 3/8-16 steel nut and bolt assembly will fixture in 3 minutes using an activator, while fixturing will occur in 20 minutes without an activator. Full cure in 24 hours for both procedures. The graph below shows the breakaway

strength developed with time using Permatex® Surface Prep Activator.



PERFORMANCE OF CURED MATERIAL

(After 24 hr at 72°F on 3/8-16 steel Grade 8 Nuts and Grade 5 bolts)

	Value	Typical Range
Breakaway Torque, Nm, (in.lbs)	10 (85)	3 to 17 (20 to 150)
Prevail Torque, Nm (in.lbs)	29 (250)	17 to 41 (150 to 350)

Where Breakaway Torque is the force required to initiate the fastener movement and Prevail Torque is the force required to disassemble the fastener once Breakaway Torque has occurred.

TYPICAL ENVIRONMENTAL RESISTANCE

Temperature Resistance

Product temperature range from -54°C to +149°C (-65°F to +300°F). The breakaway and prevailing torque values decrease as temperature increases, however the assembly remains effective against vibration and leakage.

Chemical / Solvent Resistance

Aged under conditions and tested at 22°C(72°F)

% Initial Strength retained after time	Temp	500hr	1000hr
Hot air	150°C		35%
Motor oil(SL)	125°C		60%
Gasoline	23°C	100%	
Antifreeze	87°C	100%	
Ethanol	23°C	100%	
Acetone	23°C	100%	

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

This product is not normally recommended for use on plastics (particularly thermoplastic materials where stress cracking of the plastic could result). It is recommended to confirm compatibility of the product with such substrates.

Ordering Information

Part Number	Container Size
29010	10 ml bottle, carded
29050	50 ml bottle
29025	250 ml bottle
29001	1 liter bottle

STORAGE

Products shall be ideally stored in a cool, dry location in unopened containers at a temperature between 8° to 28°C (46° to 82°F) unless otherwise labeled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused product, do not return any material to its original container.

NOTE

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. **Permatex, Inc. specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Permatex Inc. products and disclaims any liability for consequential or incidental damages of any kind, including lost profits.** This product may be covered by one or more United States or foreign patents or patent applications.

CLEANER, MARKER BOARD

- 0859

I. SCHNEID, INC



D10-06

 NFPA/HMIS: HEALTH - 1
 FLAMMABILITY - 0
 REACTIVITY - 0

 MATERIAL SAFETY DATA SHEET U.S. DEPARTMENT OF LABOR
 COMPLIES WITH USDL SAFETY AND HEALTH REGULATIONS, (29 CFR 1910.1200)

SECTION I CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

 PRODUCT NAME: MARKER BOARD CLEANER
 PRODUCT USE: WHITEBOARD CLEANER

 I. SCHNEID, INC.
 1429 FAIRMONT AVE. NW
 ATLANTA, GA 303181

 PRODUCT CODE: 4342
 MSDS NUMBER: KOS: 93

 EMERGENCIES: (404)-351-4705
 HOURS: M-F • 8AM-5PM EASTERN
 REVISION DATE: 12/11/96 (5)

SECTION II COMPOSITION/INFORMATION ON COMPONENTS

NOTE: This product contains no hazardous components as defined by OSHA 29 CFR section 1910.1200

SECTION III HAZARDS IDENTIFICATION

PRIMARY ROUTE(S) OF ENTRY: Eye contact, skin contact/absorption, inhalation, ingestion.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Gastrointestinal irritation (nausea, vomiting, diarrhea), irritation to nose, throat, and respiratory tract.

TARGET ORGAN EFFECTS: Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals and may aggravate pre-existing disorders of these organs in humans: chronic ingestion may cause kidney lesions at high doses.

IMMEDIATE HEALTH EFFECTS

EYES: Exposure may cause noticeable pain, severe irritation and transient corneal injury.

SKIN: Exposure may cause mild skin irritation. Prolonged or repeated exposure may dry the skin. Symptoms may include redness, burning, drying and cracking, and skin burns. Additional symptoms of skin contact may include: allergic skin reaction. Skin absorption is possible, but harmful effects are not expected from this route of exposure under normal conditions of handling and use.

INHALATION: Exposure to vapor or mist is possible. Short term inhalation is not likely to cause harmful effects; breathing large amounts may be harmful. Symptoms are more typically seen at air concentrations exceeding the recommended exposure limits.

INGESTION: Single dose oral toxicity is low. Swallowing small amounts during normal handling is not likely to cause harmful effects; swallowing large amounts may be harmful.

REPRODUCTIVE/DEVELOPMENTAL INFORMATION: No Data

CARCINOGENIC INFORMATION: None of the ingredients of this material are listed as carcinogens by IARC, NTP, or OSHA.

LONG TERM EFFECTS: No Data

SECTION IV FIRST AID MEASURES

EYES: Flush eyes with water for at least 15 minutes. If irritation persists, call physician.

SKIN: If skin becomes irritated, flush with water.

INHALATION: If symptoms of overexposure develop, remove to fresh air.

INGESTION: Give 8 to 16 ounces of water to dilute substance. Call a physician or local Poison Control Center immediately. Never give anything by mouth to an unconscious person.

SECTION V FIRE FIGHTING MEASURES

 Flash Point
 No Flash at boil (C.C. Method)

 Autoignition Temperature
 Not Applicable

 Explosive Limits
 Not Applicable

 Hazardous Products of Combustion
 Not Applicable

 Extinguishing Media
 Not Applicable

 NFPA/HMIS Ratings
 Health: 1, Flammability: 0, Reactivity: 0

Fire Fighting Instructions

Avoid contact with this material. Avoid walking in spilled material. Wear protective clothing for skin and eyes.

SECTION VI ACCIDENTAL RELEASE MEASURES

SMALL SPILL

Absorb with an inert solid and scoop up for disposal, then rinse soiled area with water down the drain.

LARGE SPILL

Stop leak at the source and collect into a suitable container, then treat as a small spill.

SECTION VII HANDLING AND STORAGE

HANDLING

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

STORAGE

Store in a cool, dry place. Keep container closed when not in use. Shelf life - 2 years minimum.

SECTION VIII EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

SKIN PROTECTION

Wear rubber gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

RESPIRATORY PROTECTION

If workplace exposure limits of product or any component are exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

ENGINEERING CONTROLS

Provide sufficient mechanical (general and local exhaust) ventilation to maintain exposure below level of overexposure (from known, suspected or apparent adverse effects).

SECTION IX PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor Green, clear liquid; Clean smelling	pH Concentrate 11.5 - 12.5	Specific Gravity (H2O=1) : 1.01 +/- 0.02
Vapor Pressure Unknown	Vapor Density Unknown	Percent Volatiles 97%
Boiling Point >212 degrees F	Solubility in Water Complete	Evaporation Rate (Water=1) : < 1

SECTION X STABILITY AND REACTIVITY

Chemical Stability Stable	Incompatibility Acidic conditions	Hazardous Polymerization Will Not Occur
Conditions To Avoid Avoid temperature extremes	Hazardous Decomposition None	

SECTION XI TOXICOLOGICAL INFORMATION

No Data Available

SECTION XII ECOTOXICOLOGICAL INFORMATION

No Data Available

SECTION XIII DISPOSAL CONSIDERATION

WASTE DISPOSAL INFORMATION

Dispose of in accordance with all applicable Federal, State, and Local regulations.

RCRA INFORMATION

If this material becomes a waste, it would be considered hazardous under 40 CFR 261.22 and would be classified as EPA Waste number D002.

SECTION XIV TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101

DOT Description:

Compounds, cleaning liquid - in boxes, barrels, kits, pails or packages - item 48580 Sub 3 Class 55

DOT Hazard Class:

Non Hazardous

Hazardous Component:

None

Reportable Quantity (RQ) - 49 CFR 172.101

Not applicable

SECTION XV REGULATORY INFORMATION

US FEDERAL REGULATIONS

TSCA (Toxic Substances Control Act) Status

TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 355 Appendix A

None

SARA 302 Components - 40 CFR 355 Appendix A

None

Section 311/312 Hazard Class - 40 CFR 370.2

Immediate(X) Delayed(X) Fire() Reactivity() Sudden Release of Pressure()

SARA 313 Components - 40 CFR 372.65

None

STATE AND LOCAL REGULATIONS

California Proposition 65

None

North Carolina Administrative Code 2D.1104 and 28.0810

None

South Carolina Regulation 62.5 Standard Number 6

None

672



PARBSO Engineered Products

4670 Sawmill Road
Clarence, NY 14031
Phone: 716-759-3210
Fax: 716-706-1228
www.parbsco.com

MATERIAL SAFETY DATA SHEET

Page 1 of 2

HAZARD RATING

Health : 1
Reactivity: 0
Flammability: 1

SECTION I: PRODUCT IDENTIFICATION

PRODUCT NAME : Valve Grinding Compound, Grease Mix
National Stock Nos: 5350-00-193-1340, 5350-00-193-1341, 5350-00-193-1348, 5350-00-193-1349,
5350-00-193-1356, 5350-00-193-7227, 5350-00-271-5966, 5350-99-576-1687, 5350-00-576-1689,
5350-00-579-2513, 5350-00-639-2668, 5350-00-927-3867

SECTION II: MATERIALS AND COMPONENTS

INGREDIENTS	CAS NUMBER	MAX WEIGHT %	OSHA PEL Mg/m3**	ACGIH TLV Mg/m3**	CARCINOGEN
Aluminum Oxide (Alumina)*	1344-28-1	30.0	15	10	N
Silicon Carbide*	409-21-2	30.0	15	10	N
Calcium Stearate	1592-23-0	10	N/a	N/a	N
Mineral Oil	64742-52-5	52	N/a	N/a	N
Polyoxyethylenesorbitol Oleate	9005-65-6	5	N/a	N/a	N
Wyoming Bentonite	1302-78-9	3	N/a	N/a	N

* Denotes materials that are regulated by OSHA 29 CFT 1910.1200 Hazard Communication Standard
** Total Dust

SECTION III: PHYSICAL PROPERTIES

Boiling Point	650°F	Specific Gravity	0.9 to 1.4 @16 C
Melting Point	250°F	Solubility in water	46 to 90%
Freezing Point	0°F	Solubility in Alcohol	n/a
Vapor Pressure	n/a	Solubility in other Solvents	n/a
Vapor Density	n/a	Evaporation Rate	n/a
Appearance	Fluid Grease	Odor :	Bland

SECTION IV: FIRE AND EXPLOSION DATA

Flash Point:	360°F	Extinguish with waterfog, CO2, Dry Chemical Foam, Earth or Sand. Water may cause frothing.
Flammable Limits	n/a	
Explosion Potential:	n/a	

SECTION V: REACTIVITY DATA

Stability	Stable	Incompatibility:	Strong Oxidizers
Conditions to Avoid :	Open Flame	Polymerization:	Will Not Occur
Decomposition Products: CO/CO2 if incomplete combustion			

SECTION VI: SPILL OR LEAK

Steps to be taken if material is released or spilled : Flush with water, absorb with sand or inert material, sweep or scoop up and remove.

Waste disposal method : Incinerate.

SECTION VII: TOXICITY

Conditions to avoid : Avoid contact with eyes ; contains fine abrasives.

Primary Routes of Entry ; Skin Contact.

This product has been used for years with no known ill effects. It contains no known carcinogens or mutagens as defined by OSHA or IARC.

SECTION VIII: HEALTH HAZARD INFORMATION

Inhalation: No known hazardous effects

Ingestion: Do not induce vomiting, Get medical Attention

Skin: Some may experience skin irritation ;
Wash affected areas with soap and water
Get medical attention

Eye: Flush with large amounts of water
Get medical attention

SECTION IX. SPECIAL PRODUCT INFORMATION

Store in cool area.

Use with proper ventilation.

Eye protection recommended.

Use Neoprene or polyethylene gloves.

Do not get in eyes or on clothing.

Wash thoroughly after handling.

Normal clean-up procedures.

Waste disposal method ; standard landfill methods.

Keep away from sparks and open flames.

Note : The above information is accurate to the best of our knowledge, however, since data, safety standards, and government requirements are subject to change and the conditions of handling and use, or misuse are beyond our control, Paribco Engineered Products makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. User should satisfy themselves that they have all current data relevant to their particular use.

Ingredients

TOP

Cas: Code: X RTECS #: Code: X
 Name: **NON-HAZARDOUS INGREDIENTS**
 % Text: NK Environmental Wt:
 Other REC Limits: NONE RECOMMENDED
 OSHA PEL: NOT RELEVANT Code: M OSHA STEL: Code:
 ACGIH TLV: NOT RELEVANT Code: M ACGIH N/P STEL: Code:
 EPA Rpt Qty: DOT Rpt Qty:

Ozone Depleting Chemical:

Health Hazards Data

TOP

LD50 LC50 MixtureNK
 Route Of Entry Inds - Inhalation:NO Skin:YES Ingestion:NO
 Carcinogenicity Inds - NTP:NO IARC:NO OSHA:NO
 Health Hazards Acute And Chronic
 POSSIBLE MECHANICAL IRRITATION IF INTRODUCED INTO EYE DUE TO ABRASIVE GRIT PRESENT.

Explanation Of Carcinogenicity

NK

Signs And Symptions Of Overexposure

NK

Medical Cond Aggravated By Exposure

NK

First Aid

EYE: FLUSH W/TEPID WATER FOR 15 MINUTES, HOLD EYELIDS APART. DO NOT RUB EYES, GET MED AID.

Spill Release Procedures

SCOOP UP. WIPE UP W/RAGS OR USE ABSORBENT MATERIAL. COMPLETE CLEANUP W/DETERGENT & WATER, HIGH FLASH POINT SOLVENT OR CHLORINATED SOLVENT CLEANER W/ADEQUATE VENT.

Neutralizing Agent

NK

Waste Disposal Methods

CONTROLLED INCINERATION OR BURY IN POSTED LANDFILL IN ACCORDANCE W/FEDERAL/STATE/LOCAL REGULATIONS.

Handling And Storage Precautions

NORMAL STORAGE & HANDLING FOR PETROLEUM GREASE PRODUCTS.

Other Precautions

KEEP OUT OF REACH OF CHILDREN.

Fire and Explosion Hazard Information

TOP

Flash Point Method: COC

Flash Point:

Flash Point Text: >300F,>149C

Autoignition Temp:

Autoignition Temp Text: NK

Lower Limits: NA

Upper Limits: NA

Extinguishing Media

CO2, FOAM, DRY CHEMICAL.

Fire Fighting Procedures

WATER MAY BE INEFFECTIVE. USE EYE PROTECTION & SCBA WHEN FIGHTING FIRES IN CONFINED AREAS.

Unusual Fire/Explosion Hazard

NONE EXCEPT AS FOR PETROLEUM GREASE FIRES.

Control Measures

TOP

Respiratory Protection

NONE REQUIRED.

Ventilation

LOCAL EXHAUST ACCEPTABLE. MECHANICAL, (GENERAL) ACCEPTABLE.

Protective Gloves

NONE REQUIRED..

Eye Protection

YES

Other Protective Equipment

NONE REQUIRED.

Work Hygienic Practices

NO SPECIAL WORK OR HYGENIC PRACTICE REQUIRED.

Supplemental Safety and Health

NK

Physical/Chemical Properties

TOP

HCC:

NRC/State LIC No: NK

Net Prop WT For Ammo:

Boiling Point:

B.P. Text: >500F,>260C

Melt/Freeze Pt:

M.P/F.P Text: NA

Decomp Temp:

Decomp Text: NK

Vapor Pres: NEGLIGIBLE

Vapor Density: NA

Volatile Org Content %:

Spec Gravity: 1.15

VOC Pounds/Gallon:

PH: NK

VOC Grams/Liter:

Viscosity: NK

Evaporation Rate & NA

Reference:

Solubility in Water: INSOLUBLE.

Appearance and Odor: GRAY PASTE, SLIGHT PETROLATUM ODOR.

Percent Volatiles by Volume: NK

Corrosion Rate: NK

Reactivity Data

[TOP](#)

Stability Indicator: YES

Stability Condition To Avoid: NONE

Materials To Avoid: STRONG OXIDIZING AGENTS.

Hazardous Decomposition PYROLISIS YIELDS CO, CO2, &

Products: INCOMPLETELY BURNED HYDROCARBONS.

Hazardous Polymerization NO

Indicator:

Conditions To Avoid NONE

Polymerization:

Toxicological Information

[TOP](#)

Toxicological Information:N/P

Ecological Information

[TOP](#)

Ecological: N/P

MSDS Transport Information

[TOP](#)

Transport Information:N/P

Regulatory Information

[TOP](#)

Sara Title III Information: N/P

Federal Regulatory Information: N/P

State Regulatory Information: N/P

Other Information

[TOP](#)

Other Information: N/P

8030-01-026-1538

MSDS for Fastenal part number 62416 Hydr/PneSealant 50ml

PERMATEX INDUSTRIAL CORPORATION

07/02/97

ROCKY HILL, CONNECTICUT 06067
TELEPHONE: (860) 571-5100

MATERIAL SAFETY DATA SHEET

Page 01 of 04

Hydraulic Sealant
81802

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Hydraulic Sealant
Item No.: 81802
Product Type: Anaerobic

2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredients	CAS No.	%
Polyglycol dimethacrylate	25852-47-5	55-60
Polyglycol dioctanoate	18268-70-7	25-30
Poly(butyl methacrylate)	9011-53-4	5-10
CUMENE HYDROPEROXIDE*	80-15-9	3-5
N,N-Dialkyltoluidines	613-48-9	0.1-1
SACCHARIN	81-07-2	0.1-1

* This component is listed as a SARA Section 313 Toxic Chemical.

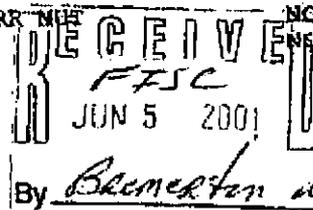
Ingredients which have exposure limits

Exposure Limits (TWA) Ingredients	ACGIH (TLV)	OSHA (PEL)	OTHER
Exposure limits (STEL) Ingredients	ACGIH (TLV)	OSHA (PEL)	

3. HAZARDS IDENTIFICATION

Toxicity: Estimated oral LD50 greater than 5,000 mg/kg.
Estimated dermal LD50 greater than 2,000 mg/kg.
Primary Routes of Entry: None known
Signs and symptoms of Exposure: May cause dermatitis on prolonged contact in sensitive individuals
Existing Conditions Aggravated by Exposure: None known

Ingredients	Literature Referenced Target Organ and Other Health Effects	Carcinogen		
		NTP	IARC	OSHA
Polyglycol dimethacrylate	ALG IRR	NO	NO	NO
Polyglycol dioctanoate	No Data	NO	NO	NO
Poly(butyl methacrylate)	No Data	NO	NO	NO
CUMENE HYDROPEROXIDE	ALG CNS COR IRR	NO	NO	NO
N,N-Dialkyltoluidines	No Data	NO	NO	NO



PERMATEX INDUSTRIAL CORPORATION

07/02/97

ROCKY HILL, CONNECTICUT 06067
TELEPHONE: (860) 571-5100

MATERIAL SAFETY DATA SHEET

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Product Name: Hydraulic Sealant
Item No.: 81802

3. HAZARDS IDENTIFICATION

(continued)

SACCHARIN

No Data

YES 2B NO

Abbreviations

2B Possibly carcinogenic to humans	ALG Allergen
CNS Central nervous system	COR Corrosive
IRR Irritant	MUT Mutagen

4. FIRST AID MEASURES

Ingestion:	Do not induce vomiting. Keep individual calm. Obtain medical attention
Inhalation:	Does not apply
Skin Contact:	Flush with water.
Eye Contact:	Flush at least 15 minutes with water. Obtain medical attention.

5. FIRE FIGHTING MEASURES

Flash Point:	More than 200°F	Method: Tag Closed Cup
Recommended Extinguishing Agents:	Carbon dioxide, foam, dry chemical	
Hazardous Products formed by Fire or Thermal Decomposition:	Irritating organic vapors	
Unusual Fire or Explosion Hazards:	None	

Explosive Limits:	
(% by volume in air) Lower	Not available
(% by volume in air) Upper	Not available

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak:	Soak up in an inert absorbent. Store in a partly filled, closed container until disposal.
---	---

7. HANDLING AND STORAGE

Safe Storage:	Store below 100 deg. F
(Contact Loctite Customer Handling:	Service 1-800-243-4874 for shelf life information)
	Avoid prolonged skin contact. Keep away from eyes.

FERMATEX INDUSTRIAL CORPORATION

07/02/97

ROCKY HILL, CONNECTICUT 06067
TELEPHONE: (860) 571-5100

MATERIAL SAFETY DATA SHEET

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Product Name: Hydraulic Sealant
Item No.: 81802

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses or goggles.
Skin: Rubber or plastic gloves.
Ventilation: Does not apply

See Section 2 for Exposure Limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Brown Liquid
Odor: Mild
Boiling Point: More than 300°F
pH: Does not apply
Solubility in Water: Slight
Specific Gravity: 1.049 at 80°F
Volatile Organic Compound
(EPA Method 24) 8.7%; 91 grams per liter
Vapor Pressure: Less than 5mm at 80°F
Vapor Density: Not available
Evaporation Rate
(Ether = 1) Not available

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: Will not occur
Incompatibility: None
Conditions to Avoid: Not available
Hazardous Decomposition
Products (non-thermal): None

11. TOXICOLOGICAL INFORMATION

See Section 3.

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended methods of disposal: Incinerate following EPA and local regulations.
EPA Hazardous Waste Number: NH - Not a RCRA Hazardous Waste Material

PERMATEX INDUSTRIAL CORPORATION

07/02/97

ROCKY HILL, CONNECTICUT 06067
TELEPHONE: (860) 571-5100

MATERIAL SAFETY DATA SHEET

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Product Name: Hydraulic Sealant
Item No.: 81802

14. TRANSPORTATION INFORMATION

DOT (49 CFR 172)

Domestic Ground Transport

Proper Shipping Name: Unrestricted
Hazard Class or
Division: Unrestricted
Identification Number: None
Marine Pollutant: None

IATA

Proper Shipping Name: Unrestricted
Class or Division: Unrestricted
UN or ID Number: None

15. REGULATORY INFORMATION

CA Proposition 65: WARNING: This product contains chemicals known to
the State of California to cause cancer
and birth defects or other reproductive
harm.
(ppb levels of Arsenic, Cd, Pb, Ni),This product contains Saccharin. No Prop65 hazard
warning is necessary if this product is used as
reasonably anticipated.

16. OTHER INFORMATION

Estimated NFPA(R) Code:

Health Hazard: 1
Fire Hazard: 1
Reactivity Hazard: 1
Specific Hazard: Does not apply

Estimated HMIS(R) Code:

Health Hazard: 1
Flammability Hazard: 1
Reactivity Hazards: 1
Personal Protection: See Section B.NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.Prepared By:
Title:
Company:Stephen Repetto
Research Chemist, Environmental Health & Safety
Loctite Corp., 1001 Tx Br Cr, Rocky Hill CT 06067

OSHA PEL: 400 PPM/500 STEL Code: M

OSHA Code:

ACGIH TLV: 400 PPM/500 STEL; 9192 Code: M

ACGIH N/P Code:

EPA Rpt Qty:

STEL:

DOT Rpt

Qty:

Ozone Depleting Chemical: N

Health Hazards Data

[TOP](#)

LD50 LC50 Mixture ORAL LD50 (RAT) UNKNOWN

Route Of Entry Inds - Inhalation: YES

Skin: YES

Ingestion: YES

Carcinogenicity Inds - NTP: NO

IARC: NO

OSHA: NO

Health Hazards Acute And Chronic

INHALATION, IRRITATION OF THE NOSE & THROAT. HIGHER CONCENTRATIONS MAY CAUSE HEADACHES, VOMITING, COMA. EVEN HIGHER CONCENTRATIONS MAY CAUSE COMA & DEATH. EYES: IRRITATION, CORNEAL BURNS. SKIN: DRYNESS POSSIBLE DERMATITIS. INGESTION: LARGE AMOUNTS CAUSE HEADACHE, NAUSEA, VOMITING, STOMACH CRAMPS, UNCONSCIOUSNESS, DEATH.

Explanation Of Carcinogenicity

MANUFACTURER GAVE NO COMMENTS OTHER THAN THE REFERENCE TO THE THREE LISTINGS.

Signs And Symptoms Of Overexposure

PROLONGED EXPOSURE TO HIGH CONCENTRATIONS MAY CAUSE SEVERE OR FATAL CNS DEPRESSION.

Medical Cond Aggravated By Exposure

PRE-EXISTING SKIN DISORDERS, EYE PROBLEMS OR IMPAIRED RESPIRATORY FUNCTION MAY BE SUSCEPTIBLE.

First Aid

EYE: FLUSH W/WATER 15 MIN, HOLD LIDS OPEN. SKIN: REMOVE CONTAMINATED CLOTHING AND LAUNDRER BEFORE REUSE. WASH WITH SOAP & WATER. INHALED: REMOVE TO FRESH AIR. RESTORE/AID BREATHING AS NEEDED. INGESTED: IMMEDIATELY GIVE 2 LARGE GLASSES OF MILK OR WATER AND INDUCE VOMITING. (NOTHING BY MOUTH IF UNCONSCIOUS.) PREVENT ASPIRATION. GET IMMEDIATE MEDICAL CARE.

Spill Release Procedures

EXTINGUISH IGNITION SOURCES. BE SURE ALL HANDLING EQUIPMENT IS ELECTRICALLY GROUNDED. SMALL SPILL: MOP UP & PLACE IN DOT APPROVED CONTAINERS. LARGE SPILL: DIKE W/SOIL OR OTHER NON-COMBUSTIBLE MATERIAL & PUMP INTO DOT CONTAINER. KEEP OUT OF SEWERS, ETC.

Neutralizing Agent

NO INFORMATION GIVEN ON MSDS BY MFR.

Waste Disposal Methods

CONSULT APPROPRIATE FEDERAL, STATE & LOCAL REGULATORY AGENCIES TO ASCERTAIN PROPER DISPOSAL PROCEDURES.

Handling And Storage Precautions

KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAMES. STORE IN COOL, DRY, WELL-VENTILATED PLACE AWAY FROM INCOMPATIBLE MATERIAL. VENT CONTAINER FREQUENTLY.

Other Precautions

VENT MORE OFTEN IN WARM WEATHER. USE ONLY NON-SPARKING TOOLS AND ELECTRICALLY GROUND ALL EQUIPMENT WHEN HANDLING THIS PRODUCT. DO NOT USE PRESSURE TO EMPTY CONTAINERS. EMPTY CONTAINERS CAN HAVE RESIDUES, GASES & MISTS. DISPOSE PROPERLY.

Fire and Explosion Hazard Information

TOP

Flash Point Method: TCC**Flash Point:** =11.7C, 53.F**Flash Point Text:****Autoignition Temp:****Autoignition Temp Text:** N/K**Lower Limits:** .2.0**Upper Limits:** 12.7**Extinguishing Media**

WATER SPRAY, DRY CHEMICAL, CARBON DIOXIDE, ALCOHOLIC FOAM. DO NOT USE DIRECT WATER SPRAY.

Fire Fighting Procedures

FIRE FIGHTERS SHOULD USE NIOSH APPROVED SCBA & FULL PROTECTIVE EQUIPMENT WHEN FIGHTING FIRE. USE WATER SPRAY TO COOL NEARBY FIRE EXPOSED CONTAINERS.

Unusual Fire/Explosion Hazard

VAPORS MAY TRAVEL AND BE IGNITED BY PILOT LIGHTS, FLAMES, SPARKS, HEATERS, ETC. AT DISTANCES FROM THE HANDLING POINT.

Control Measures

TOP

Respiratory Protection

BASED ON CONTAMINATION LEVELS IN THE WORK PLACE. FOR EXAMPLE: HALF MASK AIR PURIFYING CARTRIDGE RESPIRATOR OR SUPPLIED AIR RESPIRATOR.

Ventilation

LOCAL AND MECHANICAL EXHAUST RECOMMENDED.

Protective Gloves

RUBBER

Eye Protection

CHEMICAL GOGGLES UNLESS RESPIRATOR WORN

Other Protective Equipment

RUBBER APRON, RUBBER BOOTS, IMPERVIOUS CLOTHING. EYE SHOWER.

Work Hygienic Practices

EYE WASH FOUNTAIN, QUICK DRENCH SHOWER.

Supplemental Safety and Health

KEY2:KT MSDS PREPARED BY CHEMICAL COMMODITIES' C.A. EISENHARD; BUT LISTS VAN WATERS & ROGERS AS MFR ON CONTRACT DLA-450-93-M-AS54.

Physical/Chemical Properties

TOP

HCC: F2**NRC/State LIC No:** NONE**Net Prop WT For Ammo:****Boiling Point:** =82.8C, 181.F**B.P. Text:****Melt/Freeze Pt:** =-88.3C, -127.F**M.P./F.P. Text:****Decomp Temp:****Decomp Text:** N/K**Vapor Pres:** 33 DEG.C?!**Vapor Density:** 2.07**Volatile Org Content %:****Spec Gravity:** 0.79**VOC Pounds/Gallon:****PH:** N/K

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Permatex, Inc.
10 Columbus Blvd.
Hartford, CT 06106 USA
Telephone: 1-87-Permatex
(877) 376-2839
Emergency: 800-255-3924
International Emergency: +01-813-248-0585

Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: FAST ORANGE SMOOTH CREAM 14OZ TUB
Item No: 33013
Product Type: Waterless hand cleaner

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight%	ACGIH; TLV-TWA	OSHA PEL
WATER 7732-18-5	75-85	Not listed	Not listed
D-LIMONENE 5989-27-5	5-15	Not listed	Not listed
ETHOXYLATED C11-C16 ALCOHOL 127036-24-2	<3	Not listed	Not listed
CASTOR OIL 8001-79-4	<3	Not listed	Not listed
PROPYLENE GLYCOL 57-55-6	<3	Not listed	Not listed

3. HAZARDS IDENTIFICATION

Toxicity: Oral LD50 greater than 5000 mg/kg. Primary irritation tests show that this product is not a primary irritant.
Primary Routes of Entry: Eye and skin contact, ingestion, inhalation
Signs and Symptoms of Exposure: None under normal conditions of use.

Component	Weight%	NTP	ACGIH Carcinogens	IARC
D-LIMONENE 5989-27-5	5-15	male rat-clear evidence; female rat-no evidence; male mice-no evidence; female mice-no evidence		Group 3 Monograph 73, 1999

Medical Conditions Recognized as Being Aggravated by Exposure: None known.

4. FIRST AID MEASURES

Ingestion: If swallowed, DO NOT induce vomiting. Keep individual calm. Obtain medical attention.
Inhalation: None reasonably foreseeable.
Skin Contact: Flush with copious amounts of water.
Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point °F(C°): >200°F
Recommended Extinguishing Media: Carbon dioxide, Water, Foam
Special Fire-Fighting Procedures: No special procedures.
Hazardous Products of Combustion: None anticipated
Unusual Fire/Explosion Hazards: None.

Lower Explosive Limit: Not determined.
Upper Explosive Limit: Not determined.

Product Name: FAST ORANGE SMOOTH CREAM
14OZ TUB

Item No: 33013

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Rinse away with water or wipe up with a towel.

7. HANDLING AND STORAGE

Storage: Hand cleaner should be stored at temperatures between 40 degrees F. and 100 degrees F.

Handling: Follow all general safety precautions. Keep from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Not required.
Skin: Not necessary.
Ventilation: None needed.
Respiratory Protection: Not normally necessary.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White cream
Odor: Orange odor.
Boiling Point: 212°F
pH: 7.0
Solubility in Water: SOLUBLE
Specific Gravity: 0.98
VOC(Wt.%): 7.9%
Vapor Pressure: Not Determined
Vapor Density (Air=1): Heavier than air
Evaporation Rate: <1 (butyl acetate = 1)

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal conditions
Hazardous Polymerization: Will not occur.
Incompatibilities: None known
Conditions to Avoid: Freezing.
Hazardous Products of Combustion: None anticipated

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Dispose of uncontaminated material through sewer system with permission of the authority responsible for that system.

US EPA Waste Number: NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

Ground Transport (DOT)

DOT Shipping Name: Not Regulated
Hazard Class: None
UN/ID Number: None

IATA

Proper Shipping Name: Not regulated
Class or Division: None
UN/ID Number: None

IMDG

Proper Shipping: Not regulated
Hazard Class: None
UN Number: None

Product Name: FAST ORANGE SMOOTH CREAM
14OZ TUB

Item No: 33013

Marine Pollutant: None

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

NONE

California Proposition 65: No California Prop 65 chemicals are known to be present.

TSCA Inventory Status: All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 1, FLAMMABILITY 1, REACTIVITY 0.

Estimated HMIS Classification: HEALTH 1, FLAMMABILITY 1, PHYSICAL HAZARD 0

NFPA is a registered trademark of the National Fire Protection Assn.

HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared By: Denise Boyd, Manager-Environmental, Health & Safety
Company: Permatex, Inc. 10 Columbus Blvd. Hartford, CT USA 06106

Revision Date: January 12, 2010

Revision Number: 6

Telephone No.: 1-87-Permatex (877) 376-2839

Material Safety Data Sheet

MSDS#: 224-18

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Sanford Corporation
2711 Washington Boulevard
Bellwood, IL 60104

Telephone Number: 1-800-323-0749
Initiated By: Susan Nyborg
Date of Last Revision: June 1, 2001
Medical Emergency No: 1-800-228-5635

Section One: Product Identification

Product Name Expo_R 2 Cleaner for Dry Erase Surfaces

Colors: Clear

Sanford Corporation is a member of The Art and Creative Materials Institute, Inc. This product is certified by the Institute to be labeled in accordance with the voluntary chronic hazard labeling standard ASTM D4236 and is labeled with the CL Cautionary Label Seal. Products bearing the CL Seal are certified to be properly labeled in a program of toxicological evaluation by a medical expert for any known health risks and with information on the safe and proper use of these materials. Conforms to ASTM D4236.

Section Two: Composition

Water, isopropyl alcohol (67-63-0), n-propoxypropanol (1569-01-3), fragrances, surfactants

Section Three: Physical and Chemical Characteristics

	For isopropanol:
Boiling Point:	180 ^o F at 760 mm Hg
Vapor Pressure (mm Hg):	33 mm Hg at 68 ^o F
Specific Gravity:	0.78 at 77 ^o F
Solubility in Water:	Miscible mixture
Appearance and Odor:	Clear liquid; lemon odor (for mixture)
Evaporation Rate:	7.7 (ethyl ether = 1)

Section Four: Fire and Explosion Hazard Data

Flash Point (Method Used):	110 ^o F (TCC) for mixture
Flammability Limits (% by volume):	Lower: 2.5% for isopropanol Upper: Not available
Extinguishing Medium:	As appropriate for surrounding area.
Special Fire Fighting Procedures:	N/A
Unusual Fire and Explosion Hazards:	N/A

Section Five: Reactivity Data

Stability:	Stable
Conditions to Avoid:	Avoid extreme heat and flame.
Chemical Incompatibility:	None known
Hazardous Decomposition:	None known
Hazardous Polymerization:	Will not occur.

Section Six: Health Hazard Data

Chemicals Listed as Carcinogens or Potential Carcinogen:

IARC Monographs:	No
National Toxicology Program:	No
OSHA Regulated:	No

WARNING: MAY BE HARMFUL IF SWALLOWED. EYE IRRITANT. CONTAINS: 1-PROPOXY-2-PROPANOL.
 PRECAUTIONS: Avoid ingestion. Keep away from eyes. KEEP OUT OF REACH OF CHILDREN. FIRST AID: If eye contact occurs, rinse with tap water for 5-10 minutes. If irritation persists, seek medical care. If swallowed, get prompt medical attention. For further health information, contact a poison control center or call 1-800-228-5635.

Section Seven: Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spill:	Wipe up with absorbent material.
Waste Disposal Method:	Dispose in accordance with Federal, State, and Local Regulations.
Precautions to Be Taken in Handling and Storage:	Use in a well-ventilated area.
Other Precautions:	Aim nozzle away from eyes.

Section Eight: Personal Protection and Exposure Control Measures

Eye Protection:	None under normal use conditions. Avoid eye contact.
Skin Protection:	None under normal use conditions. Avoid prolonged skin contact.
Respiratory Protection:	None under normal use conditions.
Ventilation:	Use in a well-ventilated area.
Protective Clothing:	None under normal use conditions.

HMIS Code	
Health	1
Flammability	2
Reactivity	0
Personal Protection	N/A

Sanford Corporation has been advised by council that the OSHA Hazard Communication Standard does not apply to the Sanford product described in this MSDS. The reason for the exemption is contained in 29 CFR 1910.1200 (b)(6)(ix), as amended July 1, 1994, per the Code of Federal Regulations. The information contained in this MSDS is forwarded to you for your information, but is not meant to imply that the product is covered by the Hazard Communication Standard, nor is the MSDS meant to comply with all the requirements of the Hazard Communication Standard.

0 = Minimal / 4 = Severe Hazard

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Material Safety Data Sheet



Revision Number: 005.5

Issue date: 12/22/2010

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Permatex[®] Medium Strength Threadlocker Blue
Product type: Anaerobic Sealant
Company address: Henkel Corporation
 One Henkel Way
 Rocky Hill, Connecticut 06067

IDH number: 303074
Item number: 24240
Region: United States
Contact information:
 Telephone: 860.571.5100
 MEDICAL EMERGENCY Phone: Poison Control Center
 1-877-671-4608 (toll free) or 1-303-692-1711
 TRANSPORT EMERGENCY Phone: CHEMTREC
 1-800-424-9300 (toll free) or 1-703-527-3887
 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW	
Physical state: Liquid	HEALTH: *2
Color: Blue	FLAMMABILITY: 1
Odor: Mild	PHYSICAL HAZARD: 1
WARNING: CAUSES EYE IRRITATION. MAY CAUSE SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. MAY CAUSE RESPIRATORY TRACT IRRITATION.	Personal Protection: See MSDS Section 8

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: May cause respiratory tract irritation.
Skin contact: May cause allergic skin reaction. May cause skin irritation.
Eye contact: Contact with eyes will cause irritation.
Ingestion: Not expected to be harmful by ingestion.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Polyglycol dimethacrylate	25852-47-5	60 - 100
Oleic acid 5.5EO	9004-96-0	10 - 30
Saccharin	81-07-2	1 - 5
Silica, amorphous, fumed, crystal-free	112945-52-5	1 - 5
Cumene hydroperoxide	80-15-9	1 - 5
Propanediol-1,2	57-55-6	1 - 5
Titanium dioxide	13463-67-7	0.1 - 1

4 FIRST AID MEASURES

Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Keep warm and quiet. Get medical attention.
Skin contact:	Wash with soap and water. Remove contaminated clothing and footwear. Wash clothing before reuse. If symptoms develop and persist, get medical attention.
Eye contact:	Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Get medical attention.
Ingestion:	Do not induce vomiting. Keep individual calm. Get medical attention.

5 FIRE FIGHTING MEASURES

Flash point:	> 93.3 °C (> 199.94 °F) Tagliabue closed cup
Flame projection:	Not applicable
Autoignition temperature:	Not determined
Flammable/Explosive limits - lower:	2.6 % (propylene glycol)
Flammable/Explosive limits - upper:	12.5 % (propylene glycol)
Extinguishing media:	Foam, dry chemical or carbon dioxide.
Special firefighting procedures:	None
Unusual fire or explosion hazards:	None
Hazardous combustion products:	Oxides of carbon. Oxides of sulfur. Oxides of nitrogen. Irritating organic vapours.

6 ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not allow product to enter sewer or waterways.
Clean-up methods:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Store in a partly filled, closed container until disposal.

7 HANDLING AND STORAGE

Handling:	Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling.
Storage:	For safe storage, store at or below 38 °C (100.4 °F) Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Polyglycol dimethacrylate	None	None	None	None
Oleic acid 5.5EO	None	None	None	None
Saccharin	None	None	None	None
Silica, amorphous, fumed, crystal-free	10 mg/m3 TWA Inhalable dust. 3 mg/m3 TWA Respirable fraction.	20 MPPCF TWA 0.8 mg/m3 TWA	None	None
Cumene hydroperoxide	None	None	1 ppm (6 mg/m3) TWA (SKIN)	None
Propanediol-1,2	None	None	10 mg/m3 TWA Aerosol.	None
Titanium dioxide	10 mg/m3 TWA	15 mg/m3 TWA Total dust.	None	None

Engineering controls: No specific ventilation requirements noted, but forced ventilation may still be required if concentrations exceed occupational exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Use impermeable gloves and protective clothing as necessary to prevent skin contact. Neoprene gloves. Butyl rubber gloves. Natural rubber gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Blue
Odor:	Mild
Odor threshold:	Not available
pH:	Not applicable
Vapor pressure:	< 5 mm hg (27 °C (80.6 °F))
Boiling point/range:	> 149 °C (> 300.2 °F)
Melting point/ range:	Not available
Specific gravity:	1.1 at 23.9 °C (75.02 °F)
Vapor density:	Not available
Flash point:	> 93.3 °C (> 199.94 °F) Tagliabue closed cup
Flame projection:	Not applicable
Flammable/Explosive limits - lower:	2.6 % (propylene glycol)
Flammable/Explosive limits - upper:	12.5 % (propylene glycol)
Autoignition temperature:	Not determined
Evaporation rate:	Not available
Solubility in water:	Slight
Partition coefficient (n-octanol/water):	Not available
VOC content:	4.48 %; 49.3 g/l EPA Method 24

10. STABILITY AND REACTIVITY

Stability: Stable

Hazardous reactions: Will not occur.

Hazardous decomposition products: Oxides of carbon. Oxides of sulfur. Oxides of nitrogen. Irritating organic vapours.

Incompatible materials: Strong oxidizing agents. Free radical initiators. Strong reducing agents. Alkalis. Oxygen scavengers. Other polymerization initiators. Copper. Iron. Zinc. Aluminum. Rust.

Conditions to avoid: See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10).

11. TOXICOLOGICAL INFORMATION

Acute oral product toxicity: LD50 (rat) > 10,000 mg/kg

Acute dermal product toxicity: LD50 (rabbit) > 5,000 mg/kg

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Polyglycol dimethacrylate	No	No	No
Oleic acid 5.5EO	No	No	No
Saccharin	No	No	No
Silica, amorphous, fumed, crystal-free	No	No	No
Cumene hydroperoxide	No	No	No
Propanediol-1,2	No	No	No
Titanium dioxide	No	Group 2B	No

Hazardous components	Health Effects/Target Organs
Polyglycol dimethacrylate	Irritant, Allergen
Oleic acid 5.5EO	Irritant
Saccharin	No Target Organs
Silica, amorphous, fumed, crystal-free	Nuisance dust
Cumene hydroperoxide	Allergen, Central nervous system, Corrosive, Irritant, Mutagen
Propanediol-1,2	Irritant
Titanium dioxide	Irritant, Respiratory, Some evidence of carcinogenicity

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The shipping classifications in this sections are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification:	None above reporting de minimus
CERCLA/SARA Section 302 EHS:	None above reporting de minimus
CERCLA/SARA Section 311/312:	Immediate Health, Delayed Health
CERCLA/SARA 313:	This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Cumene hydroperoxide (CAS# 80-15-9).
California Proposition 65:	This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDL Status:	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
WHMIS hazard class:	D.2.A, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Kyra Kozak Woods, Manager, Regulatory Affairs

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 www.us.lindegas.com

MATERIAL SAFETY DATA SHEET

No. 005

PRODUCT NAME Argon	CAS # 7440-37-1
TRADE NAME AND SYNONYMS Argon Gas	DOT I.D. No.: UN 1006
	DOT Hazard Class: Division 2.2
CHEMICAL NAME AND SYNONYMS Argon, compressed (D.O.T.)	Formula Ar
	Chemical Family: Rare Gas
ISSUE DATES AND REVISIONS Revised January 1995	

HEALTH HAZARD DATA

<p>TIME WEIGHTED AVERAGE EXPOSURE LIMIT Argon is defined as a simple asphyxiant (ACGIH 1994-1995). No PEL (8 Hr. TWA) is listed by OSHA (1993).</p>
<p>SYMPTOMS OF EXPOSURE Effects of exposure to high concentrations so as to displace the oxygen in air necessary for life may include any, all, or none of the following: • Loss of balance or dizziness • Tightness in the frontal area of the forehead (Continued on Page 4)</p>
<p>TOXICOLOGICAL PROPERTIES Argon is nontoxic but the liberation of a large amount in a confined area could displace the amount of oxygen in air necessary to support life. Argon is not listed in the IARC, NTP or by OSHA as a carcinogen or potential carcinogen. Persons in ill health where such illness would be aggravated by exposure to argon should not be allowed to work with or handle this product.</p>
<p>RECOMMENDED FIRST AID TREATMENT PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO ARGON. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS. Inhalation: Conscious persons should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Unconscious persons should be moved to an uncontaminated area, given assisted respiration and supplemental oxygen. Further treatment should be symptomatic and supportive.</p>

Information contained in this material safety data sheet is offered without charge for use by technically qualified personnel at their discretion and risk. All statements, technical information and recommendations contained herein are based on tests and data which we believe to be reliable, but the accuracy or completeness thereof is not guaranteed and no warranty of any kind is made with respect thereto. This information is not intended as a license to operate under or a recommendation to practice or infringe any patent of this Company or others covering any process, composition of matter or use. Since the Company shall have no control of the use of the product described herein, the Company assumes no liability for loss or damage incurred from the proper or improper use of such product.

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES

None

PHYSICAL DATA

BOILING POINT -302.6°F (-185.9°C)	LIQUID DENSITY AT BOILING POINT 87 lb/ft ³ (1393 kg/m ³)
VAPOR PRESSURE @ 70°F (21.1°C) = Above the critical temperature of -188.1°F (-122.3°C)	GAS DENSITY AT 70°F, 1 atm .1034 lb/ft ³ (1.656 kg/m ³)
SOLUBILITY IN WATER Very slightly	FREEZING POINT -308.9°F (-189.4°C)
EVAPORATION RATE N/A(Gas)	SPECIFIC GRAVITY (AIR=1) @ 70°F (21.1°C) = 1.38
APPEARANCE AND ODOR Colorless, odorless gas	

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) N/A	AUTO IGNITION TEMPERATURE N/A	FLAMMABLE LIMITS % BY VOLUME (See Page 4) LE N/A UEL N/A
EXTINGUISHING MEDIA Nonflammable, inert gas		ELECTRICAL CLASSIFICATION Nonhazardous
SPECIAL FIRE FIGHTING PROCEDURES None		
UNUSUAL FIRE AND EXPLOSION HAZARDS If cylinders are involved in a fire, safely relocate or keep cool with water spray.		

REACTIVITY DATA

STABILITY Unstable		CONDITIONS TO AVOID None
Stable	X	
INCOMPATIBILITY (Materials to avoid) None		
HAZARDOUS DECOMPOSITION PRODUCTS None		
HAZARDOUS POLYMERIZATION May Occur		CONDITIONS TO AVOID None
Will Not Occur	X	

SPILL OR LEAK PROCEDURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Evacuate all personnel from a affected area. Use appropriate protective equipment. If leak is in container or container valve, contact your closest supplier location or call the emergency telephone number listed herein.

WASTE DISPOSAL METHOD

Do not attempt to dispose of waste or unused quantities. Return in the shipping container properly labeled, with any valve outlet plugs or caps secured and valve protection cap in place to your supplier. For emergency disposal assistance, contact your closest supplier location or call the emergency telephone number listed herein

SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)		Positive pressure air line with mask or self-containerbreathing apparatus should be available for emergency use.	
VENTILATION See Local Exhaust	LOCAL EXHAUST See Page 4	SPECIAL	N/A
	MECHANICAL (Gen.) N/A	OTHER	N/A
PROTECTIVE GLOVES Any Material			
EYE PROTECTION Safety goggles or glasses			
OTHER PROTECTIVE EQUIPMENT Safety shoes			

SPECIAL PRECAUTIONS*

SPECIAL LABELING INFORMATION			
DOT Shipping Name:	Argon, compressed	DOT Hazard Class:	Division 2.2
DOT Shipping Label:	Nonflammable Gas	I.D. No.:	UN 1006
SPECIAL HANDLING RECOMMENDATIONS			
Protect cylinders from physical damage. Store in cool, dry, well-ventilated area away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 125°F (52°C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in - first out" inventory system to prevent full cylinders being stored for excessive periods of time.			
For additional recommendations, consult Compressed Gas Association's Pamphlets P- 1, P-9, P-14, and Safety Bulletin SB-2.			
SPECIAL STORAGE RECOMMENDATIONS			
Protect cylinders from physical damage. Store in cool, dry, well-ventilated area away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 125°F (52°C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in - first out" inventory system to prevent full cylinders being stored for excessive periods of time.			
For additional recommendations, consult Compressed Gas Association's Pamphlets P- 1, P-9, P-14, and Safety Bulletin SB-2.			
SPECIAL PACKAGING RECOMMENDATIONS			
Argon is noncorrosive and may be used with any common structural material.			
OTHER RECOMMENDATIONS OR PRECAUTIONS			
Compressed gas cylinders should not be refilled except by qualified producers of compressed gases. Shipment of a compressed gas cylinder which has not been filled by the owner or with his (written) consent is a violation of Federal Law (49CFR).			
(Continued on Page 4)			

*Various Government Agencies (i.e. Department of Transportation, Occupational Safety and Health Administration, Food and Drug Administration and others) may have specific regulations concerning the transportation, handling, storage or use of this product which will not be reflected in this data sheet. The customer should review these regulations to ensure that he is in full compliance.

Argon

HEALTH HAZARD DATA

TIME WEIGHTED AVERAGE EXPOSURE LIMIT: (Continued)

Oxygen levels should be maintained at greater than 18 Molar percent at normal atmospheric pressure ($pO_2 > 135$ torr).

SYMPTOMS OF EXPOSURE: (Continued)

- Tingling in the tongue, fingertips or toes
- Weakened speech leading to the inability to utter sounds
- Rapid reduction in the ability to perform movements
- Reduced consciousness of the surroundings
- Loss of tactile sensations
- Heightened mental activity

It should be recognized that it is possible that none of the above symptoms may occur in argon asphyxia so that there are no definite warning symptoms.

SPECIAL PROTECTION INFORMATION

LOCAL EXHAUST:

To prevent accumulation of high concentrations so as to reduce the oxygen level in the air to less than 18 molar percent.

SPECIAL PRECAUTIONS

OTHER RECOMMENDATIONS OR PRECAUTIONS: (Continued)

Always secure cylinders in an upright position before transporting them. NEVER transport cylinders in trunks of vehicles, enclosed vans, truck cabs or in passenger compartments. Transport cylinders secured in open flatbed or in open pick-up type vehicles.

Reporting under SARA, Title III, Section 313 not required.

NFPA 704 No. for gaseous argon = 1 0 0 None

BUILDING 326 (GR NANO MATERIALS)

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

Date 06/19/13 Time: 1:25

Address: 401 Alexander Ave. Building 326 Tacoma, WA 98421

Building Owner: Port of Tacoma

Occupant Name: GR Nano Materials

Contact Name: Aaron Halsted Telephone (home): Telephone (work): Cell: 253-217-8910

How long has owner/tenant/occupant/resident occupied building? 1.5 years

Occupation: Lab work/admin.

Number of Occupants Adults: 8 Ages: 30-65 Children: Ages:

BUILDING CONSTRUCTION CHARACTERISTICS:

Building Use: Residential Commercial/Industrial X School/Institutional

Building Type: One story X Two storey Apartment (# of units) Condominium (# of units) Other

General Description of Building Construction Materials: Brick, Siding, Wood, Stone, Stucco, Metal, Other Metal Siding/wood frame

Year Constructed: 1911

GARAGE: Do you have an attached garage? Yes No

Has the building been weatherized with any of the following? Insulation, Storm Windows, Energy-Efficient Windows, Other (specify) NA

What type of basement does the building have?

Table with 5 columns: None, Finished, Unfinished, Depth below reference point (meters), and a row for Crawl space.

Number of floors at or above grade: 0

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

Depth of basement below grade: ____ ft. Basement Size: _____ ft²
Foundation construction: Poured concrete Cinder block Stone
Any visual evidence of leakage through basement walls or floor
Floor Construction: Poured concrete Wood Earth Brick Other: ____
Floor condition (cracks, drains): No Cracks
Condition at floor/wall joint (if visible): good condition
Any exterior openings from the basement: NA
 Vents
 Fans
 Windows
 Wall openings
 Utility pipe penetrations
 Other: _____
Type of ground cover outside of building: grass / concrete / asphalt / other (specify): _____
Sub-slab vapor/moisture barrier in place? Yes / No /Don't know
Type of barrier: _____
Do you have a sump?: Yes No
Where: _____
If yes, sealed open NA
If yes, is there water in the sump?: Yes No NA
Is building serviced with municipal water? Yes No
Do you have a water well?: Yes No Don't know
Well location:
Do you drink the water obtained from the well? NA _____
What do you use the well for?: NA _____
Do you have a cistern?: Yes No
If yes, describe its location: NA _____
Do you have a septic system?: Yes No If Yes is it still active Yes No
If yes, describe its location: _____
If yes, describe how septic system is cleaned: _____
Have there ever been a fire in the building?: Yes No
If yes, describe its location and extent: _____
Is there a laundry room located inside the house?: Yes No
If yes, describe its location: _____

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

Is there a Radon System in the building: Yes No

HEATING AND VENTILATION SYSTEM(S) PRESENT:

What type of heating system(s) is/are used in the building?

<input checked="" type="checkbox"/> Hot Air Circulation	<input type="checkbox"/> Heat Pump	<input type="checkbox"/> Steam Radiation	<input type="checkbox"/> Wood Stove
<input type="checkbox"/> Hot Air Radiation	<input type="checkbox"/> Unvented Kerosene heater	<input type="checkbox"/> Electric Baseboard	<input type="checkbox"/> Other (specific)

Where are they located Roof

Is there outside air vent for heating system? Yes

What type(s) of fuel(s) are used in this building?

<input checked="" type="checkbox"/> Natural Gas	<input type="checkbox"/> Electric	<input type="checkbox"/> Coal	<input type="checkbox"/> Other (specific) Propane
<input type="checkbox"/> Fuel Oil	<input type="checkbox"/> Wood	<input type="checkbox"/> Solar	

What type of mechanical ventilation systems are present and/or currently operating in the building? Chrome welding fumes

<input checked="" type="checkbox"/> Central Air Conditioning	<input type="checkbox"/> Mechanical Fans	<input type="checkbox"/> Bathroom Ventilation
<input type="checkbox"/> Fan	<input type="checkbox"/> Kitchen Range Hood	<input type="checkbox"/> Open Windows
<input type="checkbox"/> Individual Air Conditioning Units	<input type="checkbox"/> Air-to-Air Heat Exchanger	<input type="checkbox"/> Other (specify)

Where are they located? Roof

Do you have a fireplace? Yes No

Does the fireplace have an outside combustion air vent? Yes No

SOURCES OF CHEMICAL CONTAMINANTS

- When was the last time dry-cleaned clothes were brought into the building?
 0 to 5 days ago 6 to 10 days ago More than 10 days ago Don't dry-clean
- How recently were the carpets installed?
 In the last six months More than six months ago No Carpet
- When was the last time the carpet was cleaned?

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

In the last six months More than six months ago Never

4. Was there any recent remodeling or painting done in the building?

Yes No Details: _____

5. Are there any pressed wood products in the building (e.g., hardwood plywood wall paneling, particleboard, fiberboard)? No

6. Are there any new upholstery, drapes, or textiles in the building? No

7. Do you have any spot removers in the building?

Yes No Details: _____

8. Are there any hobbies include model building, arts and crafts, model railroading, or others that require paints, thinners, or glue undertaken in the building?

Yes No Details: _____

9. Do you perform automotive or other vehicle maintenance or repair within the building (e.g., attached garage)?

Yes No Details: _____

10. Which of these items are present in the building? (Check all that apply)

<i>Potential VOC Source</i>	<i>Location of Source</i>	<i>Removed 48 hours prior to sampling? (Yes/No/NA)</i>
<input type="checkbox"/> Paints or paint thinners	Acetone/Latex paint	Yes
<input type="checkbox"/> Gas-powered equipment		
<input type="checkbox"/> Gasoline storage cans	Goop Off	Yes
<input type="checkbox"/> Cleaning solvents		
<input type="checkbox"/> Air fresheners		
<input type="checkbox"/> Oven cleaners		
<input type="checkbox"/> Carpet/upholstery cleaners		Yes
<input type="checkbox"/> Hairspray		
<input type="checkbox"/> Nail polish/polish remover		
<input type="checkbox"/> Bathroom cleaner		Yes
<input type="checkbox"/> Appliance cleaner		
<input type="checkbox"/> Furniture/floor polish		Yes
<input type="checkbox"/> Moth balls		
<input type="checkbox"/> Fuel Tank		
<input type="checkbox"/> Wood stove		
<input type="checkbox"/> Fireplace		
<input type="checkbox"/> Perfume/colognes		
<input type="checkbox"/> Hobby supplies (e.g., solvents, paints,		

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

lacquers, glues, photographic darkroom chemicals)
 Scented trees, wreaths, potpourri, etc.
 Other Paint/exterior
 Other
 Other
 Other

11. Do you have pesticides in the building?

Yes No Unsure

12. Do you have any spray insecticides in the building?

Yes No Unsure

13. Have you painted any area of the interior of the building in the last 12 months?

Yes No

If yes, please indicate what paint you used

Enamel Vinyl Latex Other

14. Have you painted the exterior of the building in the last 12 months? Yes No

If yes, please indicate what paint you used

Enamel Vinyl Latex Other

15. Where are paint, thinner, pesticides, insecticides stored?

	<i>Paint</i>	<i>Thinner</i>	<i>Pesticides</i>	<i>Insecticides</i>
Garage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Basement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storage shed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (Sink)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I don't store these items in the building

16. Have you purchased one of the following items in the last 12 months?

Rubberized door mat Computer Wiring
 Plastic shower curtain Printer Linoleum
 Wood stains or paint VCR

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

17. Do you have a computer printer in the building?

Yes No

18. Do you have a VCR etc in the building?

Yes No

19. Do you use cleaners to maintain your VCR?

Yes No

If yes, what type? _____

20. Are there any pets in the building?

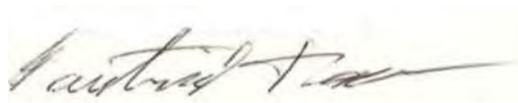
Yes No

If yes, what type? _____Dogs_____

If yes, number _____1_____

21. Does anyone in the smoke in the building? Yes No

22. Questions asked by Occupant that require follow-up.



Signature and Printed Name of Conducting the Survey

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Klean-Strip Acetone

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HEALTH		1
FLAMMABILITY		3
PHYSICAL HAZ.		0
PPE		



Printed: 12/30/2008
Revision: 11/13/2008
Supersedes Revision: 03/13/2006
Date Created: 05/18/2005

1. Product and Company Identification

Product Code: 1640.1
Product Name: Klean-Strip Acetone
Reference #: 1640.1
Manufacturer Information
Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113
Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892
Web site address: www.wmbarr.com
Preparer Name: W.M. Barr EHS Department (901)775-0100
Synonyms

CAC18, DAC18, GAC18, GAC718, QAC18, QAC18L, QAC718, QAC18L

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA PEL	ACGIH TWA	ACGIH STEL
1. Acetone	67-64-1	100.0 %	1000 ppm	500 ppm	750 ppm

3. Hazards Identification

Emergency Overview

Danger! Extremely Flammable. Keep away from heat, sparks, flame and all other sources of ignition. Vapors may cause flash fire or ignite explosively. Vapors may travel long distances to other areas and rooms away from the work site. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition anywhere in the structure, dwelling, or building during use and until all vapors are gone from the work site. Keep away from electrical outlets and switches. Beware of static electricity that may be generated by synthetic clothing and other sources.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic)

Inhalation Acute Exposure Effects:

Vapor harmful. May cause dizziness, headache, watering of eyes, irritation of respiratory tract, drowsiness, nausea, and numbness in fingers, arms and legs.

Skin Contact Acute Exposure Effects:

May cause drying of skin, and numbness in fingers and arms. Liquid is absorbed readily.

Eye Contact Acute Exposure Effects:

This material is an eye irritant.

Ingestion Acute Exposure Effects:

Harmful if swallowed. May cause dizziness, headache, nausea, and irritation of the mouth, throat, and stomach.

Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other

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physiological damage. May cause weakness, fatigue, skin irritation, and numbness in hands and feet.

Signs and Symptoms Of Exposure

Primary Routes of Exposure:

Inhalation, ingestion, and dermal.

Medical Conditions Generally Aggravated By Exposure

Skin, eye, lung (asthma-like conditions)

4. First Aid Measures

Emergency and First Aid Procedures

Inhalation:

If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be reached.

Skin Contact:

Wash with soap and water.

Eye Contact:

Flush with large quantities of water for at least 15 minutes and seek immediate medical attention.

Ingestion:

Call your poison control center, hospital emergency room, or physician immediately for instructions.

Note to Physician

Call your local poison control center for further instructions.

5. Fire Fighting Measures

Flammability Classification:

Class IB

Flash Pt:

-4.00 F Method Used: TAG Closed Cup

Explosive Limits:

LEL: 2.5 % at 77.0 F UEL: 13.0 % at 77.0 F

Autoignition Pt:

869.00 F

Fire Fighting Instructions

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards

Extremely Flammable!

Hazardous Combustion Products

carbon monoxide, carbon dioxide

Extinguishing Media

Use carbon dioxide, dry powder, or foam.

Unsuitable Extinguishing Media

No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Clean Up:

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area. For small spills, take up liquid with sand, earth, or other noncombustible absorbent material and place in a container for disposal. For large spills, dike far ahead of spill and use sand, earth, or other noncombustible absorbent material and then place material in a container for disposal.

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Waste Disposal:

Dispose in accordance with applicable local, state, and federal regulations.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations.

Do not reuse the container.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.

Eye Protection

Safety glasses, chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear chemical resistant gloves suited for use with acetone. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

Other Protective Clothing

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure.

Engineering Controls (Ventilation etc.)

Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or your experience slight dizziness, headache, nausea, or eye-watering - STOP - ventilation is inadequate. Leave area immediately.

Work/Hygienic/Maintenance Practices

A source of clean water should be available in the work area for flushing eyes and skin.

Do not eat, drink, or smoke in the work area.

Wash hands thoroughly after use.

Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use.

Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

9. Physical and Chemical Properties

Physical States:	[] Gas [X] Liquid [] Solid
Melting Point:	No data.
Boiling Point:	> 131.00 F
Autoignition Pt:	869.00 F
Flash Pt:	-4.00 F Method Used: TAG Closed Cup
Explosive Limits:	LEL: 2.5 % at 77.0 F UEL: 13.0 % at 77.0 F
Specific Gravity (Water = 1):	0.789
Density:	6.572 LB/GA at 77.0 F
Vapor Pressure (vs. Air or mm Hg):	213 MM HG at 77.0 F

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Vapor Density (vs. Air = 1): No data.
Evaporation Rate (vs Butyl Acetate=1): No data.
Solubility in Water: No data.
Percent Volatile: 100.0 % by weight.
Corrosion Rate: No data.
pH: No data.

Appearance and Odor

Clear colorless liquid with a characteristic ketone odor.

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

May form explosive mixtures with chromic anhydride, chromyl alcohol, hexachloromelamine, hydrogen peroxide, permonosulfuric acid, potassium tertbutoxide, and thioglycol. Strong oxidizers.

Hazardous Decomposition Or Byproducts

Decomposition may produce carbon monoxide, carbon dioxide, and other asphyxiants.

Hazardous Polymerization: Will occur [] Will not occur [X]

Conditions To Avoid - Hazardous Polymerization

No data available.

11. Toxicological Information

LD50 Rat oral 10.7 mL/kg (=8450 mg/kg bw); acetone given by gastric intubation to groups of five non-fasted Carworth-Wistar female rats
LD50 Rat oral 9800 mg/kg/ bw
LD50 Rat oral 5800 mg/kg bw
LD50 Mouse oral 3000 mg/kg bw
LD50 Rabbit oral 5340 mg/kg bw
LC50 Rat inhalation exposure 76 mg/L/4 hr
LC50 Rat inhalation 50.1 mg/L/8 hr
LD50 Rabbit dermal 20 mg/kg bw
LD50 Rabbit dermal 20,000 mg/kg bw
LD50 Mouse ip 1,297 mg/kg bw
LD50 Rat iv 5500 mg/kg bw
LD50 Mouse oral 5.2 g/kg

Carcinogenicity/Other Information

No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Acetone	67-64-1	n.a.	n.a.	A4	n.a.

12. Ecological Information

No data available.

13. Disposal Considerations

Waste Disposal Method

Dispose in accordance with applicable local, state and federal regulations.

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Supercedes Revision: 03/13/2006

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name Acetone

DOT Hazard Class: 3
DOT Hazard Label: FLAMMABLE LIQUID
UN/NA Number: UN1090
Packing Group: II

Additional Transport Information

For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

The supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Acetone	67-64-1	No	Yes 5000 LB	No	Yes

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

Sec.302: EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.

Sec.304: EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.

Sec.313: EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.

Sec.110: EPA SARA 110 Superfund Site Priority Contaminant List

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

Yes No Acute (immediate) Health Hazard
 Yes No Chronic (delayed) Health Hazard
 Yes No Fire Hazard
 Yes No Sudden Release of Pressure Hazard
 Yes No Reactive Hazard

16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.



MATERIAL SAFETY DATA SHEET

Date stamp: 26-May-2006

MSDS Ref. No.: 043206027-1

Revision Number: 0

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: ORTHO® Season-Long MAX Weed & Grass Killer Plus Preventer Concentrate
Description: Herbicide

Company
The Scotts Company, L.L.C.
14111 Scottslawn Road
Marysville, OH 43041

24-HOUR EMERGENCY TELEPHONE NUMBERS:
CHEMTREC (U.S.): 1-800-424-9300
CHEMTREC (International): 1-703-527-3887
Non-Emergency Calls: 1-937-644-0011

EPA Registration No.: 239-2694
Formula No.: S11758

2. HAZARDS IDENTIFICATION

Labelling

Signal word: CAUTION

Precautionary Statement
Avoid contact with eyes, skin, and clothing. Causes moderate eye irritation. Wash with soap and water after handling. Keep out of reach of children.

Potential health effects

Eye contact: Irritating to eyes.

Skin contact: Irritating to skin.

Ingestion: Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Inhalation: Inhalation of aerosols may cause irritation to mucous membranes.

Aggravated Medical Conditions: Inhalation may aggravate asthma. Pre-existing dermatitis or sores.

Principle routes of exposure: Skin, Eyes, Inhalation

Target organ effects: Irritation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No	Weight %
Oxyfluorfen	42874-03-3	1.5
Diquat dibromide	85-00-7	0.1
Glyphosate	1071-83-6	8
Other Ingredients	No CAS#	90.4

Comments: Contains petroleum distillates.

4. FIRST AID MEASURES

Eye contact: Hold eye open and rins slowly and gently with water for 15-20 minutes. Remove contact lenses, if present after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice

Skin contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice

Ingestion: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person

Inhalation: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice

Notes to physician: Do not induce vomiting; contains petroleum distillates and/or aromatic solvents. Aspiration may cause pulmonary oedema and pneumonitis.

5. FIRE-FIGHTING MEASURES

Revision date:

Page 1 of 4

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50/oral: >5.0 g/kg, rat
LD50/dermal: >5.0 g/kg, rabbit
LC50/inhalation: >2.7 mg/L, (vapor), rat
Eye effects: Mild eye irritation, rabbit
Skin effects: Moderate skin irritation, rabbit
Sensitization: No sensitization, guinea pig

Chronic toxicity

Carcinogenic effects: The table below indicates whether each agency has listed any ingredient as a carcinogen.

Components	NTP:	IARC:	OSHA:
Oxyfluorfen	Not listed	Not listed	Not listed
Diquat dibromide	Not listed	Not listed	Not listed
Glyphosate	Not listed	Not listed	Not listed
Other Ingredients	Not listed	Not listed	Not listed

Ingestion: Ingestion may cause irritation to mucous membranes.
Inhalation: May cause irritation of respiratory tract.
Target organ effects: Irritation.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects: No data is available on the product itself.
Persistence and degradability: Inherently biodegradable.
Bioaccumulative potential: Not determined.
Mobility: Water contaminating.
Aquatic toxicity: Toxic to aquatic invertebrates.
Additional ecological information: Do not apply to water. Do not contaminate water by cleaning of equipment or disposal of wastes.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods: If partially filled, call the local solid waste agency or 1-800-CLEANUP for disposal instructions. Do not place product down any indoor or outdoor drain.
Contaminated packaging: Do not re-use empty containers. If empty, place in trash or offer for recycling if available.

14. TRANSPORT INFORMATION

The description shown may not apply to all situations. Consult 49 CFR, or appropriate dangerous goods regulations for additional description requirements (e.g. technical name) and mode-specific or quantity-specific shipping requirements.

DOT
Proper shipping name: Not DOT regulated

15. REGULATORY INFORMATION

Components	CAS-No	CERCLA/SARA 313	CERCLA/SARA 302
Oxyfluorfen	42874-03-3	Not Listed	Not Listed
Diquat dibromide	85-00-7	1000 lb final RQ 454 kg final RQ	Not Listed
Glyphosate	1071-83-6	Not Listed	Not Listed
Other Ingredients	No CAS#	Not Listed	Not Listed

General Information Contact local authorities for disposal of large quantities of product

16. OTHER INFORMATION

16. OTHER INFORMATION

NFPA: Health: 2 Flammability: 1 Reactivity: 0

HMIS: Health: 2 Flammability: 1 Reactivity: 0

Hazard Rating: 0=Least; 1-Slight; 2=Moderate; 3=High; 4=Severe

EPA FIFRA Comment: Use of this product is regulated by the U.S. Environmental Protection Agency (EPA) through the approved product label. It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

General comment: This document contains health, safety, and environmental information useful to emergency response agencies, health care providers, manufacturers, and workers/employees. It does not replace the precautionary language, use directions, or the storage and disposal information found on the product label.

Additional Information: This information contained herein is, to the best of Scott's knowledge and belief, accurate and reliable as of the date of preparation of this document. However, no warranty or guarantee, express or implied, is made as to the accuracy or reliability, and Scotts shall not be liable for any loss or damage arising out of the use thereof. No authorization is given or implied to use any patented invention without a license. In addition, Scotts shall not be liable for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name	Unger Pro Formula Window Cleaner
Synonym(s)	964000 - Gallon 0400 - Quart
CAS #	Mixture
Product use	Glass cleaner
Manufacturer	Unger Industrial, LLC 425 Asylum Street Bridgeport, CT 06610 US Phone: (203) 336-3344 Fax: (203) 336-2644 Phone: Toll Free: (800) 833-6100 Emergency Phone: (203) 366-4884

2. Hazards Identification

Emergency overview	Non-hazardous by WHMIS/OSHA criteria.
Potential short term health effects	
Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Eyes	May cause irritation.
Skin	May cause irritation.
Inhalation	Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).
Ingestion	May cause stomach distress, nausea or vomiting.
Target organs	Eyes. Skin.
Chronic effects	Prolonged or repeated exposure to dilutions can cause drying, defatting and dermatitis.
Signs and symptoms	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
OSHA Regulatory Status	This product is NOT known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
Potential environmental effects	This product has not been tested.

3. Composition / Information on Ingredients

Composition comments	This product is considered non hazardous by WHMIS/OSHA criteria.
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4. First Aid Measures

First aid procedures	
Eye contact	Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.
Skin contact	Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.
Inhalation	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
Ingestion	Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
Notes to physician	Symptoms may be delayed.
General advice	Keep away from sources of ignition. No smoking. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties	Not flammable by WHMIS/OSHA criteria.
Extinguishing media	
Suitable extinguishing media	Fog. Foam. Carbon dioxide. Dry chemical.
Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Not available
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen.
Explosion data	
Sensitivity to mechanical impact	Not available
Sensitivity to static discharge	Not available

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Environmental precautions	Do not discharge into lakes, streams, ponds or public waters.
Methods for containment	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Remove sources of ignition. Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills in original containers for re-use.

7. Handling and Storage

Handling	Use good industrial hygiene practices in handling this material. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.
Storage	Keep out of reach of children. Do not store at temperatures above 120°F (49°C). Store in a closed container away from incompatible materials.

8. Exposure Controls / Personal Protection

Engineering controls	General ventilation normally adequate.
Personal protective equipment	
Eye / face protection	Wear safety glasses with side shields.
Hand protection	Rubber gloves. Confirm with a reputable supplier first.
Skin and body protection	As required by employer code.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance	Clear.
Color	Clear Green
Form	Liquid
Odor	pleasant
Odor threshold	Not available
Physical state	Liquid
pH	9.5 - 10.5
Melting point	Not available
Freezing point	Not available
Boiling point	< 212 °F (< 100.00 °C)

Pour point	Not available
Evaporation rate	Not available
Flash point	> 205 °F (> 96.11 °C) Tag Closed Cup
Auto-ignition temperature	Not available
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	1.004
Octanol/water coefficient	Not available
Solubility (H2O)	Complete
VOC (Weight %)	< 1 %
Viscosity	Water thin
Percent volatile	Not available

10. Stability and Reactivity

Reactivity	This product may react with strong acids.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Avoid high temperatures. Do not mix with other chemicals.
Incompatible materials	Acids. Oxidizers.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen.

11. Toxicological Information

Effects of acute exposure	
Eye	May cause irritation.
Skin	May cause irritation.
Inhalation	Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).
Ingestion	May cause stomach distress, nausea or vomiting.
Sensitization	Non-hazardous by WHMIS/OSHA criteria.
Chronic effects	Non-hazardous by WHMIS/OSHA criteria.
Carcinogenicity	Non-hazardous by WHMIS/OSHA criteria.
Mutagenicity	Non-hazardous by WHMIS/OSHA criteria.
Reproductive effects	Non-hazardous by WHMIS/OSHA criteria.
Teratogenicity	Non-hazardous by WHMIS/OSHA criteria.
Name of Toxicologically Synergistic Products	Not available

12. Ecological Information

Ecotoxicity	Not available
Persistence / degradability	Not available
Bioaccumulation / accumulation	Not available
Mobility in environmental media	Not available
Environmental effects	Not available
Aquatic toxicity	Not available
Partition coefficient	Not available
Chemical fate information	Not available
Other adverse effects	Not available

13. Disposal Considerations

Disposal instructions	Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14. Transport Information

U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

Transportation of Dangerous Goods (TDG - Canada)

Not regulated as dangerous goods.

15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS status Not Controlled

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical No

US Federal regulations

This product is NOT known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA (Superfund) reportable quantity

Formaldehyde: 100.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

Clean Air Act (CAA) Not available

Clean Water Act (CWA) Not available

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Inventory name

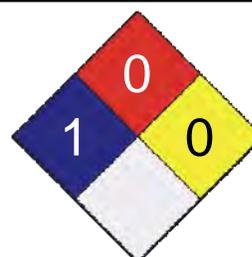
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	/ 1
Flammability	0
Physical Hazard	0
Personal Protection	B



Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date

30-Mar-2011

Effective date

31-Mar-2011

Expiry date

31-Mar-2014

Prepared by

Dell Tech Laboratories Ltd. (519) 858-5021

Other information

For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: GOO GONE
Product Code: GG89,GG89ST
Supplier: THE HOMAX GROUP, INC
Address: 200 WESTERLY ROAD
BELLINGHAM, WA 98226
Telephone: (800) 321-6330 M-F, 9-5 EST
Emergency: CHEMTREC 24 HR (800) 424-9300
Date: MAY 16, 2011

SECTION 2 – COMPOSITION, INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>Percent</u>	<u>CAS #</u>
Distillates (petroleum), hydrotreated light	< 95	64742-47-8
Tripropylene glycol methyl ether	1 – 10	25498-49-1
Citrus extracts blend	1 – 10	94266-47-4 / 8028-48-6

*The ingredients in the balance of this product do not contribute significant hazards beyond those described in this document. All pertinent health, safety and environmental information has been presented, per the requirements of the US Federal OSHA Hazard Communication Standard (29CFR 1910.1200).

SECTION 3 – HAZARDS IDENTIFICATION

Potential Health Effects:

Acute Effects:

Eye: Causes eye irritation.

Skin: Contact may cause irritation. Prolonged or repeated contact may cause drying or cracking.

Ingestion: Symptoms may include headache, nausea, drowsiness, pneumonitis, pulmonary edema, central nervous system depression, convulsions and loss of consciousness. **ASPIRATION HAZARD.** Harmful or fatal if aspirated into lungs.

Inhalation: May cause headache, nausea, drowsiness, central nervous system depression, convulsions and loss of consciousness.

Chronic Effects:

Carcinogenicity: No components listed by IARC, NTP, or OSHA as carcinogens.

SECTION 4 - FIRST AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and seek medical attention.

Skin: Immediately flush with mild soap and water for 15 minutes. Seek medical attention if irritation develops. Remove contaminated clothing and launder before reuse.

Eye: Immediately flush with water for 15 minutes. Seek medical attention.

Ingestion: **Do not** induce vomiting. Get immediate medical care.

MATERIAL SAFETY DATA SHEET

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point: 186 F (86 C)

Autoignition Temperature : > 450 F

Extinguishing Media: Foam, carbon dioxide, and dry chemical.

Special Fire Fighting Procedures: Evacuate personnel to a safe area. Keep containers cool with water spray. Avoid breathing decomposition products. Wear self-contained breathing apparatus and full body protection.

Hazardous Decomposition Products: Thermal decomposition includes oxides of carbon and other asphyxiants.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedure: Evacuate area and turn off all sources of ignition. Ventilate area. Wear appropriate personal protective equipment, including appropriate respiratory protection. Contain spill if possible. Wipe up or absorb on suitable material and shovel up. Prevent entry into sewers and waterways. Avoid contact with skin, eyes or clothing. Dispose of collected material in accordance with federal, state and local requirements.

SECTION 7 – HANDLING AND STORAGE

Store in original container. Keep container tightly closed when not in use and in an upright position. Do not store at elevated temperatures and away from incompatible materials. For industrial use only.

SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls: Not normally required. Insure general dilution ventilation is adequate.

Respiratory protection: Not normally required. Avoid breathing vapor or spray mists.

Eye protection: Use chemical goggles or glasses with side shields.

Skin protection: Use chemical resistant gloves.

Other protective clothing or equipment: Eye wash, Safety Shower, Full Protective Clothing.

Work Hygienic Practices: The usual precaution for the handling of chemicals must be observed.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Yellow liquid
Odor:	Citrus
Specific Gravity (H₂O = 1):	0.8
Solubility In Water:	Negligible
Vapor Pressure:	No data available
Vapor Density:	No data available
Boiling Point:	> 430 F
pH:	No applicable
VOC:	2% by CARB Definition for Consumer Products

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable.

Conditions to Avoid: Sources of ignition.

Incompatible Materials: Avoid contact with oxidizers.

Hazardous Decomposition Products: Thermal decomposition includes oxides of carbon and other asphyxiants.

Hazardous Polymerization: Will not occur.

MATERIAL SAFETY DATA SHEET

SECTION 11 - TOXICOLOGICAL INFORMATION

THIS PRODUCT WAS NOT TESTED. THE FOLLOWING IS COMPONENT DATA:

Distillates (petroleum), hydrotreated light (64742-47-8): Acute Ingestion Toxicity: LD50 > 15000 mg/kg

SECTION 12 – ECOLOGICAL INFORMATION

THIS PRODUCT WAS NOT TESTED. THE FOLLOWING IS COMPONENT DATA:

Distillates (petroleum), hydrotreated light (64742-47-8):

ECOTOXICITY

Material -- Not expected to be harmful to aquatic organisms.

Material -- Not expected to demonstrate chronic toxicity to aquatic organisms.

MOBILITY

Material -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY

Biodegradation: Material -- Expected to be readily biodegradable.

Hydrolysis: Material -- Transformation due to hydrolysis not expected to be significant.

Photolysis: Material -- Transformation due to photolysis not expected to be significant.

Atmospheric Oxidation: Material -- Expected to degrade rapidly in air

SECTION 13 – DISPOSAL CONSIDERATIONS

Follow federal, provincial or state and local government requirements for disposal.

SECTION 14 - TRANSPORT INFORMATION

U.S. DOT (Road or Rail):

Not Regulated

AIR / WATER / INTERNATIONAL TRANSPORT:

No data available

SECTION 15 - REGULATORY INFORMATION

SARA 302 Chemicals: None of the ingredients are listed.

SARA 313 Chemicals: None of the ingredients are listed.

Toxic Substances Control Act (TSCA): All the ingredients are listed on the inventory

Canadian Domestic Substance List (DSL): All ingredients are listed.

California Prop. 65 Components: None

OSHA & WHMIS: MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) and Canadian WHMIS regulations (Controlled Products Regulations under the Hazardous Products Act).

SECTION 16 - OTHER INFORMATION

HMIS RATING: HEALTH: 1 FLAMMABILITY: 2 REACTIVITY: 0

THIS PRODUCT IS SOLD TO CONSUMERS FOR HOUSEHOLD USE IN CONTAINERS OF RELATIVELY SMALL VOLUME (I.E. 5 GALLON OR LESS IN SIZE). THIS MSDS HAS BEEN DEVELOPED TO ADDRESS SAFETY

MATERIAL SAFETY DATA SHEET

CONCERNS AFFECTING THOSE INDIVIDUALS WORKING IN WAREHOUSES AND OTHER PLACES WHERE LARGE NUMBERS OF THESE CONTAINERS ARE STORED, AS WELL AS THOSE AFFECTING POTENTIAL USERS OF THIS PRODUCT IN INDUSTRIAL /OCCUPATIONAL SETTINGS. ALL PERTINENT HEALTH, SAFETY AND ENVIRONMENTAL INFORMATION HAVE BEEN PRESENTED IN THIS DOCUMENT, PER THE REQUIREMENTS OF THE US FEDERAL OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200) AND CANADIAN WHMIS.

DISCLAIMER: THIS INFORMATION IS PROVIDED IN GOOD FAITH BUT WITHOUT EXPRESS OR IMPLIED WARRANTY. BUYER ASSUMES ALL RESPONSIBILITY FOR SAFETY AND USE NOT IN ACCORDANCE WITH LABEL INSTRUCTIONS. JUDGEMENTS AS TO THE SUITABILITY OF INFORMATION HEREIN FOR THE INDIVIDUAL'S OWN USE OR PURPOSES ARE NECESSARILY THE INDIVIDUAL'S OWN RESPONSIBILITY. ALTHOUGH REASONABLE CARE HAS BEEN TAKEN IN THE PREPARATION OF SUCH INFORMATION, AS MANUFACTURER OR DISTRIBUTOR, WE EXTEND NO WARRANTIES, MAKE NO REPRESENTATIONS, AND ASSUME NO RESPONSIBILITY AS TO THE ACCURACY OR SUITABILITY OF SUCH INFORMATION FOR APPLICATION TO THE INDIVIDUAL'S PURPOSES OR THE CONSEQUENCES OF ITS USE.

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



PLEDGE® WOOD FLOOR CLEANER

Version 1.3

Print Date 06/24/2010

Revision Date 06/24/2010

MSDS Number 350000003590
350000015445
SITE_FORM Number
30000000000000002930.001

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Trade name : PLEDGE® WOOD FLOOR CLEANER

Use of the Substance/Mixture : Floor Polish/Cleaner

Company : S.C. Johnson and Son, Limited
1 Webster Street
Brantford ON N3T 5R1

Emergency telephone : 24 Hour Transport & Medical Emergency Phone (866) 231-5406
24 Hour International Emergency Phone (952) 852-4647
24 Hour Canadian Transport Emergency Phone (CANUTEC) (613) 996-6666

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance / Odor : clear / liquid / pleasant

Immediate Concerns : No adverse effects expected when used as directed.

Potential Health Effects

Exposure routes : Eye, Skin, Inhalation, Ingestion.

Eyes : No adverse effects expected when used as directed.

Skin : No adverse effects expected when used as directed.

Inhalation : No adverse effects expected when used as directed.

Ingestion : May cause abdominal discomfort.

Aggravated Medical Condition : None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product does not contain hazardous chemicals at or above reportable levels as defined by OSHA 29 CFR 1910.1200 or the Canadian Controlled Products Regulations.

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



PLEDGE® WOOD FLOOR CLEANER

Version 1.3

Print Date 06/24/2010

Revision Date 06/24/2010

MSDS Number 350000003590
350000015445
SITE_FORM Number
30000000000000002930.001

4. FIRST AID MEASURES

- Eye contact : Rinse with plenty of water. Get medical attention if irritation develops and persists.
- Skin contact : Rinse with plenty of water.
- Inhalation : No special requirements
- Ingestion : No special requirements

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Specific hazards during fire fighting : Container may melt and leak in heat of fire.
- Further information : Fight fire with normal precautions from a reasonable distance. Standard procedure for chemical fires. Wear full protective clothing and positive pressure self-contained breathing apparatus.
- Flash point : Note: does not flash
- Lower explosion limit : Note: no data available
- Upper explosion limit : Note: no data available

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : No special precautions required.
- Environmental precautions : Outside of normal use, avoid release to the environment.
- Methods for cleaning up : Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Dike large spills. Clean residue from spill site.

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



PLEDGE® WOOD FLOOR CLEANER

Version 1.3

Print Date 06/24/2010

Revision Date 06/24/2010

MSDS Number 350000003590
350000015445
SITE_FORM Number
30000000000000002930.001

7. HANDLING AND STORAGE

Handling

Advice on safe handling : Use only as directed.
KEEP OUT OF REACH OF CHILDREN AND PETS.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Storage

Requirements for storage areas and containers : Keep container closed when not in use.
Keep in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

ACGIH or OSHA exposure limits have not been established for this product or reportable ingredients unless noted in the table above.

Personal protective equipment

Respiratory protection

Industrial setting : No personal respiratory protective equipment normally required.

Household setting : No special requirements.

Hand protection : No special requirements.

Eye protection

Industrial setting : No special requirements.

Household setting : No special requirements.

Skin and body protection : No special requirements.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



PLEDGE® WOOD FLOOR CLEANER

Version 1.3

Print Date 06/24/2010

Revision Date 06/24/2010

MSDS Number 350000003590
350000015445
SITE_FORM Number
30000000000000002930.001

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	liquid
Color	:	clear
Odor	:	pleasant
pH	:	9.0 - 10.0
Melting point	:	no data available
Boiling point	:	212 °F
Freezing point	:	32 °F
Flash point	:	does not flash
Evaporation rate	:	no data available
Autoignition temperature	:	not applicable
Lower explosion limit	:	no data available
Upper explosion limit	:	no data available
Vapour pressure	:	no data available
Density	:	1 g/cm ³
Water solubility	:	completely soluble
Partition coefficient: n-octanol/water	:	no data available
Volatile Organic Compounds (California Air Resource Board – CARB) Total VOC (wt. %)	:	0.1 % - does not include any applicable regulatory exemptions

10. STABILITY AND REACTIVITY

Conditions to avoid	:	None known.
Materials to avoid	:	Strong acids

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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Hazardous decomposition products : Thermal decomposition can lead to release of irritating gases and vapours.

Hazardous reactions : Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50
estimated
> 5,000 mg/kg

Acute inhalation toxicity : no data available

Acute dermal toxicity : no data available

Chronic effects

Carcinogenicity : no data available

Mutagenicity : no data available

Reproductive effects : no data available

Teratogenicity : no data available

Sensitisation : Not known to be a sensitizer.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects : no data available

13. DISPOSAL CONSIDERATIONS

Observe all applicable Federal, Provincial and State regulations and Local/Municipal ordinances regarding disposal.
Consumer may discard empty container in trash, or recycle where facilities exist.

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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RCRA waste class : Non-hazardous waste

14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/receiving documents for up-to-date shipping information.

Land transport

▪ **U.S. DOT and Canadian TDG Surface Transportation:**

Proper shipping name not regulated
Class: None.
UN/ID No.: None.
Packaging group None.

Sea transport

▪ **IMDG:**

Proper shipping name not regulated
Class: None.
UN/ID No.: None.
Packaging group None.

Air transport

▪ **ICAO/IATA:**

Proper shipping name not regulated
Class: None.
UN/ID No.: None.
Packaging group None.

15. REGULATORY INFORMATION

Notification status : All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Notification status : All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

California Prop. 65 : This product is not subject to the reporting requirements under California's Proposition 65.
: This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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16. OTHER INFORMATION

HMIS Ratings

Health	0
Flammability	0
Reactivity	0

NFPA Ratings

Health	0
Fire	0
Reactivity	0
Special	

Further information

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

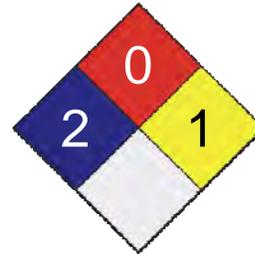
Prepared by:	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)
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1. Product and Company Identification

Product Name RESOLVE® MAX (formerly SPRAY'N WASH®) - Trigger/Refill
UPC CODES Refer to Section 16
CAS # Mixture
Product use Stain remover
Distributed by Reckitt Benckiser
 Morris Corporate Center IV
 399 Interpace Parkway
 P.O. Box 225
 Parsippany, NJ 07054-0225
 In Case of Emergency: 1-800-228-4722
 Transportation Emergencies: 24 Hour Number:
 North America: CHEMTREC: 1-800-424-9300
 Outside North America: 1-703-527-3887

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	/ 2
Flammability	0
Physical Hazard	1
Personal Protection	B



2. Hazards Identification

Emergency overview WARNING
 EYE AND SKIN IRRITANT.
 MAY BE HARMFUL IF SWALLOWED.
 Do not get in eyes, on skin or ingest.
 May be severely irritating to eyes.
 Wash hands after use.
 DO NOT treat garments while wearing.

 KEEP OUT OF REACH OF CHILDREN.

Potential short term health effects

Routes of exposure Eye, Skin contact, Inhalation, Ingestion.
Eyes May be severe eye irritant (raw materials information).
Skin Skin irritant. (raw materials information).
 Not expected to be a skin sensitizer.
Inhalation None expected during normal conditions of use.
Ingestion May be harmful by ingestion. (Oral LD 500-5000 mg/kg) (raw materials information).

Target organs Eyes. Respiratory system. Skin.
Chronic effects The finished product is not expected to have chronic health effects.
Signs and symptoms Symptoms may include redness, edema, drying, defatting and cracking of the skin.
 Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Alcohols, C12-16, ethoxylated	68551-12-2	2.5 - 10
Benzenesulfonic acid, C10-16-alkyl derivatives	68584-22-5	2.5 - 10
Hydrogen peroxide	7722-84-1	2.5 - 10
Sodium cumenesulfonate	28348-53-0	1 - 2.5

4. First Aid Measures

First aid procedures

Eye contact	If in eyes, IMMEDIATELY rinse eyes with plenty of water. Remove any contact lenses and continue rinsing eyes for at least 15 minutes. If irritation persists get medical attention.
Skin contact	If on skin, wash with soap and water. If irritation develops, get medical attention.
Inhalation	Move person to fresh air. If the person feels unwell, call a physician or Poison Control Center.
Ingestion	If swallowed, rinse mouth and drink a glass of water. Call a physician or Poison Control Centre.
Notes to physician	Symptoms may be delayed.
General advice	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties	Not flammable by OSHA criteria. (based on raw material data)
Extinguishing media	
Suitable extinguishing media	Treat for surrounding material.
Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Not available
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of carbon.
Explosion data	
Sensitivity to mechanical impact	Not available
Sensitivity to static discharge	Not available

6. Accidental Release Measures

Personal precautions	Avoid contact with eyes. Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Methods for containment	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills in original containers for re-use.

7. Handling and Storage

Handling	WARNING. EYE AND SKIN IRRITANT. May be severely irritating to eyes. MAY BE HARMFUL IF SWALLOWED. Do not get in eyes, on skin or ingest. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.
Storage	Keep out of reach of children. Store in a closed container away from incompatible materials. Store in a cool dry place inaccessible to children and pets.

8. Exposure Controls / Personal Protection

Exposure limits	
Ingredient(s)	Exposure Limits
Alcohols, C12-16, ethoxylated	ACGIH-TLV Not established OSHA-PEL Not established
Benzenesulfonic acid, C10-16-alkyl derivatives	ACGIH-TLV Not established OSHA-PEL Not established
Hydrogen peroxide	ACGIH-TLV TWA: 1 ppm OSHA-PEL TWA: 1 ppm
Sodium cumenesulfonate	ACGIH-TLV Not established OSHA-PEL Not established
Engineering controls	General ventilation normally adequate.
Personal protective equipment	
Eye / face protection	Not normally required under normal use conditions. When handling in large quantities or responding to emergency situations, the use of appropriate eye protection is recommended. Emergency responders should wear full eye and face protection.
Hand protection	No special requirements under normal use conditions. For sensitive skin or prolonged use, wear rubber gloves. Emergency responders should wear impermeable gloves.
Skin and body protection	As required by employer code. Emergency responders should wear impermeable clothing and footwear when responding to a situation where contact with the liquid is possible.
Respiratory protection	Not normally required under normal use conditions. Emergency responders should wear self-contained breathing apparatus (SCBA) to avoid inhalation of vapours generated by this product during a spill or other clean-up operations.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Washing with soap and water after use is recommended as good hygienic practice to prevent possible eye irritation from hand contact.

9. Physical and Chemical Properties

Appearance	Clear.
Color	Colorless
Form	Liquid
Odor	Perfume
Odor threshold	Not available
Physical state	Liquid
pH	3.5 ± 0.5 (as is)
Freezing point	Not available
Boiling point	Not available
Pour point	Not available
Evaporation rate	Not available
Flash point	Not available
Auto-ignition temperature	Not available

Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	1.005 - 1.015
Octanol/water coefficient	Not available
Solubility (H2O)	High
Viscosity	<1000 (CPs, 20°C)

10. Stability and Reactivity

Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	DO NOT MIX WITH BLEACH or use in conjunction with other household products.
Incompatible materials	Oxidizers. Caustics.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
Alcohols, C12-16, ethoxylated	Not available
Benzenesulfonic acid, C10-16-alkyl derivatives	Not available
Hydrogen peroxide	Not available
Sodium cumenesulfonate	Not available

Component analysis - Oral LD50

Ingredient(s)	LD50
Alcohols, C12-16, ethoxylated	1380 mg/kg rat
Benzenesulfonic acid, C10-16-alkyl derivatives	530 mg/kg rat
Hydrogen peroxide	75 mg/kg rat; 2000 mg/kg mouse
Sodium cumenesulfonate	7000 mg/kg rat

Effects of acute exposure

Eye	May be severe eye irritant (raw materials information).
Skin	Skin irritant. (raw materials information). Not expected to be a skin sensitizer.
Inhalation	None expected during normal conditions of use.
Ingestion	May be harmful by ingestion. (Oral LD 500-5000 mg/kg) (raw materials information).
Sensitization	The finished product is not expected to have chronic health effects.
Chronic effects	The finished product is not expected to have chronic health effects.
Carcinogenicity	The finished product is not expected to have chronic health effects.

ACGIH - Threshold Limit Values - Carcinogens

Hydrogen peroxide 7722-84-1 A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

IARC - Group 3 (Not Classifiable)

Hydrogen peroxide 7722-84-1 Monograph 71 [1999]; Supplement 7 [1987]; Monograph 36 [1985]

Mutagenicity	The finished product is not expected to have chronic health effects.
Reproductive effects	The finished product is not expected to have chronic health effects.
Teratogenicity	The finished product is not expected to have chronic health effects.
Synergistic Materials	Not available

12. Ecological Information

Ecotoxicity Contained surfactants are ultimate aerobically biodegradable according to method OECD 301.

Ecotoxicity - Freshwater Algae - Acute Toxicity Data

Hydrogen peroxide	7722-84-1	72 Hr EC50 Chlorella vulgaris: 2.5 mg/L
Sodium cumenesulfonate	28348-53-0	72 Hr EC50 Desmodesmus subspicatus: >1000 mg/L

Ecotoxicity - Freshwater Fish - Acute Toxicity Data

Benzenesulfonic acid, C10-16-alkyl derivatives	68584-22-5	96 Hr LC50 Oncorhynchus mykiss: 3 mg/L [static]
Hydrogen peroxide	7722-84-1	96 Hr LC50 Pimephales promelas: 16.4 mg/L; 96 Hr LC50 Lepomis macrochirus: 18-56 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 10.0-32.0 mg/L [static]

Ecotoxicity - Water Flea - Acute Toxicity Data

Benzenesulfonic acid, C10-16-alkyl derivatives	68584-22-5	48 Hr EC50 Daphnia magna: 2.9 mg/L
Hydrogen peroxide	7722-84-1	24 Hr EC50 Daphnia magna: 7.7 mg/L; 48 Hr EC50 Daphnia magna: 18 - 32 mg/L [Static]
Sodium cumenesulfonate	28348-53-0	24 Hr EC50 Daphnia magna: >1000 mg/L

Environmental effects	Not available
Aquatic toxicity	Not available
Persistence / degradability	Not available
Bioaccumulation / accumulation	Not available
Partition coefficient	Not available
Mobility in environmental media	Not available
Chemical fate information	Not available

13. Disposal Considerations

Waste codes	Not available
Disposal instructions	Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14. Transport Information

UN/ID N.o.	Not applicable
U.S. Department of Transportation (DOT): Classification:	Not regulated
Proper shipping name	Not applicable
U.S. DOT Hazard Class	Not applicable
Subsidiary Risk	Not applicable
Packing group	Not applicable
DOT RQ (lbs)	Not applicable
ERG NO	Not applicable

Transportation of Dangerous Goods (TDG - Canada): Classification: Not regulated

Proper shipping name Not applicable
Status Not applicable
Packing group Not applicable

IMDG (Marine Transport): Classification: Not regulated

Proper shipping name Not applicable
Class Not applicable
Subsidiary Risk Not applicable
Packing group Not applicable
IMDG Page Not applicable
Marine pollutant Not applicable
EMS Not applicable
MFAG Not applicable
Maximum Quantity Not applicable

IATA/ICAO (Air): Classification: Not regulated

Proper shipping name Not applicable
Class Not applicable
Subsidiary Risk: Not applicable
Packing group Not applicable
Maximum Quantity Not applicable

15. Regulatory Information

US Federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Product Registration: Product is compliant with CPSC regulatory guidelines; a specific registration is not required for this product.

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

Hydrogen peroxide 7722-84-1 1000 Lb EPCRA RQ (concentration >52%)

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

Hydrogen peroxide 7722-84-1 1000 Lb TPQ (concentration >52%)

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	Yes
Clean Air Act (CAA)	Not available
Clean Water Act (CWA)	Not available
State regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances

Hydrogen peroxide 7722-84-1 Present

U.S. - Massachusetts - Right To Know List

Hydrogen peroxide 7722-84-1 Extraordinarily hazardous

U.S. - Minnesota - Hazardous Substance List

Hydrogen peroxide 7722-84-1 Present (includes Hydrogen Peroxide [90%])

U.S. - New Jersey - Right to Know Hazardous Substance List

Hydrogen peroxide 7722-84-1 sn 1015

U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

Hydrogen peroxide 7722-84-1 1 Lb RQ (air); 1 lb RQ (land/water)

U.S. - Ohio - Extremely Hazardous Substances - Threshold Quantities

Hydrogen peroxide 7722-84-1 500 Lb TQ (concentration >52%)

U.S. - Pennsylvania - RTK (Right to Know) List

Hydrogen peroxide 7722-84-1 Environmental hazard (concentration >52%)

U.S. - Rhode Island - Hazardous Substance List

Hydrogen peroxide 7722-84-1 Toxic; Flammable

U.S. - Texas - Tier II Chemical Reporting - Extremely Hazardous Substances - Reportable Quantities

Hydrogen peroxide 7722-84-1 1000 Lb RQ

U.S. - Texas - Tier II Chemical Reporting - Extremely Hazardous Substances - Threshold Planning Quantities

Hydrogen peroxide 7722-84-1 1000 Lb TPQ (concentration >52%)

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

Disclaimer

This product should only be used as directed on the label and for the purpose intended. To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Further information

62338-82843 - 32 oz. - RESOLVE® MAX (formerly SPRAY'N WASH®) - Refill - 0129047
62338-81268 - 16 oz. - RESOLVE® MAX (formerly SPRAY'N WASH®) - Trigger - 0129047
62338-80966 - 12 oz. - RESOLVE® MAX (formerly SPRAY'N WASH®) - Trigger - 0129047

Issue date

23-Aug-2010

Effective date

15-Aug-2010

Prepared by

Reckitt Benckiser Regulatory Department 800-333-3899

Other information

For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



PLEDGE® FURNITURE POLISH - LEMON CLEAN

Version 2.0

Print Date 08/29/2011

Revision Date 06/10/2011

MSDS Number 350000003607
SITE_FORM Number
30000000000000002947.001

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Trade name : PLEDGE® FURNITURE POLISH - LEMON CLEAN

Use of the Substance/Mixture : Furniture Polish/Cleaner

Company : S.C. Johnson & Son, Inc.
1525 Howe Street
Racine WI 53403-2236

Emergency telephone number : 24 Hour Transport & Medical Emergency Phone (866) 231-5406
24 Hour International Emergency Phone (952) 852-4647

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance / Odor : white / aerosol / pleasant

Immediate Concerns

: Caution
Avoid contact with skin, eyes and clothing.
Keep away from heat, sparks and flame.
Contents under pressure.
Do not puncture or incinerate.
Do not store at temperatures above 120 Deg. F (50 Deg C), as container may burst.
May be harmful if swallowed.

Potential Health Effects

Exposure routes : Eye, Skin, Inhalation, Ingestion.

Eyes : May cause:
Mild eye irritation

Skin : No adverse effects expected when used as directed.

Inhalation : No adverse effects expected when used as directed.

Ingestion : Aspiration hazard if swallowed - can enter lungs and cause damage.

Aggravated Medical Condition : None known.

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous chemicals present at or above reportable levels as defined by OSHA 29 CFR 1910.1200 or the Canadian Controlled Products Regulations are listed in this table:

Chemical Name	CAS-No.	Weight percent
Naphtha, petroleum, light alkylate	64741-66-8	5.00 - 10.00
Butane	106-97-8	1.00 - 5.00
Propane	74-98-6	1.00 - 5.00
Isobutane	75-28-5	1.00 - 5.00

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

- Eye contact : Rinse with plenty of water. Get medical attention if irritation develops and persists.
- Skin contact : Rinse with plenty of water.
- Inhalation : Remove to fresh air. If breathing is affected, get medical attention.
- Ingestion : If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Specific hazards during fire fighting : Aerosol Product - Containers may rocket or explode in heat of fire. Container may melt and leak in heat of fire.
- Further information : Fight fire from maximum distance or protected area. Cool and use caution when approaching or handling fire-exposed containers. Wear full protective clothing and positive pressure self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.
- Flash point : < -7 °C
< 19.4 °F

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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Method: Tag Closed Cup (TCC)
Note: Propellant

Upper explosion limit : Note: no data available

NFPA Classification : NFPA Level 1 Aerosol

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Remove all sources of ignition.
Wear personal protective equipment.

Environmental precautions : Outside of normal use, avoid release to the environment.

Methods for cleaning up : Soak up with inert absorbent material.
If damage occurs to aerosol can:
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Sweep up and shovel into suitable containers for disposal.
Use only non-sparking equipment.
Dike large spills.
Clean residue from spill site.

7. HANDLING AND STORAGE

Handling

Advice on safe handling : Do not puncture or incinerate.
Avoid breathing vapors, mist or gas.
Do not spray toward face.
Do not use in areas without adequate ventilation.
Use only as directed.
KEEP OUT OF REACH OF CHILDREN AND PETS.

Advice on protection against fire and explosion : Keep away from heat and sources of ignition.

Storage

Requirements for storage areas and containers : Do not store at temperatures above 120 Deg. F (50 Deg C), as container may burst.
Keep in a dry, cool and well-ventilated place.

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components	CAS-No.	mg/m3	ppm	Non-standard units	Basis
Butane	106-97-8	-	1,000 ppm	-	ACGIH TWA
Propane	74-98-6	1,800 mg/m3	1,000 ppm	-	OSHA TWA
Propane	74-98-6	-	1,000 ppm	-	ACGIH TWA
Isobutane	75-28-5	-	1,000 ppm	-	ACGIH TWA

Personal protective equipment

Respiratory protection

Industrial setting : No personal respiratory protective equipment normally required.

Household setting : Use only with adequate ventilation.

Hand protection : No special requirements.

Eye protection

Industrial setting : No special requirements.

Household setting : Avoid contact with eyes.

Skin and body protection : No special requirements.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : aerosol

Color : white

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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Odor	:	pleasant
pH	:	not applicable
Boiling point	:	no data available
Freezing point	:	no data available
Flash point	:	< -7 °C < 19.4 °F Method: Tag Closed Cup (TCC) Propellant
Evaporation rate	:	no data available
Autoignition temperature	:	no data available
Upper explosion limit	:	no data available
Vapour pressure	:	no data available
Density	:	0.917 g/cm ³
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	no data available
Viscosity, dynamic	:	no data available
Volatile Organic Compounds (California Air Resource Board – CARB) Total VOC (wt. %)	:	17.1 % - does not include any applicable regulatory exemptions

10. STABILITY AND REACTIVITY

Conditions to avoid	:	Heat, flames and sparks.
Materials to avoid	:	Strong oxidizing agents
Hazardous decomposition products	:	Thermal decomposition can lead to release of irritating gases and vapours.
Hazardous reactions	:	Stable under recommended storage conditions.

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50 estimated > 20,000 mg/kg
Acute inhalation toxicity	:	LC50 estimated > 212 mg/l
Acute dermal toxicity	:	no data available
Chronic effects		
Carcinogenicity	:	no data available
Mutagenicity	:	no data available
Reproductive effects	:	no data available
Teratogenicity	:	no data available
Sensitisation	:	Not known to be a sensitizer.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects	:	no data available
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13. DISPOSAL CONSIDERATIONS

Observe all applicable Federal, Provincial and State regulations and Local/Municipal ordinances regarding disposal.
Consumer may discard empty container in trash, or recycle where facilities exist.

RCRA waste class	:	D001 (Ignitable Waste)
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Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



PLEDGE® FURNITURE POLISH - LEMON CLEAN

Version 2.0

Print Date 08/29/2011

Revision Date 06/10/2011

MSDS Number 350000003607

SITE_FORM Number

30000000000000002947.001

14. TRANSPORT INFORMATION

Land transport

▪ **U.S. DOT and Canadian TDG Surface Transportation:**

Proper shipping name UN 1950 AEROSOLS, Flammable, 2.1

Class: 2.1

UN number 1950

Packaging group: None.

Note: Limited quantities derogation may be applicable to this product, please check transport documents.

Sea transport

▪ **IMDG:**

Proper shipping name UN 1950 AEROSOLS, Flammable, 2.1

Class: 2

UN number: 1950

Packaging group: None.

EmS: F-D, S-U

Note: Limited quantities derogation may be applicable to this product, please check transport documents.

Air transport

▪ **ICAO/IATA:**

Proper shipping name UN 1950 AEROSOLS, Flammable, 2.1

Class: 2.1

UN/ID No.: UN 1950

Packaging group: None.

Note: SC Johnson typically does not ship products via air, therefore it has not been determined if the product container meets current IATA/ICAO package criteria. Refer to IATA/ICAO Dangerous Goods Regulations for detailed instructions when shipping this item by air.

15. REGULATORY INFORMATION

Notification status : All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Notification status : All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

California Prop. 65 : This product is not subject to the reporting requirements under California's Proposition 65.

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



PLEDGE® FURNITURE POLISH - LEMON CLEAN

Version 2.0

Print Date 08/29/2011

Revision Date 06/10/2011

MSDS Number 350000003607

SITE_FORM Number
30000000000000002947.001

: This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

HMIS Ratings

Health	0
Flammability	4
Reactivity	0

NFPA Ratings

Health	0
Fire	4
Reactivity	0
Special	

Further information

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by:	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)
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BUILDNG (\$+ (74589@A 5F-B 9)

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

Date March 7th 2014 Time: 10:30 am

Address: 401 Alexander Ave E, Tacoma WA 98421

Building Owner: Port of Tacoma

Occupant Name: Citadel Marine Center (Buildng 407)

Contact Name: Steve Friedley Telephone (work):253-426-2557

How long has owner/tenant/occupant occupied building? 5 years

Occupation: boat building and repair

Number of Occupants Adults: 12 Ages: 25-55 Children: Ages:

BUILDING CONSTRUCTION CHARACTERISTICS:

Building Use: Commercial/Industrial

Building Type: One story X Two storey Other

General Description of Building Construction Materials: Wood and Metal

Year Constructed: NA

GARAGE: Do you have an attached garage? Yes X No

Has the building been weatherized with any of the following? Insulation, Storm Windows, Energy-Efficient Windows, Other (specify)

What type of basement does the building have?

Table with 5 columns: None, X, Finished, Unfinished, Depth below reference point (meters). Rows: Partial, Full, Crawl space.

Number of floors at or above grade:

Depth of basement below grade: ft. Basement Size: ft²

Foundation construction: Poured concrete X Cinder block Stone

Any visual evidence of leakage through basement walls or floor

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

Floor Construction: Poured concrete Wood Earth Brick Other: _____

Floor condition (cracks, drains): Excellent

Condition at floor/wall joint (if visible): Some cracks _____

Any exterior openings from the basement: No basement

- Vents
- Fans
- Windows
- Wall openings
- Utility pipe penetrations
- Other: _____

Type of ground cover outside of building: grass / **concrete** / asphalt / other (specify): _____

Sub-slab vapor/moisture barrier in place? Yes / No / **Don't know**

Type of barrier: _____

Do you have a sump?: Yes No

Where: _____

If yes, sealed open NA

If yes, is there water in the sump?: Yes No

Is building serviced with municipal water? Yes No

Do you have a water well?: Yes No Don't know

Well location: _____

Do you drink the water obtained from the well? _____

What do you use the well for?: _____

Do you have a cistern?: Yes No

If yes, describe its location: _____

Do you have a septic system?: Yes No If Yes is it still active Yes No

If yes, describe its location: _____

If yes, describe how septic system is cleaned: _____

Have there ever been a fire in the building?: Yes No

If yes, describe its location and extent: _____

Is there a laundry room located inside the house?: Yes No

If yes, describe its location: _____

Is there a Radon System in the building: Yes No

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

HEATING AND VENTILATION SYSTEM(S) PRESENT:

What type of heating system(s) is/are used in the building?

Hot Air Circulation Heat Pump Steam Radiation Wood Stove
Hot Air Radiation Unvented Kerosene heater **Electric Baseboard** Other (specific)

Where are they located? Office _____

Is there outside air vent for heating system? No _____

What type(s) of fuel(s) are used in this building?

Natural Gas **Electric** Coal Other (specific)
Fuel Oil Wood Solar

What type of mechanical ventilation systems are present and/or currently operating in the building?

Central Air Conditioning Mechanical Fans Bathroom Ventilation
Fan **Kitchen Range Hood** **Open Windows**
Individual Air Conditioning Units Air-to-Air Heat Exchanger Other (specify)

Where are they located? Office _____

SOURCES OF CHEMICAL CONTAMINANTS

1. When was the last time dry-cleaned clothes were brought into the building?
 0 to 5 days ago 6 to 10 days ago More than 10 days ago Don't dry-clean
2. How recently were the carpets installed?
 In the last six months More than six months ago No Carpet
3. When was the last time the carpet was cleaned?
 In the last six months More than six months ago Never
4. Was there any recent remodeling or painting done in the building?
 Yes No Details: __office painted 2 years ago__

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

5. Are there any pressed wood products in the building (e.g., hardwood plywood wall paneling, particleboard, fiberboard)? Plywood wall on back of shop

6. Are there any new upholstery, drapes, or textiles in the building? No

7. Do you have any spot removers in the building?

Yes No Details: _____

8. Do you perform automotive or other vehicle maintenance or repair within the building (e.g., attached garage)?

Yes No Details: Boat repair

9. Which of these items are present in the building? (Check all that apply)

<i>Potential VOC Source</i>	<i>Location of Source</i>	<i>Removed 48 hours prior to sampling? (Yes/No/NA)</i>
-----------------------------	---------------------------	--

- Paints or paint thinners**
- Gas-powered equipment
- Gasoline storage cans**
- Cleaning solvents**
- Air fresheners**
- Oven cleaners**
- Carpet/upholstery cleaners
- Hairspray
- Nail polish/polish remover
- Bathroom cleaner**
- Appliance cleaner**
- Furniture/floor polish
- Moth balls
- Fuel tank
- Wood stove
- Fireplace
- Perfume/colognes
- Hobby supplies (e.g., solvents, paints, lacquers, glues, photographic darkroom chemicals)
- Scented trees, wreaths, potpourri, etc.
- Other
- Other
- Other
- Other

10. Do you have MSDS for the above referenced chemicals?

Yes No Unsure

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

11. Do you have pesticides in the building?

Yes X No Unsure

12. Do you have any spray insecticides in the building?

Yes X No Unsure

13. Have you painted any area of the interior of the building in the last 12 months?

Yes X No

If yes, please indicate what paint you used

X Enamel X Vinyl X Latex Other

14. Have you painted the exterior of the building in the last 12 months? Yes X No

If yes, please indicate what paint you used

Enamel Vinyl Latex Other

15. Where are paint, thinner, pesticides, insecticides stored?

	<i>Paint</i>	<i>Thinner</i>	<i>Pesticides</i>	<i>Insecticides</i>
Garage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Basement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storage shed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I don't store these items in the building

16. Have you purchased one of the following items in the last 12 months?

Rubberized door mat Computer Wiring
 Plastic shower curtain Printer Linoleum
 Wood stains or paint

17. Do you have a computer printer in the building?

X Yes No

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

18. Are there any pets in the building?

X Yes No

If yes, what type? _____

If yes, number _____

19. Questions asked by Occupant that require follow-up.



Patrick Domres

Signature and Printed Name of Conducting the Survey

-0

MATERIAL SAFETY DATA SHEET

Sales Order: {SalesOrd}

GRIPTEX 73013

MSDS Revision No:

MSDS Revision Date: 09/20/2004

AWLGRIP

Akzo Nobel Coatings
 Awlgrip North America
 2270 Morris Avenue
 P. O. Box 386
 Union, NJ 07083

**EMERGENCY
NUMBERS:**

(800) 424-9300

CHEMTREC (USA)

(703) 527-3887

CHEMTREC (Intl)

(800) 854-6813

Poison Control
Center**CUSTOMER SERVICE:**

(Non-Emergency)

(888) 355-3090

AWLGRIP (Phone)

(908) 686-1752

AWLGRIP (Fax)

1. GENERAL INFORMATION**Product Identity:** GRIPTEX 73013**Bulk Sales Reference No:** O73013

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
		OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	No Data Available

009003-07-0

Polypropylene
100% by Weight

Supplier: No Data Available
 OSHA,
 CAN: No Data Available
 Mexico: No Data Available
 Brazil: No Data Available

Source**Health Data**

NIOSH: No Data Available

Source**Carcinogen Data**

OSHA: Select Carcinogen: No

NTP: Known Carcinogen: No; Suspected Carcinogen: No

IARC: Group 1: No; Group 2A: No;
Group 2b: No; Group 3: Yes; Group 4: No

3. HAZARD IDENTIFICATION

Overview: Avoid contact with eyes, skin and clothing.

Inhalation: May be harmful or fatal if inhaled. Causes nose and throat irritation.

Eyes: Causes severe eye irritation. Avoid contact with eyes.

Skin: Causes skin irritation. May be harmful if absorbed through the skin.

Ingestion: Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.

Chronic Effects: Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient).

HMIS Rating: Health: Unknown Flammability: Unknown Reactivity: Unknown

4. FIRST AID MEASURES

General: Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin: In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.

Ingestion: If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Avoid breathing dust. Use a NIOSH approved respirator in accordance with 29CFR 1910.134 to remove particulates (and vapors if there is overexposure to vapors generated during the processing of this product). FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes:	Avoid contact with eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin/Hand:	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls:	Depending on the site-specific conditions of use, provide adequate ventilation.
Other Work Practices:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water. Avoid contact with eyes and clothing. Avoid prolonged or repeated contact with skin.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:	F: Not Determined C: Not Determined
Lower Explosive Limit (LEL):	? (%vol in air) at Normal Atmospheric Temp and Pressure
Fire and Explosion Hazards:	FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.
Fire Fighting Procedures:	Also Reference Emergency Response Guide Number: Not Determined

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid
pH:	Not Determined
Specific Gravity:	N/D
Boiling Point (F):	?
Vapor Density:	Not Applicable
VOC Content (lbs):	Refer to the Technical Data Sheet for this product.
Evaporation Rate:	Not Applicable

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:	Store between 32 and 120 F
Handling and Storage Precautions:	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Finely divided powders are potentially explosive when suspended in air. Isolate from heat, sparks, electrical equipment and open flame. Avoid contact with eyes, skin and clothing. Do not breathe dust. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:	No additional information provided for this product. See Section 2 for chemical specific data.
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11. ECOLOGICAL DATA

General:	No additional information provided for this product. See Section 2 for chemical specific data.
-----------------	--

12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures:	<p>ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.</p>
Public Safety:	<p>CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).</p> <p>Also, Reference Emergency Response Guide Number: Not Determined</p>

13. DISPOSAL CONSIDERATION

Waste Disposal:	Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).
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14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)
DOT Proper Shipping Name:	IMDG Proper Shipping Name:
DOT Hazard Class:	IMDG Hazard Class:
UN / NA Number:	UN Number:
DOT Packing Group:	IMDG Packing Group:
CERCLA/DOT RQ: Not Applicable gal. / Not Applicable lbs.	System Reference Code: NOT REGULATED

15. REGULATORY INFORMATION

The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

Regulatory Overview:

Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification: Not Determined

Regulatory List Product Ingredients on List

**DOT Marine Pollutants
(10%):**

(No Product
Ingredients Listed)

**DOT Severe Marine
Pollutants (1%):**

(No Product
Ingredients Listed)

**EPCRA 311/312
Chemicals and RQs
(>.1%):**

(No Product
Ingredients Listed)

**EPCRA 302 Extremely
Hazardous (>.1%):**

(No Product
Ingredients Listed)

**EPCRA 313 Toxic
Chemicals (>.1%):**

(No Product
Ingredients Listed)

**Mass RTK Substances
(>1%):**

(No Product
Ingredients Listed)

**Mass Extraordinarily
Haz Sub (>.01%):**

(No Product
Ingredients Listed)

**Penn RTK Substances
(>1%):**

(No Product
Ingredients Listed)

**Penn Special Hazardous
Substances (>.01%):**

(No Product
Ingredients Listed)

**Rhode Island Hazardous
Substances (>.1%):**

(No Product
Ingredients Listed)

Ingredients Listed)

RCRA Status (>.01%) :

(No Product

Ingredients Listed)

RTK Substances

(>0%) :

(No Product

Ingredients Listed)

N.J. Special Hazardous

Substances (>.01%) :

(No Product

Ingredients Listed)

N.J. Env. Hazardous

Substances (>.1%) :

(No Product

Ingredients Listed)

Proposition 65 -

Carcinogens (>0%):

(No Product

Ingredients Listed)

Proposition 65 - Female

Repro Toxins (>0%):

(No Product

Ingredients Listed)

Proposition 65 - Male

Repro Toxins (>0%):

(No Product

Ingredients Listed)

Proposition 65 -

Developmental Toxins

(>0%):

(No Product

Ingredients Listed)

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

MATERIAL SAFETY DATA SHEET

Sales Order: {SalesOrd}

D8008 ULTRA BUILD

MSDS Revision No: E1 -0
MSDS Revision Date: 03/26/2004



Akzo Nobel Coatings
Awlgrip North America
2270 Morris Avenue
P. O. Box 386
Union, NJ 07083

EMERGENCY NUMBERS:
(800) 424-9300 CHEMTREC (USA)
(703) 527-3887 CHEMTREC (Intl)
(800) 854-6813 Poison Control Center
CUSTOMER SERVICE: (Non-Emergency)
(888) 355-3090 AWLGRIP (Phone)
(908) 686-1752 AWLGRIP (Fax)

1. GENERAL INFORMATION

Product Identity: D8008 ULTRA BUILD

Bulk Sales Reference No: OD8008

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000108-10-1	Methylisobutyl ketone 10 - 25% by Weight	OSHA:	100 ppm TWA; 410 mg/m3 TWA75 ppm STEL; 300 mg/m3 STEL
		ACGIH:	50 ppm TWA75 ppm STEL
		NIOSH:	50 ppm TWA; 205 mg/m3 TWA75 ppm STEL; 300 mg/m3 STEL500 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	50 ppm TWAEV; 205 mg/m3 TWAEV75 ppm STEV; 305 mg/m3 STEV
		Mexico:	50 ppm TWA; 203 mg/m3 TWA75 ppm STEL; 307 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Irritation liver
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000108-88-3	Toluene 10 - 25% by Weight	OSHA:	200 ppm TWA 150 ppm STEL; 560 mg/m3 STEL
		ACGIH:	50 ppm TWA
		NIOSH:	100 ppm TWA; 375 mg/m3 TWA 150 ppm STEL; 560 mg/m3 STEL 500 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	50 ppm TWAEV; 376 mg/m3 TWAEV
		Mexico:	100 ppm TWA; 375 mg/m3 TWA
		Brazil:	78 ppm TWA; 290 mg/m3 TWA
		Source	Health Data
		NIOSH:	Central nervous system depressant
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No;		
	Group 2b: No; Group 3: Yes; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000108-95-2	Phenol 1.0 - 10% by Weight	OSHA:	5 ppm TWA; 19 mg/m3 TWA
		ACGIH:	5 ppm TWA
		NIOSH:	5 ppm TWA; 19 mg/m3 TWA 15.6 ppm Ceiling (15 minute); 60 mg/m3 Ceiling (15 minute) 250 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	5 ppm TWAEV; 19 mg/m3 TWAEV
		Mexico:	5 ppm TWA; 19 mg/m3 TWA 10 ppm STEL; 38 mg/m3 STEL
		Brazil:	4 ppm TWA; 15 mg/m3 TWA
		Source	Health Data
		NIOSH:	Skin eye
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No;		
	Group 2b: No; Group 3: Yes; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
001317-65-3	Limestone 1.0 - 10% by Weight	OSHA:	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
		ACGIH:	No Data Available
		NIOSH:	10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)
		Supplier:	No Data Available
		OHSA, CAN:	10 mg/m3 TWAEV (total dust, no asbestos and less than 1% crystalline silica)
		Mexico:	10 mg/m3 TWA (nuisance particulate)
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Eye and skin irritation Physical irritation
		Source	Carcinogen Data

OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 Group 1: No; Group 2A: No;
 IARC: Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
013397-24-5	Gypsum (Ca(SO4).2H2O) 25 - 50% by Weight	OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)
		Supplier:	No Data Available
		OHSA, CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Eye skin
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No Group 1: No; Group 2A: No;		
IARC:	Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
013463-67-7	Titanium dioxide 10 - 25% by Weight	OSHA:	15 mg/m3 TWA (total dust)
		ACGIH:	10 mg/m3 TWA
		NIOSH:	5000 mg/m3 IDLH
		Supplier:	No Data Available
		OHSA, CAN:	10 mg/m3 TWAEV (total dust)
		Mexico:	10 mg/m3 TWA (nuisance particulate)20 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Lung tumors in animals
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No Group 1: No; Group 2A: No;		
IARC:	Group 2b: No; Group 3: Yes; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
014808-60-7	Quartz 1.0 - 10% by Weight	OSHA:	No Data Available
		ACGIH:	0.05 mg/m3 TWA (respirable fraction)
		NIOSH:	0.05 mg/m3 TWA (respirable dust)50 mg/m3 IDLH (respirable dust)
		Supplier:	No Data Available
		OHSA, CAN:	0,10 mg/m3 TWAEV0.10 mg/m3 TWEAV; (See Ontario Reg. 845 for full information)
		Mexico:	10 mg/m3 TWA
		Brazil:	No Data Available
		Source	Health Data

NIOSH: Chronic lung disease (silicosis)
Source **Carcinogen Data**
 OSHA: Select Carcinogen: Yes
 NTP: Known Carcinogen: Yes; Suspected Carcinogen: No
 IARC: Group 1: Yes; Group 2A: No;
 Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
025620-58-0	Trimethylhexamethylenediamine 1.0 - 10% by Weight	OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	No Data Available
		Supplier:	No Data Available
		OHSA, CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	No Data Available
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

3. HAZARD IDENTIFICATION

Overview:

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing. Absorption through the skin can cause damage to the liver, kidneys, pancreas and spleen and swelling of the lungs. Chronic exposure can cause death. Symptoms of exposure include vomiting, difficulty in swallowing, diarrhea, nausea, fainting, dizziness, pale skin and cold sweat. May be harmful or fatal if inhaled. May cause lung injury. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.

Inhalation:

Eyes:

Causes eye burns. Do not get in eyes.

Skin:

Causes skin burns. May be harmful if absorbed through the skin.

Ingestion:

Poison. Cannot be made non-poisonous. Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness. Ingestion can cause gangrene and corrosion of the lips, mouth, throat, esophagus, and stomach.

Chronic Effects:

Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient). Cancer hazard. Contains an ingredient which can cause cancer (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.

HMIS Rating:

Health: Unknown Flammability: Unknown Reactivity: Unknown

4. FIRST AID MEASURES

General:

Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Eyes:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin:

In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.

Ingestion:

If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes:	Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin/Hand:	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls:	Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
Other Work Practices:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:	F: 40 C: 4
Lower Explosive Limit (LEL):	1 (%vol in air) at Normal Atmospheric Temp and Pressure
Fire and Explosion Hazards:	Flammable liquid and vapor. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.
Fire Fighting Procedures:	CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. SMALL FIRES: Use dry chemical, CO ₂ , water spray or alcohol-resistant foam. LARGE FIRES: Use water spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material. Also Reference Emergency Response Guide Number: 127

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
pH:	Not Determined
Specific Gravity:	1.407044
Boiling Point (F):	281
Vapor Density:	Heavier than air
VOC Content (lbs):	Refer to the Technical Data Sheet for this product.
Evaporation Rate:	Slower than ether

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:	Store between 32 and 120 F
Handling and Storage Precautions:	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.
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11. ECOLOGICAL DATA

General:	No additional information provided for this product. See Section 2 for chemical specific data.
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12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures:	ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.
Public Safety:	CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet). Also, Reference Emergency Response Guide Number: 127

13. DISPOSAL CONSIDERATION

Waste Disposal:	Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).
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14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	PAINT	IMDG Proper Shipping Name:	PAINT
DOT Hazard Class:	3	IMDG Hazard Class:	3.2 - Intermediate flashpoint flammable liquids

UN / NA Number: UN 1263

UN Number: UN 1263

DOT Packing Group: II

IMDG Packing Group: II

DOT CERCLA/DOT RQ: 676 gal. / 7924 lbs.

System Reference Code: 2

15. REGULATORY INFORMATION

Regulatory Overview:

The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification:

Not Determined

Regulatory List

DOT Marine Pollutants (10%):

(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):

(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs

(>.1%):

000108-10-1

000108-95-2

000108-88-3

001330-20-7

Methylisobutyl ketone : 5000 lb final RQ; 2270 kg final RQ

Phenol : 1000 lb final RQ; 454 kg final RQ

Toluene : 1000 lb final RQ; 454 kg final RQ

Xylenes (o-, m-, p- isomers) : 100 lb final RQ; 45.4 kg final RQ.

EPCRA 302 Extremely Hazardous (>.1%)

:

000108-95-2

Phenol : 500 lb TPQ (lower threshold); 10,000 lb TPQ (upper threshold)

EPCRA 313 Toxic Chemicals (>.1%) :

000108-10-1

000108-95-2

000095-63-6

000108-88-3

001330-20-7

Methylisobutyl ketone

Phenol

Pseudocumene

Toluene

Xylenes (o-, m-, p- isomers)

Mass RTK Substances (>1%) :

001317-65-3

000108-10-1

000108-95-2

014808-60-7

013463-67-7

000108-88-3

Limestone

Methylisobutyl ketone

Phenol

Quartz

Titanium dioxide

Toluene

Mass Extraordinarily Haz Sub (>.01%) :

000108-95-2

014808-60-7

Phenol

Quartz

Penn RTK Substances (>1%) :

013397-24-5

001317-65-3

000108-10-1

000108-95-2

014808-60-7

013463-67-7

000108-88-3

Gypsum (Ca(SO4).2H2O)

Limestone

Methylisobutyl ketone

Phenol

Quartz

Titanium dioxide

Toluene

Penn Special Hazardous Substances

(>.01%) :

000108-88-3

Toluene

Rhode Island Hazardous Substances

(>.1%) :

000064-17-5

001317-65-3

000108-10-1

000108-95-2

014808-60-7

013463-67-7

000108-88-3

001330-20-7

Ethyl alcohol

Limestone

Methylisobutyl ketone

Phenol

Quartz

Titanium dioxide

Toluene

Xylenes (o-, m-, p- isomers)

RCRA Status (>.01%) :

(No Product Ingredients Listed)

N.J. RTK Substances (>1%) :

000108-10-1	Methylisobutyl ketone
000108-95-2	Phenol
014808-60-7	Quartz
013463-67-7	Titanium dioxide
000108-88-3	Toluene
025620-58-0	Trimethylhexamethylenediamine

N.J. Special Hazardous Substances (>.01%) :

000108-10-1	Methylisobutyl ketone
000108-95-2	Phenol
000108-88-3	Toluene
025620-58-0	Trimethylhexamethylenediamine

N.J. Env. Hazardous Substances (>.1%) :

000108-10-1	Methylisobutyl ketone
000108-95-2	Phenol
000095-63-6	Pseudocumene
000108-88-3	Toluene
001330-20-7	Xylenes (o-, m-, p- isomers)

Proposition 65 - Carcinogens (>0%):

014808-60-7	Quartz
000108-88-3	Toluene

Proposition 65 - Female Repro Toxins (>0%):

(No Product Ingredients Listed)

Proposition 65 - Male Repro Toxins (>0%):

(No Product Ingredients Listed)

Proposition 65 - Developmental Toxins (>0%):

000064-17-5	Ethyl alcohol
000108-88-3	Toluene

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

MATERIAL SAFETY DATA SHEET

Sales Order: {SalesOrd}

D3018 ULTRA BUILD

MSDS Revision No: E1 -0
MSDS Revision Date: 03/26/2004



Akzo Nobel Coatings
Awlgrip North America
2270 Morris Avenue
P. O. Box 386
Union, NJ 07083

EMERGENCY NUMBERS:
(800) 424-9300 CHEMTREC (USA)
(703) 527-3887 CHEMTREC (Intl)
(800) 854-6813 Poison Control Center
CUSTOMER SERVICE: (Non-Emergency)
(888) 355-3090 AWLGRIP (Phone)
(908) 686-1752 AWLGRIP (Fax)

1. GENERAL INFORMATION

Product Identity: D3018 ULTRA BUILD

Bulk Sales Reference No: OD3018

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000108-10-1	Methylisobutyl ketone 1.0 - 10% by Weight	OSHA:	100 ppm TWA; 410 mg/m3 TWA75 ppm STEL; 300 mg/m3 STEL
		ACGIH:	50 ppm TWA75 ppm STEL
		NIOSH:	50 ppm TWA; 205 mg/m3 TWA75 ppm STEL; 300 mg/m3 STEL500 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	50 ppm TWA EV; 205 mg/m3 TWA EV75 ppm STEV; 305 mg/m3 STEV
		Mexico:	50 ppm TWA; 203 mg/m3 TWA75 ppm STEL; 307 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Irritation liver
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000108-88-3	Toluene 1.0 - 10% by Weight	OSHA:	200 ppm TWA 150 ppm STEL; 560 mg/m3 STEL
		ACGIH:	50 ppm TWA
		NIOSH:	100 ppm TWA; 375 mg/m3 TWA 150 ppm STEL; 560 mg/m3 STEL 500 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	50 ppm TWAEV; 376 mg/m3 TWAEV
		Mexico:	100 ppm TWA; 375 mg/m3 TWA
		Brazil:	78 ppm TWA; 290 mg/m3 TWA
		Source	Health Data
		NIOSH:	Central nervous system depressant
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No;		
	Group 2b: No; Group 3: Yes; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000123-86-4	n-Butyl acetate 1.0 - 10% by Weight	OSHA:	150 ppm TWA; 710 mg/m3 TWA 200 ppm STEL; 950 mg/m3 STEL
		ACGIH:	150 ppm TWA 200 ppm STEL
		NIOSH:	150 ppm TWA; 710 mg/m3 TWA 200 ppm STEL; 950 mg/m3 STEL 1700 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	150 ppm TWAEV; 710 mg/m3 TWAEV 200 ppm STEV; 950 mg/m3 STEV
		Mexico:	150 ppm TWA; 710 mg/m3 TWA 200 ppm STEL; 950 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Mucous membrane and eye irritation; high concentrations cause nervous system effects in animals
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No;		
	Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
101317-65-3	Limestone 10 - 25% by Weight	OSHA:	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
		ACGIH:	No Data Available
		NIOSH:	10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)
		Supplier:	No Data Available
		OHSA, CAN:	10 mg/m3 TWAEV (total dust, no asbestos and less than 1% crystalline silica)
		Mexico:	10 mg/m3 TWA (nuisance particulate)
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Eye and skin irritation Physical irritation
		Source	Carcinogen Data

Source
 OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No;
 Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
014808-60-7	Quartz 0.10 - 1.0% by Weight	OSHA:	No Data Available
		ACGIH:	0.05 mg/m3 TWA (respirable fraction)
		NIOSH:	0.05 mg/m3 TWA (respirable dust)50 mg/m3 IDLH (respirable dust)
		Supplier:	No Data Available
		OHSA, CAN:	0.10 mg/m3 TWAEV0.10 mg/m3 TWEAV; (See Ontario Reg. 845 for full information)
		Mexico:	10 mg/m3 TWA
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Chronic lung disease (silicosis)
		Source	Carcinogen Data
OSHA:	Select Carcinogen: Yes		
NTP:	Known Carcinogen: Yes; Suspected Carcinogen: No		
IARC:	Group 1: Yes; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
025068-38-6	Bisphenol A - Epichlorohydrin polymer 25 - 50% by Weight	OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	No Data Available
		Supplier:	No Data Available
		OHSA, CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	No Data Available
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
112945-52-5	Silica, amorphous, fumed, cryst.- free	OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	No Data Available
		Supplier:	No Data Available
		OHSA, CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available

1.0 - 10% by Weight

Source

Health Data

NIOSH: No Data Available

Source

Carcinogen Data

OSHA: Select Carcinogen: No

NTP: Known Carcinogen: No; Suspected Carcinogen: No

IARC: Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.

Ingredient Name & %

Source

Exposure Data

OSHA: No Data Available

ACGIH: No Data Available

NIOSH: No Data Available

Supplier: No Data Available

OHSA, CAN: No Data Available

Mexico: No Data Available

Brazil: No Data Available

14807-96-6*

Talc (*non-asbestiform)
10 - 25% by Weight

Source

Health Data

NIOSH: No Data Available

Source

Carcinogen Data

OSHA: Select Carcinogen: No

NTP: Known Carcinogen: No; Suspected Carcinogen: No

IARC: Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

3. HAZARD IDENTIFICATION

Overview:

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.

Inhalation:

Harmful if inhaled. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.

Eyes:

Causes severe eye irritation. Do not get in eyes.

Skin:

Causes skin irritation. May cause allergic skin reaction. May be harmful if absorbed through the skin.

Ingestion:

Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.

Chronic Effects:

Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient). Cancer hazard. Contains an ingredient which can cause cancer (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.

HMIS Rating:

Health: Unknown Flammability: Unknown Reactivity: Unknown

4. FIRST AID MEASURES

General:

Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Eyes:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin:

In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.

Ingestion:

If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:

Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.

Eyes:

Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.

Skin/Hand:

Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.

Engineering Controls: Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.

Other Work Practices:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:

F: 40

C: 4

Lower Explosive Limit (LEL):

1 (%vol in air) at Normal Atmospheric Temp and Pressure

Fire and Explosion Hazards:

Flammable liquid and vapor. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.

Fire Fighting Procedures:

CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. SMALL FIRES: Use dry chemical, CO₂, water spray or alcohol-resistant foam. LARGE FIRES: Use water spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material.

Also Reference Emergency Response Guide Number: 127

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:

Liquid

pH:

Not Determined

Specific Gravity:

1.432861

Boiling Point (F):

281

Vapor Density:

Heavier than air

VOC Content (lbs):

Refer to the Technical Data Sheet for this product.

Evaporation Rate:

Slower than ether

8. STABILITY AND REACTIVITY DATA

General: This product is stable and hazardous polymerization will not occur.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition: May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature: Store between 32 and 120 F

Handling and Storage Precautions: Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.

11. ECOLOGICAL DATA

General: No additional information provided for this product. See Section 2 for chemical specific data.

12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures: ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.

Public Safety: CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).

Also, Reference Emergency Response Guide Number: 127

13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	PAINT	IMDG Proper Shipping Name:	PAINT
DOT Hazard Class:	3	IMDG Hazard Class:	3.2 - Intermediate flashpoint flammable liquids

UN / NA Number: UN 1263

UN Number: UN 1263

DOT Packing Group: II

IMDG Packing Group: II

DOT/ERCLA/DOT RQ: 1123 gal. / 13405 lbs.

System Reference Code: 2

15. REGULATORY INFORMATION

Regulatory Overview:

The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification:

Not Determined

Regulatory List

Product Ingredients on List

DOT Marine Pollutants (10%):

(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):

(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs

(>.1%):

000108-10-1
000123-86-4
000071-36-3
000108-88-3
001330-20-7

Methylisobutyl ketone : 5000 lb final RQ; 2270 kg final RQ
n-Butyl acetate : 5000 lb final RQ; 2270 kg final RQ
n-Butyl alcohol : 5000 lb final RQ; 2270 kg final RQ
Toluene : 1000 lb final RQ; 454 kg final RQ
Xylenes (o-, m-, p- isomers) : 100 lb final RQ; 45.4 kg final RQ

EPCRA 302 Extremely Hazardous (>.1%)

:

(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals (>.1%):

000108-10-1
000071-36-3
000108-88-3
001330-20-7

Methylisobutyl ketone
n-Butyl alcohol
Toluene
Xylenes (o-, m-, p- isomers)

Mass RTK Substances (>1%):

001317-65-3
000108-10-1
000123-86-4
000108-88-3

Limestone
Methylisobutyl ketone
n-Butyl acetate
Toluene

Mass Extraordinarily Haz Sub (>.01%):

014808-60-7

Quartz

Penn RTK Substances (>1%):

001317-65-3
000108-10-1
000123-86-4
000108-88-3

Limestone
Methylisobutyl ketone
n-Butyl acetate
Toluene

Penn Special Hazardous Substances

(>.01%):

000108-88-3

Toluene

Rhode Island Hazardous Substances

(>.1%):

001317-65-3
000108-10-1
000123-86-4
000071-36-3
014808-60-7
000108-88-3
001330-20-7

Limestone
Methylisobutyl ketone
n-Butyl acetate
n-Butyl alcohol
Quartz
Toluene
Xylenes (o-, m-, p- isomers)

RCRA Status (>.01%):

(No Product Ingredients Listed)

N.J. RTK Substances (>1%):

000108-10-1
000123-86-4
000108-88-3

Methylisobutyl ketone
n-Butyl acetate
Toluene

N.J. Special Hazardous Substances

(>.01%):

000108-10-1

Methylisobutyl ketone

000123-86-4	n-Butyl acetate
000108-88-3	Toluene
N.J. Env. Hazardous Substances (>.1%) :	
000108-10-1	Methylisobutyl ketone
000071-36-3	n-Butyl alcohol
000108-88-3	Toluene
001330-20-7	Xylenes (o-, m-, p- isomers)
Proposition 65 - Carcinogens (>0%):	
014808-60-7	Quartz
000108-88-3	Toluene
Proposition 65 - Female Repro Toxins (>0%):	
(No Product Ingredients Listed)	
Proposition 65 - Male Repro Toxins (>0%):	
(No Product Ingredients Listed)	
Proposition 65 - Developmental Toxins (>0%):	
000108-88-3	Toluene

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

MATERIAL SAFETY DATA SHEET

G8003 AWLGRIP TOPCOAT MATTERHORN WHITE

Sales Order: (SalesOrd)

MSDS Revision No: 6 -2
MSDS Revision Date: 08/13/2007

Akzo Nobel Coatings

EMERGENCY NUMBERS:

Awlgrip North America

(800) 424-9300 CHEMTREC (USA)
(703) 527-3887 CHEMTREC (Intl)
(800) 854-6813 Poison Control Center
CUSTOMER SERVICE: (Non-Emergency)
(888) 355-3090 AWLGRIP (Phone)
(908) 686-1752 AWLGRIP (Fax)

2270 Morris Avenue

P. O. Box 386

Union, NJ 07083



1. GENERAL INFORMATION

Product Identity: G8003 AWLGRIP TOPCOAT MATTERHORN WHITE

Bulk Sales Reference No: OG8003

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000100-41-4	Ethyl benzene 0.10 - 1.0% by Weight	OSHA:	125 ppm STEL; 545 mg/m3 STEL
		ACGIH:	100 ppm TWA; 125 ppm STEL
		NIOSH:	100 ppm TWA; 435 mg/m3 TWA; 125 ppm STEL; 545 mg/m3 STEL; 800 ppm IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV; 125 ppm STEV; 540 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA; 125 ppm STEL; 545 mg/m3 STEL
		Brazil:	78 ppm TWA; 340 mg/m3 TWA
		Source	Health Data
		NIOSH:	Eye skin
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: Yes; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000108-65-6	Propylene glycol monomethyl ether acetate 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	50 ppm TWAEV; 270 mg/m3 TWAEV
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		

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NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
000108-83-8	Diisobutylketone 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	25 ppm TWA
		NIOSH:	25 ppm TWA; 150 mg/m3 TWA500 ppm IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	25 ppm TWAEV; 145 mg/m3 TWAEV
		Mexico:	48 ppm TWA; 290 mg/m3 TWA
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	Irritation; liver kidney
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
000123-86-4	n-Butyl acetate 1.0 - 10% by Weight	OSHA:	200 ppm STEL; 950 mg/m3 STEL
		ACGIH:	150 ppm TWA200 ppm STEL
		NIOSH:	150 ppm TWA; 710 mg/m3 TWA200 ppm STEL; 950 mg/m3 STEL1700 ppm IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	150 ppm TWAEV; 710 mg/m3 TWAEV200 ppm STEV; 950 mg/m3 STEV
		Mexico:	150 ppm TWA; 710 mg/m3 TWA200 ppm STEL; 950 mg/m3 STEL
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	Mucous membrane and eye irritation; high concentrations cause nervous system effects in animals
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
001330-20-7	Xylenes (o-, m-, p- isomers) 1.0 - 10% by Weight	OSHA:	150 ppm STEL; 655 mg/m3 STEL
		ACGIH:	100 ppm TWA150 ppm STEL
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV150 ppm STEV; 650 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
		Brazil:	78 ppm TWA; 340 mg/m3 TWA
		Source	Health Data
		NIOSH:	Central nervous system depressant; respiratory and eye irritation
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No

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CAS No.	Ingredient Name & %	Source	Exposure Data
007631-86-9	Silica, amorphous 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	6 mg/m3 TWA3000 mg/m3 IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	0.10 mg/m3 TWAEV
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
013463-67-7	Titanium dioxide 10 - 25% by Weight	OSHA:	No Established Limit
		ACGIH:	10 mg/m3 TWA
		NIOSH:	5000 mg/m3 IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	10 mg/m3 TWAEV (total dust)
		Mexico:	10 mg/m3 TWA (nuisance particulate)20 mg/m3 STEL
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	Lung tumors in animals
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
019549-80-5	HEPTANONE, 4,6-DIMETHYL- 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
021645-51-2	Aluminum hydroxide 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit

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Source	Health Data
NIOSH:	No Established Limit
Source	Carcinogen Data
OSHA:	Select Carcinogen: No
NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
148462-57-1	2-Propanol, 1-methoxy-, propanoate 10 - 25% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

3. HAZARD IDENTIFICATION

Overview:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.		
Inhalation:	Harmful if inhaled. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.		
Eyes:	Causes severe eye irritation. Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific condition of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.		
Skin:	Causes skin irritation. May cause allergic skin reaction. May be harmful if absorbed through the skin.		
Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.		
Chronic Effects:	Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient). Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.		
HMIS Rating:	Health: Unknown	Flammability: Unknown	Reactivity: Unknown

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates
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dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.

- Eyes:** Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific condition of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
- Skin/Hand:** Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
- Engineering Controls:** Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
- Other Work Practices:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

- Flash Point:** F: 114
C: 46
- Lower Explosive Limit (LEL):** 1 (%vol in air) at Normal Atmospheric Temp and Pressure
Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
- Fire and Explosion Hazards:** FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.
- Fire Fighting Procedures:** CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. SMALL FIRES: Use dry chemical, CO₂, water spray or alcohol-resistant foam. LARGE FIRES: Use water spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material.
Also Reference Emergency Response Guide Number: 127

7. PHYSICAL AND CHEMICAL PROPERTIES

- Physical State:** Liquid
- pH:** No Established Limit
- Specific Gravity:** 1.361964
- Boiling Point (F):** 241
- Vapor Density:** Heavier than air
- VOC Content (lbs):** Refer to the Technical Data Sheet for this product.
- Evaporation Rate:** Slower than ether

8. STABILITY AND REACTIVITY DATA

- General:** This product is stable and hazardous polymerization will not occur. Not sensitive to mechanical impact. Excessive heat and fumes generation can occur if improperly handled.
- Incompatible Materials:** Strong oxidizing agents.
- Hazardous Decomposition:** May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

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9. HANDLING AND STORAGE

Storage Temperature: Store between 40–100F (4–38C).
Handling and Storage Precautions: Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.

11. ECOLOGICAL DATA

General: No additional information provided for this product. See Section 2 for chemical specific data.

12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures: ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material. CALL CHEMTREC at (800)–424–9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).
Public Safety: Also, Reference Emergency Response Guide Number: 127

13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	PAINT	IMDG Proper Shipping Name:	PAINT
DOT Hazard Class:	3	IMDG Hazard Class:	3.3 – High flashpoint flammable liquids
UN / NA Number:	UN 1263	UN Number:	UN 1263
DOT Packing Group:	III	IMDG Packing Group:	III
CERCLA/DOT RQ:	339 gal. / 3844 lbs.	System Reference Code:	1

15. REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.
Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a

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concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification: No Established Limit

Regulatory List Product Ingredients on List

DOT Marine Pollutants (10%):
(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):
(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs (>.1%) :
(No Product Ingredients Listed)

EPCRA 302 Extremely Hazardous (>.1%) :
(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals (>.1%) :

000100-41-4	Ethyl benzene
000071-36-3	n-Butyl alcohol
001330-20-7	Xylenes (o-, m-, p- isomers)

Mass RTK Substances (>1%) :

000108-83-8	Diisobutylketone
000123-86-4	n-Butyl acetate
007631-86-9	Silica, amorphous
013463-67-7	Titanium dioxide
001330-20-7	Xylenes (o-, m-, p- isomers)

Mass Extraordinarily Haz Sub (>.01%) :
(No Product Ingredients Listed)

Penn RTK Substances (>1%) :

000108-83-8	Diisobutylketone
000123-86-4	n-Butyl acetate
000108-65-6	Propylene glycol monomethyl ether acetate
007631-86-9	Silica, amorphous
013463-67-7	Titanium dioxide
001330-20-7	Xylenes (o-, m-, p- isomers)

Penn Special Hazardous Substances (>.01%) :

001333-86-4	Carbon black
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Rhode Island Hazardous Substances (>.1%) :

000071-36-3	n-Butyl alcohol
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RCRA Status (>.01%) :
(No Product Ingredients Listed)

N.J. RTK Substances (>1%) :
(No Product Ingredients Listed)

N.J. Special Hazardous Substances (>.01%) :

000100-41-4	Ethyl benzene
000123-86-4	n-Butyl acetate
000071-36-3	n-Butyl alcohol
001330-20-7	Xylenes (o-, m-, p- isomers)

N.J. Env. Hazardous Substances (>.1%) :

000100-41-4	Ethyl benzene
000071-36-3	n-Butyl alcohol
001330-20-7	Xylenes (o-, m-, p- isomers)

Proposition 65 - Carcinogens (>0%):

000100-41-4	Ethyl benzene
014808-60-7	Quartz

Proposition 65 - Female Repro

Toxins (>0%):
(No Product Ingredients
Listed)

Proposition 65 – Male Repro

Toxins (>0%):
(No Product Ingredients
Listed)

Proposition 65 – Developmental

Toxins (>0%):
(No Product Ingredients
Listed)

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

FOR PROFESSIONAL USE ONLY

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

Brand names mentioned in this data sheet are trademarks of or are licensed to Akzo Nobel.

Head Office

International Paint, LLC, 6001 Antoine Drive, Houston, Texas 77091. <http://www.international-pc.com> or <http://www.international-marine.com>

End Of Document



MATERIAL SAFETY DATA SHEET

S9001; 30-Y-94 NON-SAND ANTI-CRSV. EPOXY PRIMER



1. Identification of the Product and Company

Product Code & Product Name: **S9001; 30-Y-94 NON-SAND ANTI-CRSV. EPOXY PRIMER**

Company: Akzo Nobel - Awlgrip North America
2270 Morris Avenue
Union, NJ 07083
Tel. 888 355 3090; Fax 908 686 1752
Health & Safety Information 847 623 4200

Emergency: Emergency telephone (US) CHEMTREC - 800 424 9300
Emergency telephone (Outside US) CHEMTREC - 703 527 3887
NOTE: CHEMTREC numbers to be used only in the event of emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

Product Use: Coating

2. Composition / Information on Ingredients

Chemical Name	CAS Number	WT %	ACGIH TLV	ACGIH TLV	OSHA PEL C	OSHA PEL
			TWA	STEL		TWA
STRONTIUM CHROMATE	7789-06-2	10-30	.0005 mg/m ³ Cr	N.D.	N.D.	.1 mg/m ³ CrO ₃
TALC	14807-96-6	7-13	2 mg/m ³	N.D.	N.D.	N.D.
METHYL ETHYL KETONE	78-93-3	5-10	200 ppm	300 ppm	N.D.	200 ppm
TOLUENE	108-88-3	5-10	50 ppm	N.D.	300 ppm	200 ppm
1-METHOXY-2-PROPANOL	107-98-2	5-10	100 ppm	150 ppm	N.D.	N.D.
BUTYL ACETATE	123-86-4	5-10	150 ppm	200 ppm	N.D.	150 ppm
ISOBUTANOL	78-83-1	5-10	50 ppm	N.D.	N.D.	100 ppm
TITANIUM DIOXIDE	13463-67-7	1-5	10 mg/m ³ dust	N.D.	N.D.	N.D.
XYLENE	1330-20-7	1-5	100 ppm	150 ppm	N.D.	100 ppm
CRYSTALLINE SILICA (CRISTOBALITE)	14464-46-1	1-5	0.05 mg/m ³	N.D.	N.D.	N.D.
ETHYLBENZENE	100-41-4	0.1-1.0	100 ppm	125 ppm	N.D.	100 ppm
CRYSTALLINE SILICA (QUARTZ)	14808-60-7	0.1-1.0	0.1 mg/m ³	N.D.	N.D.	N.D.

Note

Talc is a naturally occurring mineral which may contain minor amounts of Quartz CAS# 14808-60-7.

3. Hazards Identification

*** Emergency Overview *** ----- yellow liquid with ketone odor ----- Class IB - Flammable Liquid -----

Potential Health Effects - Eye: Severe irritation with redness, pain, tearing and the possibility of significant injury after direct splash to eye. Vapors may cause eye irritation with redness and minor discomfort of the eye.

Potential Health Effects - Skin: Moderately irritating with possible redness and discomfort. Prolonged contact may cause burns with redness and pain. May cause dry skin by dissolving skin oils. Contains a component which can be absorbed through the skin in harmful amounts.

Potential Health Effects - Inhalation: Moderately irritating to nose, throat or breathing passages. May cause unconsciousness by depressing the central nervous system after prolonged exposure to high concentrations. May increase risk for sudden death from irregular heart rhythms caused by stressful conditions that increase the levels of adrenalin in the blood.

Potential Health Effects - Ingestion: Moderately irritating to the mouth, stomach, and digestive system. No ingestion exposure expected with normal occupational use.

Potential Health Effects - Chronic Hazards: Chronic exposure may cause inflammation of the lens of the eye (cornea). Chronic exposure can cause redness and irritation of the membrane that covers the eyeball and the inside of the eyelids (conjunctivitis). Repeated contact can cause skin to crack and peel. Chronic inhalation exposure may cause coughing or tightness in chest. May cause dry nose and throat, an abnormal sensation of prickling or tingling of the skin, tremors, apprehension, impaired memory, weakness, nervous irritation, dizziness, nausea, loss of appetite, headache, increase liver size and damage to liver, abnormal increase in the number of bone marrow cells, low red blood cell count, and damage to the kidney. May cause damage to hearing or increase sensitivity to noise. Chronic inhalation may lower the count of certain types of blood cells. Chronic alcohol use can increase the potential for toxicity from the repeated exposure to the aromatic hydrocarbon in this product. May accumulate in the body with daily exposure. Cancer hazard. Contains ingredients which can cause cancer. Chronic ingestion exposure would be unlikely due to the method of use or physical properties of this product.

The components listed in Section 2 may affect the following target organs: Blood. Central Nervous System. Cardiovascular System. Eyes. Gastrointestinal Tract. Kidneys. Liver. Lungs. Respiratory System. Skin.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Eye Contact

4. First Aid Measures

First Aid - Eye Contact: If this product contacts the eyes, immediately wash the eyes with large amounts of water, occasionally lifting the lower and upper lids. Get medical attention.

First Aid - Skin Contact: If this product contacts the skin, promptly wash the contaminated skin with soap & water. If this product penetrates the clothing, promptly remove the clothing and wash the skin with soap & water. If irritation persists after washing, get medical attention. Launder clothing before reuse.

First Aid - Inhalation: If a person breathes large amounts of this product, move the exposed person to fresh air at once. If breathing is difficult, get medical attention.

First Aid - Ingestion: If this product has been swallowed, get medical attention immediately.

5. Fire-Fighting Measures

Flash Point (F): 23
LOWER EXPLOSIVE LIMIT: 1.0
UPPER EXPLOSIVE LIMIT: 20.0

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam

Unusual Fire And Explosion Hazards: Flammable Liquid. Vapors are heavier than air and may travel to a source of ignition and flash back.

Special Fire Fighting Procedures: Firefighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus.

6. Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Eliminate all ignition sources. Stop or control the spill, if this can be done without undue risk. Do not allow material to enter sewers or ground. Isolate discharged material for proper disposal. Wear appropriate personal protective equipment.

7. Handling and Storage

Handling: Grounding or bonding of containers is recommended before material transfer. Activities such as sanding, burning off, etc, of paint films may generate dust and/or fumes hazardous to the skin and lungs. Sanding dust may contain levels of unreacted materials which may cause irritation and sensitization; these are highest in the first 24/48 hours after application. Work in well ventilated areas. Use local exhaust ventilation and personal skin and respiratory protective equipment as appropriate.

Storage: Storage areas should be dry and well-ventilated.

8. Exposure Controls / Personal Protection

Engineering Controls: It is recommended that work be done in an adequately ventilated area (i.e., ventilation sufficient to maintain concentrations below one half of the PEL and other relevant standards). Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination.

Respiratory Protection: Appropriate respirators must be used, and a program that follows 29 CFR 1910.134 or other applicable regulatory requirements must be followed, when workplace hazards warrant the use of a respirator. NIOSH-approved or other appropriate respirators must be used when respiratory protection is necessary.

Eye Protection: Wear appropriate goggles, face shields or other PPE, which will be effective under the circumstances if the possibility of contact exists. A program meeting 29 CFR 1910.133 or other applicable regulatory requirements must be followed when PPE is necessary.

Other Protective Equipment: Use impermeable gloves and protective clothing as necessary to prevent skin contact.

Hygienic Practices: Do not eat, drink, chew tobacco or gum, or apply cosmetics while working with this product. Wash hands before performing any of these activities.

9. Physical and Chemical Properties*Theoretical Values*

Boiling Range (F):	160 - 280	VOC (g/l)(less water & exempt):	515
Freeze Point (F):	N.D.	VOC (lb/gal)(less water & exempt):	4.3
Specific Gravity:	1.3	% Solids By Weight:	60
Appearance:	yellow	% Solids By Volume:	40
Physical State:	liquid	Density (lb/gal):	10.8
Odor:	ketone		

10. Stability and Reactivity

Conditions To Avoid: Avoid contact with heat, open flame, sparks, or ignition sources.

Hazardous Polymerization: Will not occur.

Stability: Stable.

11. Toxicological Information

Chemical Name	LD50	LC50	IARC	NTP	OSHA
STRONTIUM CHROMATE	Oral Rat: 3118 mg/kg	N.D.			Known Carcinogen
TALC	N.D.	N.D.			Select Carcinogen
METHYL ETHYL KETONE	Oral Rat: 2.9 g/kg	Inhalation Rat: 23500 mg/m3/8H			
TOLUENE	N.D.	Inhalation Rat: 49 gm/m3/4H			
1-METHOXY-2-PROPANOL	Oral Mouse: 11700 mg/kg	Inhalation Rat: 10000 ppm/5H			
BUTYL ACETATE	Oral Rat: 14130 mg/kg	Inhalation Rat: 2000 ppm/4H			
ISOBUTANOL	Oral Rat: 2460 mg/kg	N.D.			
TITANIUM DIOXIDE	Oral rat >10,000 mg/kg	N.D.			
XYLENE	Oral Rat: 4300 mg/kg	Inhalation Rat: 5000 ppm/4H;			
CRYSTALLINE SILICA (CRISTOBALITE)	N.D.	N.D.	Group 1	Anticipated Carc	
ETHYLBENZENE	Oral Rat: 3500 mg/kg	N.D.	Group 2B		
CRYSTALLINE SILICA (QUARTZ)	N.D.	N.D.	Group 1	Anticipated Carc	

12. Ecological Information

Akzo Nobel has not conducted specific studies on the eco toxicity or environmental fate of this product. Commonly available data on certain ingredients indicate that acute or chronic effects could result from uncontrolled releases to soil, ground water, storm waters, or air. Appropriate measures should be taken to prevent uncontrolled releases. Prompt containment and clean up should be performed if releases do occur.

13. Disposal Considerations

Legal disposition of wastes is the responsibility of the owner/generator of the waste. Applicable federal, state, and/or local regulations must be followed during treatment, storage, or disposal of waste containing this product. Do not dispose of in an uncontrolled manner.

14. Transport Information

DOT Proper Shipping Name:	Paint	IATA Proper Shipping Name:	Paint	IMO Proper Shipping Name:	Paint
DOT Hazard Class:	3	IATA Hazard Class:	3	IMO Hazard Class:	3
DOT UN Number:	UN1263	IATA UN Number:	UN1263	IMO UN Number:	UN1263
DOT Packing Group:	II	IATA Packing Group:	II	IMO Packing Group:	II
Resp. Guide Page:	128	IATA Hazard Subclass:	N/A	Marine Pollutant:	No

Chemical Name	CAS Number	RQ (lbs)
STRONTIUM CHROMATE	7789-06-2	10
METHYL ETHYL KETONE	78-93-3	5000
TOLUENE	108-88-3	1000
BUTYL ACETATE	123-86-4	5000
ISOBUTANOL	78-83-1	5000
XYLENE	1330-20-7	100

ETHYLBENZENE

100-41-4

1000

15. Regulatory Information

U.S. FEDERAL REGULATIONS: As follows -

CERCLA - SARA Hazard Category: This product is considered, under applicable definitions, to meet the following categories: IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313: This product contains the following substances subject to the reporting requirements of Section 313 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and 40 CFR 372:

Chemical Name	313 Category	CAS Number	WT %
STRONTIUM CHROMATE	Chromium Compounds	7789-06-2	19.4
TOLUENE		108-88-3	7.0
XYLENE		1330-20-7	3.1
ETHYLBENZENE		100-41-4	0.7

Clean Air Act: This product contains the following chemical substances listed as Hazardous Air Pollutants (HAPs) under the Clean Air Act of 1990:

Chemical Name	HAP Category	CAS Number	WT %
STRONTIUM CHROMATE	Chromium Compounds	7789-06-2	19.4
TOLUENE		108-88-3	7.0
XYLENE		1330-20-7	3.1
ETHYLBENZENE		100-41-4	0.7

Toxic Substances Control Act: All the components of this product comply with applicable requirements of the US EPA TSCA inventory. Does not contain chemicals known to be subject to TSCA 12b.

U.S. STATE REGULATIONS: As follows -

California Proposition 65: WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

INTERNATIONAL REGULATIONS: As follows -

Canadian WHMIS Class: B2, D2

Canadian DSL - All the components of this product are listed or are exempt from listing.
European EINECS - All the components of this product are listed or are exempt from listing.

Australian AICS - All the components of this product are listed or are exempt from listing.

16. Other Information

National Paint & Coatings Association (NPCA) Hazardous Material Identification System (HMIS):

Health: 3 Flammability: 3 Reactivity: 1 Personal Protection: See Section 8

Legend: N.A. - Not Applicable, N.D. - Not Determined

This MSDS relates only to the specific material identified in Section 2. In compiling this MSDS, Akzo Nobel has relied in good faith on information provided to Akzo Nobel by suppliers of the components of this material, and, in some cases, provided by independent data resources. Akzo Nobel has not independently verified such information, and, in addition, users should be aware that all materials may present unknown hazards. Use of this material in combination with other materials and/or in specific processes may render information set forth in the MSDS inaccurate or otherwise invalid. NO WARRANTY, EXPRESS OR IMPLIED, IS MADE REGARDING THE INFORMATION FURNISHED ON THIS MSDS.

Revision Date: 08/04/2006



MATERIAL SAFETY DATA SHEET

S3001; Converter for S9001



1. Identification of the Product and Company

Product Code & Product Name: **S3001; Converter for S9001**

Company: Akzo Nobel - Awlgrip North America
2270 Morris Avenue
Union, NJ 07083
Tel. 888 355 3090; Fax 908 686 1752
Health & Safety Information 847 623 4200

Emergency: Emergency telephone (US) CHEMTREC - 800 424 9300
Emergency telephone (Outside US) CHEMTREC - 703 527 3887
NOTE: CHEMTREC numbers to be used only in the event of emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

Product Use: Coating

2. Composition / Information on Ingredients

Chemical Name	CAS Number	WT %	ACGIH TLV TWA	ACGIH TLV STEL	OSHA PEL C	OSHA PEL TWA
ISOPROPRANOL	67-63-0	15-40	200 ppm	400 ppm	N.D.	400 ppm
N-BUTANOL	71-36-3	10-30	20 ppm	N.D.	N.D.	100 ppm
METHYL ETHYL KETONE	78-93-3	10-30	200 ppm	300 ppm	N.D.	200 ppm
BUTYL ACETATE	123-86-4	7-13	150 ppm	200 ppm	N.D.	150 ppm
TOLUENE	108-88-3	1-5	50 ppm	N.D.	300 ppm	200 ppm
TRIETHYLENETETRAMINE	112-24-3	0.5-1.5	N.D.	N.D.	N.D.	N.D.

3. Hazards Identification

*** Emergency Overview *** ----- straw liquid with amine odor ----- Class IB - Flammable Liquid -----

Potential Health Effects - Eye: Contains a component which is corrosive. Contact with eyes may cause permanent eye injury.

Potential Health Effects - Skin: Severely irritating to the skin. May cause dry skin by dissolving skin oils. Product can be absorbed through the skin, but no adverse health effects are expected with normal occupational exposure.

Potential Health Effects - Inhalation: Moderately irritating to nose, throat or breathing passages. May cause unconsciousness by depressing the central nervous system after prolonged exposure to high concentrations. May increase risk for sudden death from irregular heart rhythms caused by stressful conditions that increase the levels of adrenalin in the blood.

Potential Health Effects -Ingestion: Moderately irritating to the mouth, stomach, and digestive system. No ingestion exposure expected with normal occupational use.

Potential Health Effects - Chronic Hazards: Repeated contact can cause skin to crack and peel. Chronic inhalation exposure may cause coughing or tightness in chest. May cause slight increase in liver size without affecting the function of the liver. May cause small changes in the hearing system. Chronic inhalation may lower the count of certain types of blood cells. Chronic alcohol use can increase the potential for toxicity from the repeated exposure to the aromatic hydrocarbon in this product. May accumulate in the body with daily exposure. Chronic ingestion exposure would be unlikely due to the method of use or physical properties of this product.

The components listed in Section 2 may affect the following target organs: Central Nervous System. Eyes. Kidneys. Liver. Respiratory System. Skin.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Eye Contact

4. First Aid Measures

First Aid - Eye Contact: If this product contacts the eyes, immediately wash the eyes with large amounts of water, occasionally lifting the lower and upper lids. Get medical attention.

First Aid - Skin Contact: If this product contacts the skin, promptly wash the contaminated skin with soap & water. If this product penetrates the clothing, promptly remove the clothing and wash the skin with soap & water. If irritation persists after washing, get medical attention. Launder clothing before reuse.

First Aid - Inhalation: If a person breathes large amounts of this product, move the exposed person to fresh air at once. If breathing is difficult, get medical attention.

First Aid - Ingestion: If this product has been swallowed, get medical attention immediately.

5. Fire-Fighting Measures

Flash Point (F): 25
 LOWER EXPLOSIVE LIMIT: 1.2
 UPPER EXPLOSIVE LIMIT: 15.0

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam

Unusual Fire And Explosion Hazards: Flammable Liquid. Vapors are heavier than air and may travel to a source of ignition and flash back.

Special Fire Fighting Procedures: Firefighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus.

6. Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Eliminate all ignition sources. Stop or control the spill, if this can be done without undue risk. Do not allow material to enter sewers or ground. Isolate discharged material for proper disposal. Wear appropriate personal protective equipment.

7. Handling and Storage

Handling: Grounding or bonding of containers is recommended before material transfer. Activities such as sanding, burning off etc. of paint films may generate dust and/or fumes hazardous to the skin and lungs. Work in well ventilated areas. Use local exhaust ventilation and personal skin and respiratory protective equipment as appropriate.

Storage: Storage areas should be dry and well-ventilated.

8. Exposure Controls / Personal Protection

Engineering Controls: It is recommended that work be done in an adequately ventilated area (i.e., ventilation sufficient to maintain concentrations below one half of the PEL and other relevant standards). Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination.

Respiratory Protection: Appropriate respirators must be used, and a program that follows 29 CFR 1910.134 or other applicable regulatory requirements must be followed, when workplace hazards warrant the use of a respirator. NIOSH-approved or other appropriate respirators must be used when respiratory protection is necessary.

Eye Protection: Wear appropriate goggles, face shields or other PPE, which will be effective under the circumstances if the possibility of contact exists. A program meeting 29 CFR 1910.133 or other applicable regulatory requirements must be followed when PPE is necessary.

Other Protective Equipment: Use impermeable gloves and protective clothing as necessary to prevent skin contact.

Hygienic Practices: Do not eat, drink, chew tobacco or gum, or apply cosmetics while working with this product. Wash hands before performing any of these activities.

9. Physical and Chemical Properties

Theoretical Values

Boiling Range (F):	175 - 428	VOC (g/l)(less water & exempt):	682
Freeze Point (F):	N.D.	VOC (lb/gal)(less water & exempt):	5.7
Specific Gravity:	0.8	% Solids By Weight:	19
Appearance:	straw	% Solids By Volume:	16
Physical State:	liquid	Density (lb/gal):	7.0
Odor:	amine		

10. Stability and Reactivity

Conditions To Avoid: Avoid contact with heat, open flame, sparks, or ignition sources.

Hazardous Polymerization: Will not occur.

Stability: Stable.

11. Toxicological Information

Chemical Name	LD50	LC50	IARC	NTP	OSHA
ISOPROPANOL	Oral Rat: 5045 mg/kg	Inhalation Rat: 16000 ppm/8H			
N-BUTANOL	Oral Rat: 790 mg/kg	Inhalation Rat: 8000 ppm/4H			
METHYL ETHYL KETONE	Oral Rat: 2.9 g/kg	Inhalation Rat: 23500 mg/m ³ /8H			
BUTYL ACETATE	Oral Rat: 14130 mg/kg	Inhalation Rat: 2000 ppm/4H			
TOLUENE	N.D.	Inhalation Rat: 49 gm/m ³ /4H			
TRIETHYLENETETRAMINE	Oral Rat: 2500 mg/kg	N.D.			

12. Ecological Information

Akzo Nobel has not conducted specific studies on the eco toxicity or environmental fate of this product. Commonly available data on certain ingredients indicate that acute or chronic effects could result from uncontrolled releases to soil, ground water, storm waters, or air. Appropriate measures should be taken to prevent uncontrolled releases. Prompt containment and clean up should be performed if releases do occur.

13. Disposal Considerations

Legal disposition of wastes is the responsibility of the owner/generator of the waste. Applicable federal, state, and/or local regulations must be followed during treatment, storage, or disposal of waste containing this product. Do not dispose of in an uncontrolled manner.

14. Transport Information

DOT Proper Shipping Name:	Paint Related Material	IATA Proper Shipping Name:	Paint Related Material	IMO Proper Shipping Name:	Paint Related Material
DOT Hazard Class:	3	IATA Hazard Class:	3	IMO Hazard Class:	3
DOT UN Number:	UN1263	IATA UN Number:	UN1263	IMO UN Number:	UN1263
DOT Packing Group:	II	IATA Packing Group:	II	IMO Packing Group:	II
Resp. Guide Page:	128	IATA Hazard Subclass:	N/A	Marine Pollutant:	No

Chemical Name	CAS Number	RQ (lbs)
N-BUTANOL	71-36-3	5000
METHYL ETHYL KETONE	78-93-3	5000
BUTYL ACETATE	123-86-4	5000
TOLUENE	108-88-3	1000

15. Regulatory Information**U.S. FEDERAL REGULATIONS: As follows -**

CERCLA - SARA Hazard Category: This product is considered, under applicable definitions, to meet the following categories: IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313: This product contains the following substances subject to the reporting requirements of Section 313 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and 40 CFR 372:

Chemical Name	313 Category	CAS Number	WT %
N-BUTANOL		71-36-3	22.0
TOLUENE		108-88-3	2.5

Clean Air Act: This product contains the following chemical substances listed as Hazardous Air Pollutants (HAPs) under the Clean Air Act of 1990:

Chemical Name	HAP Category	CAS Number	WT %
TOLUENE		108-88-3	2.5

Toxic Substances Control Act: All the components of this product comply with applicable requirements of the US EPA TSCA inventory.

Does not contain chemicals known to be subject to TSCA 12b.

U.S. STATE REGULATIONS: As follows -

California Proposition 65: WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

INTERNATIONAL REGULATIONS: As follows -

Canadian WHMIS Class: B2, D2

Canadian DSL - All the components of this product are listed or are exempt from listing.

European EINECS - All the components of this product are listed or are exempt from listing.

Korean Inventory - All the components of this product are listed or are exempt from listing.

Australian AICS - All the components of this product are listed or are exempt from listing.

16. Other Information

National Paint & Coatings Association (NPCA) Hazardous Material Identification System (HMIS):

Health: 3

Flammability: 3

Reactivity: 2

Personal Protection: See Section 8

Legend: N.A. - Not Applicable, N.D. - Not Determined

FOR PROFESSIONAL USE ONLY

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

Brand names mentioned in this data sheet are trademarks of or are licensed to Akzo Nobel.

Head Office

Akzo Nobel Aerospace Coatings, East Water Street, Waukegan, IL 60085. www.anac.com

Revision Date: 03/29/2007

MATERIAL SAFETY DATA SHEET

D3002 HIGH BUILD CONVERTER

Sales Order: {SalesOrd}

MSDS Revision No: E2 -0
 MSDS Revision Date: 07/27/2004



Akzo Nobel Coatings
 Awlgrip North America
 2270 Morris Avenue
 P. O. Box 386
 Union, NJ 07083

EMERGENCY NUMBERS:

(800) 424-9300	CHEMTREC (USA)
(703) 527-3887	CHEMTREC (Intl)
(800) 854-6813	Poison Control Center
CUSTOMER SERVICE:	(Non-Emergency)
(888) 355-3090	AWLGRIP (Phone)
(908) 686-1752	AWLGRIP (Fax)

1. GENERAL INFORMATION

Product Identity: D3002 HIGH BUILD CONVERTER

Bulk Sales Reference No: OD3002

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
		OSHA:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL
		ACGIH:	200 ppm TWA300 ppm STEL
		NIOSH:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL3000 ppm IDLH

000078-93-3

Methyl ethyl ketone
1.0 - 10% by Weight

Supplier: No Data Available
 OSHA, 200 ppm TWAEV; 590 mg/m3 TWAEV300 ppm STEV; 885 mg/m3 STEV
 CAN: 200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL
 Mexico: 155 ppm TWA; 460 mg/m3 TWA
 Brazil: 155 ppm TWA; 460 mg/m3 TWA

Source Health Data
 NIOSH: Irritation; liver kidney

Source Carcinogen Data
 OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
000108-88-3	Toluene 1.0 - 10% by Weight	OSHA:	200 ppm TWA150 ppm STEL; 560 mg/m3 STEL
		ACGIH:	50 ppm TWA
		NIOSH:	100 ppm TWA; 375 mg/m3 TWA150 ppm STEL; 560 mg/m3 STEL500 ppm IDLH
		Supplier:	No Data Available
		OSHA,	50 ppm TWAEV; 376 mg/m3 TWAEV
		CAN:	50 ppm TWAEV; 376 mg/m3 TWAEV
		Mexico:	100 ppm TWA; 375 mg/m3 TWA
		Brazil:	78 ppm TWA; 290 mg/m3 TWA
		Source	Health Data
		NIOSH:	Central nervous system depressant
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
		OSHA:	200 ppm TWA; 740 mg/m3 TWA
		ACGIH:	5 ppm TWA
		NIOSH:	0.5 ppm TWA; 1.8 mg/m3 TWA500 ppm IDLH

000110-80-5 ETHOXYETHANOL
1.0 - 10% by Weight

Supplier: No Data Available
 OSHA, CAN: 5 ppm TWAEV; 18 mg/m3 TWAEV
 Mexico: 50 ppm TWA; 185 mg/m3 TWA 100 ppm STEL; 370 mg/m3 STEL
 Brazil: 78 ppm TWA; 290 mg/m3 TWA

Source Health Data
 NIOSH: Reproductive and developmental effects; blood CNS

Source Carcinogen Data
 OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
007727-43-7	Barium sulfate 50 - 75% by Weight	OSHA:	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
		ACGIH:	10 mg/m3 TWA
		NIOSH:	10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust) 50 mg/m3 IDLH (as Ba, except barium sulfate)
		Supplier:	No Data Available
		OSHA, CAN:	10 mg/m3 TWAEV (total dust)
		Mexico:	0.5 mg/m3 TWA
		Brazil:	No Data Available
		Source Health Data	
		NIOSH:	Eye nose
		Source Carcinogen Data	
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
		OSHA:	No Data Available
		ACGIH:	2 mg/m3 TWA (respirable fraction, particulate matter containing no asbestos and <1% crystallin

014807-96-6

Talc
1.0 - 10% by Weight

NIOSH: 2 mg/m3 TWA (respirable dust, containing no asbestos and less than 1% quartz) 1000 mg/m3 IDLH (containing no asbestos and less than 1% quartz)

Supplier: No Data Available

OHSA, CAN: 2 mg/m3 TWAEV (respirable dust)

Mexico: No Data Available

Brazil: No Data Available

Source Health Data

NIOSH: (containing asbestos); Fibrotic pneumoconiosis; (containing no asbestos); Nonmalignant respiratory effects

Source Carcinogen Data

OSHA: Select Carcinogen: Yes

NTP: Known Carcinogen: No; Suspected Carcinogen: No

IARC: Group 1: Yes; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No

CAS No.

Ingredient Name & %

Source

Exposure Data

025036-25-3

Polymer of epoxy resin and bisphenol A
10 - 25% by Weight

OSHA: No Data Available

ACGIH: No Data Available

NIOSH: No Data Available

Supplier: No Data Available

OHSA, CAN: No Data Available

Mexico: No Data Available

Brazil: No Data Available

Source Health Data

NIOSH: No Data Available

Source Carcinogen Data

OSHA: Select Carcinogen: No

NTP: Known Carcinogen: No; Suspected Carcinogen: No

IARC: Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

3. HAZARD IDENTIFICATION

Overview: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing. Contains an ingredient which may cause reproductive disorders based on animal data (See Section 2 and Section 15 for each ingredient).

Inhalation: Harmful if inhaled. Causes lung irritation. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.

Eyes: Causes severe eye irritation. Do not get in eyes.

Skin: Causes skin irritation. May cause allergic skin reaction. May be harmful if absorbed through the skin.

Ingestion: Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.

Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient).

Chronic Effects: Cancer hazard. Contains an ingredient which can cause cancer (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.

HMIS Rating: Health: Unknown Flammability: Unknown Reactivity: Unknown

4. FIRST AID MEASURES

General: Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin: In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.

Ingestion: If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.

Respiratory:

Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.

First Aid:

Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.

Skin/Hand:**Engineering****Controls:**

Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.

Other Work**Practices:**

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:

F: 20

C: -7

Lower Explosive Limit (LEL):

1 (%vol in air) at Normal Atmospheric Temp and Pressure

Fire and Explosion Hazards:

Extremely flammable liquid and vapor. Vapors may cause flash fire. **FLAMMABLE/COMBUSTIBLE MATERIALS:** Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.

Fire Fighting Procedures:

CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. **SMALL FIRES:** Use dry chemical, CO₂, water spray or alcohol-resistant foam. **LARGE FIRES:** Use water spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material. **Also Reference Emergency Response Guide Number: 127**

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:

Liquid

pH:

Not Determined

Specific Gravity:

1.816514

Boiling Point (F):

175

Vapor Density:

Heavier than air

Water Content (lbs):

Refer to the Technical Data Sheet for this product.

Evaporation Rate:

Slower than ether

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:	Store between 32 and 120 F
Handling and Storage Precautions:	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.
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11. ECOLOGICAL DATA

General:	No additional information provided for this product. See Section 2 for chemical specific data.
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12. ACCIDENTAL RELEASE MEASURES

ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.

Spill Response Procedures:

CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).

Public Safety:

Also, Reference Emergency Response Guide Number: 127

13. DISPOSAL CONSIDERATION

Waste Disposal:

Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)

IMO / IMDG (Ocean Transportation)

DOT Proper Shipping Name:

IMDG Proper Shipping Name:

PAINT

PAINT

DOT Hazard Class: 3

IMDG Hazard Class: 3.2 - Intermediate flashpoint flammable liquids

UN / NA Number: UN 1263

UN Number: UN 1263

DOT Packing Group: II

IMDG Packing Group: II

CERCLA/DOT RQ: 840 gal. / 12714 lbs.

System Reference Code: 28

15. REGULATORY INFORMATION

Regulatory Overview:

The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification: Not Determined

Regulatory List**Product Ingredients on List****DOT Marine Pollutants****(10%):****(No Product
Ingredients Listed)****DOT Severe Marine****Pollutants (1%):****(No Product
Ingredients Listed)****EPCRA 311/312****Chemicals and RQs****(>.1%) :**

000110-80-5	ETHOXYETHANOL : 1000 lb final RQ; 454 kg final RQ
000078-93-3	Methyl ethyl ketone : 5000 lb final RQ; 2270 kg final RQ
000123-86-4	n-Butyl acetate : 5000 lb final RQ; 2270 kg final RQ
000108-88-3	Toluene : 1000 lb final RQ; 454 kg final RQ
001330-20-7	Xylenes (o-, m-, p- isomers) : 100 lb final RQ; 45.4 kg final RQ

EPCRA 302 Extremely**Hazardous (>.1%) :****(No Product
Ingredients Listed)****EPCRA 313 Toxic****Chemicals (>.1%) :**

007727-43-7	Barium sulfate
000111-76-2	BUTOXYETHANOL
000110-80-5	ETHOXYETHANOL
0078-93-3	Methyl ethyl ketone
000108-88-3	Toluene
001330-20-7	Xylenes (o-, m-, p- isomers)

Mass RTK Substances**(>1%) :**

007727-43-7	Barium sulfate
000110-80-5	ETHOXYETHANOL
000078-93-3	Methyl ethyl ketone
014807-96-6	Talc
000108-88-3	Toluene

Mass Extraordinarily**Haz Sub (>.01%) :****(No Product****Ingredients Listed)****Penn RTK Substances****(>1%) :**

007727-43-7	Barium sulfate
000110-80-5	ETHOXYETHANOL
000078-93-3	Methyl ethyl ketone
014807-96-6	Talc
000108-88-3	Toluene

Penn Special Hazardous**Substances (>.01%) :**

00108-88-3	Toluene
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Island Hazardous**Substances (>.1%) :**

000111-76-2	BUTOXYETHANOL
000110-80-5	ETHOXYETHANOL
000064-17-5	Ethyl alcohol
000078-93-3	Methyl ethyl ketone
000123-86-4	n-Butyl acetate
014807-96-6	Talc
000108-88-3	Toluene
001330-20-7	Xylenes (o-, m-, p- isomers)

RCRA Status (>.01%) :

000078-93-3	Methyl ethyl ketone : 200.0 mg/L regulatory level; waste number D035
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N.J. RTK Substances

(>1%) :

000110-80-5	ETHOXYETHANOL
000078-93-3	Methyl ethyl ketone
014807-96-6	Talc
000108-88-3	Toluene

N.J. Special Hazardous

Substances (>.01%) :

000064-17-5	Ethyl alcohol
000067-56-1	Methyl alcohol
000078-93-3	Methyl ethyl ketone
000123-86-4	n-Butyl acetate
000108-88-3	Toluene
001330-20-7	Xylenes (o-, m-, p- isomers)

N.J. Env. Hazardous

Substances (>.1%) :

000077-43-7	Barium sulfate
000111-76-2	BUTOXYETHANOL
000110-80-5	ETHOXYETHANOL
000078-93-3	Methyl ethyl ketone
000108-88-3	Toluene
001330-20-7	Xylenes (o-, m-, p- isomers)

Proposition 65 -

Carcinogens (>0%):

014807-96-6	Talc
000108-88-3	Toluene

Proposition 65 - Female

Repro Toxins (>0%):

(No Product

Ingredients Listed)

Proposition 65 - Male

Repro Toxins (>0%):

000110-80-5	ETHOXYETHANOL
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Proposition 65 -

Developmental Toxins

(>0%):

000110-80-5	ETHOXYETHANOL
000064-17-5	Ethyl alcohol
000108-88-3	Toluene

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

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MATERIAL SAFETY DATA SHEET

D8002 HIGH BUILD PRIMER



Akzo Nobel Coatings
 Awlgrip North America
 2270 Morris Avenue
 P. O. Box 386
 Union, NJ 07083

Sales Order: (SalesOrd)
 MSDS Revision No: E4 -4
 MSDS Revision Date: 04/04/2006
 EMERGENCY NUMBERS:
 (800) 424-9300 CHEMTREC (USA)
 (703) 527-3887 CHEMTREC (Intl)
 (800) 854-6813 Poison Control Center
 CUSTOMER SERVICE: (Non-Emergency)
 (888) 355-3090 AWLGRIP (Phone)
 (908) 686-1752 AWLGRIP (Fax)

1. GENERAL INFORMATION

Product Identity: D8002 HIGH BUILD PRIMER

Bulk Sales Reference No: OD8002

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000078-93-3	Methyl ethyl ketone 1.0 - 10% by Weight	OSHA:	300 ppm STEL; 885 mg/m3 STEL
		ACGIH:	200 ppm TWA/300 ppm STEL
		NIOSH:	200 ppm TWA; 590 mg/m3 TWA/300 ppm STEL; 885 mg/m3 STEL/3000 ppm IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	200 ppm TWAEV; 590 mg/m3 TWAEV/300 ppm STEV; 885 mg/m3 STEV
		Mexico:	200 ppm TWA; 590 mg/m3 TWA/300 ppm STEL; 885 mg/m3 STEL
		Brazil:	155 ppm TWA; 460 mg/m3 TWA
		Source	Health Data
		NIOSH:	Irritation; liver kidney
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000108-88-3	Toluene 1.0 - 10% by Weight	OSHA:	150 ppm STEL; 560 mg/m3 STEL
		ACGIH:	50 ppm TWA
		NIOSH:	100 ppm TWA; 375 mg/m3 TWA/150 ppm STEL; 560 mg/m3 STEL/500 ppm IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	50 ppm TWAEV; 375 mg/m3 TWAEV
		Mexico:	100 ppm TWA; 375 mg/m3 TWA
		Brazil:	78 ppm TWA; 290 mg/m3 TWA
		Source	Health Data
		NIOSH:	Central nervous system depressant
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		

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NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
005131-66-8	1-Butoxy-2-propanol 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
013463-67-7	Titanium dioxide 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	10 mg/m3 TWA
		NIOSH:	5000 mg/m3 IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	10 mg/m3 TWAEV (total dust)
		Mexico:	10 mg/m3 TWA (nuisance particulate)20 mg/m3 STEL
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	Lung tumors in animals
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
014807-96-6	Talc 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	2 mg/m3 TWA (respirable fraction, particulate matter containing no asbestos and
		NIOSH:	2 mg/m3 TWA (respirable dust, containing no asbestos and less than 1% quartz)1000 mg/m3 IDLH (containing no asbestos and less than 1% quartz)
		Supplier:	No Established Limit
		OHSA, CAN:	2 mg/m3 TWAEV (respirable dust)
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	(containing asbestos); Fibrotic pneumoconiosis; (containing no asbestos); Nonmalignant respiratory effects
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: Yes
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: Yes; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No

3. HAZARD IDENTIFICATION

Overview:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.		
Inhalation:	Harmful if inhaled. Causes lung irritation. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.		
Eyes:	Causes severe eye irritation. Do not get in eyes.		
Skin:	Causes skin irritation. May be harmful if absorbed through the skin.		
Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.		
Chronic Effects:	Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient). Cancer hazard. Contains an ingredient which can cause cancer (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.		
HMIS Rating:	Health: Unknown	Flammability: Unknown	Reactivity: Unknown

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes:	Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin/Hand:	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls:	Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
Other Work Practices:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:	F: 40 C: 4
Lower Explosive Limit (LEL):	1 (%vol in air) at Normal Atmospheric Temp and Pressure
Fire and Explosion Hazards:	Flammable liquid and vapor. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.
Fire Fighting Procedures:	CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. SMALL FIRES: Use dry chemical, CO ₂ , water spray or alcohol-resistant foam. LARGE FIRES: Use water

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spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material.

Also Reference Emergency Response Guide Number: 127

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
pH:	No Established Limit
Specific Gravity:	2.1583
Boiling Point (F):	175
Vapor Density:	Heavier than air
VOC Content (lbs):	Refer to the Technical Data Sheet for this product.
Evaporation Rate:	Slower than ether

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:	Store between 40–100°F (4–38°C).
Handling and Storage Precautions:	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.
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11. ECOLOGICAL DATA

General:	No additional information provided for this product. See Section 2 for chemical specific data.
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12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures:	ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material. CALL CHEMTREC at (800)–424–9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).
Public Safety:	Also, Reference Emergency Response Guide Number: 127

OD8002_E4

13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	PAINT	IMDG Proper Shipping Name:	PAINT
DOT Hazard Class:	3	IMDG Hazard Class:	3.2 - Intermediate flashpoint flammable liquids
UN / NA Number:	UN 1263	UN Number:	UN 1263
DOT Packing Group:	II	IMDG Packing Group:	II
CERCLA/DOT RQ:	1110 gal. / 19951 lbs.	System Reference Code:	2

15. REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.
Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification: No Established Limit
Regulatory List: Product Ingredients on List

DOT Marine Pollutants (10%):
 (No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):
 (No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs (>.1%):
 (No Product Ingredients Listed)

EPCRA 302 Extremely Hazardous (>.1%):
 (No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals (>.1%):
 000078-93-3 Methyl ethyl ketone
 000071-36-3 n-Butyl alcohol
 000108-88-3 Toluene
 001330-20-7 Xylenes (o-, m-, p- isomers)

Mass RTK Substances (>1%):
 000078-93-3 Methyl ethyl ketone
 014807-96-6 Talc
 013463-67-7 Titanium dioxide
 000108-88-3 Toluene

Mass Extraordinarily Haz Sub (>.01%):
 000050-00-0 Formaldehyde
 014808-60-7 Quartz

Penn RTK Substances (>1%):
 000078-93-3 Methyl ethyl ketone
 014807-96-6 Talc
 013463-67-7 Titanium dioxide
 000108-88-3 Toluene

OD8002_E4

Penn Special Hazardous
Substances (>.01%) :

000050-00-0 Formaldehyde
000108-88-3 Toluene

Rhode Island Hazardous
Substances (>.1%) :

000071-36-3 n-Butyl alcohol
000108-88-3 Toluene

RCRA Status (>.01%) :

000078-93-3 Methyl ethyl ketone : 200.0 mg/L regulatory level; waste number
D035

N.J. RTK Substances (>1%) :
(No Product Ingredients
Listed)

N.J. Special Hazardous
Substances (>.01%) :

000064-17-5 Ethyl alcohol
000100-41-4 Ethyl benzene
000050-00-0 Formaldehyde
000067-56-1 Methyl alcohol
000078-93-3 Methyl ethyl ketone
000071-36-3 n-Butyl alcohol
000108-88-3 Toluene
001330-20-7 Xylenes (o-, m-, p- isomers)

N.J. Env. Hazardous Substances
(>.1%) :

000078-93-3 Methyl ethyl ketone
000071-36-3 n-Butyl alcohol
000108-88-3 Toluene
001330-20-7 Xylenes (o-, m-, p- isomers)

Proposition 65 - Carcinogens
(>0%):

000100-41-4 Ethyl benzene
000050-00-0 Formaldehyde
014808-60-7 Quartz

Proposition 65 - Female Repro

Toxins (>0%):
(No Product Ingredients
Listed)

Proposition 65 - Male Repro

Toxins (>0%):
(No Product Ingredients
Listed)

Proposition 65 - Developmental

Toxins (>0%):
(No Product Ingredients
Listed)

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

MATERIAL SAFETY DATA SHEET

Sales Order: {SalesOrd}

D6070 HULL-GARD EPOXYMSDS Revision No: E1 -1
MSDS Revision Date: 05/19/2005**AWLGRIP**

Akzo Nobel Coatings

Awlgrip North America

2270 Morris Avenue

P. O. Box 386

Union, NJ 07083

**EMERGENCY
NUMBERS:**

(800) 424-9300

(703) 527-3887

(800) 854-6813

CUSTOMER SERVICE:

(888) 355-3090

(908) 686-1752

CHEMTREC (USA)

CHEMTREC (Intl)

Poison Control

Center

(Non-Emergency)

AWLGRIP (Phone)

AWLGRIP (Fax)

1. GENERAL INFORMATION**Product Identity:** D6070 HULL-GARD EPOXY**Bulk Sales Reference No:** OD6070

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
		OSHA:	100 ppm TWA; 300 mg/m3 TWA50 ppm Ceiling; 150 mg/m3 Ceiling
		ACGIH:	20 ppm TWA
		NIOSH:	50 ppm Ceiling; 150 mg/m3 Ceiling1400 ppm IDLH

000071-36-3

n-Butyl alcohol
10 - 25% by Weight

Supplier: No Established Limit
 OSHA, CAN: 50 ppm CEV; 150 mg/m3 CEV
 Mexico: 50 ppm STEL; 150 mg/m3 STEL
 Brazil: No Established Limit

Source Health Data

NIOSH: Eye and mucous membrane irritation CNS depression

Source Carcinogen Data

OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No;
 Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
000095-63-6	Pseudocumene 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	25 ppm TWA; 125 mg/m3 TWA
		Supplier:	No Established Limit
		OSHA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
		OSHA:	100 ppm TWA; 435 mg/m3 TWA 125 ppm STEL; 545 mg/m3 STEL
		ACGIH:	100 ppm TWA 125 ppm STEL
		NIOSH:	100 ppm TWA; 435 mg/m3 TWA 125 ppm STEL; 545 mg/m3 STEL 800 ppm IDLH

000100-41-4

Ethyl benzene
0.10 - 1.0% by Weight

Supplier: No Established Limit
 OSHA, 100 ppm TWAEV; 435 mg/m3 TWAEV125 ppm STEV; 540 mg/
 CAN: m3 STEV
 Mexico: 100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3
 STEL
 Brazil: 78 ppm TWA; 340 mg/m3 TWA

Source Health Data

NIOSH: Eye skin

Source Carcinogen Data

OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No;
 Group 2b: Yes; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
001330-20-7	Xylenes (o-, m-, p- isomers) 1.0 - 10% by Weight	OSHA:	100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
		ACGIH:	100 ppm TWA150 ppm STEL
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OSHA,	100 ppm TWAEV; 435 mg/m3 TWAEV150 ppm STEV; 650 mg/
		CAN:	m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
		Brazil:	78 ppm TWA; 340 mg/m3 TWA
		Source	Health Data
		NIOSH:	Central nervous system depressant; respiratory and eye irritation
Source	Carcinogen Data		
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
		OSHA:	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
		ACGIH:	10 mg/m3 TWA
		NIOSH:	10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)50 mg/m3 IDLH (as Ba, except barium sulfate)

007727-43-7

Barium sulfate
10 - 25% by Weight

Supplier: No Established Limit
OHSA, 10 mg/m3 TWAEV (total dust)
CAN:
Mexico: 0.5 mg/m3 TWA
Brazil: No Established Limit

Source Health Data

NIOSH: Eye nose

Source Carcinogen Data

OSHA: Select Carcinogen: No
NTP: Known Carcinogen: No; Suspected Carcinogen: No
IARC: Group 1: No; Group 2A: No;
Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
012001-26-2	Mica (containing less than 1% quartz) 10 - 25% by Weight	OSHA:	No Established Limit
		ACGIH:	3 mg/m3 TWA (respirable fraction)
		NIOSH:	3 mg/m3 TWA (respirable dust, containing less than 1% quartz) 1500 mg/m3 IDLH (containing less than 1% quartz)
		Supplier:	No Established Limit
		OHSA,	6 mg/m3 TWAEV (total dust); 3 mg/m3 TWAEV (respirable dust, no asbestos and less than 1% crista
		CAN:	
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	respirable dust; Fibrotic pneumoconiosis
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
		OSHA:	15 mg/m3 TWA (total dust)
		ACGIH:	10 mg/m3 TWA
		NIOSH:	5000 mg/m3 IDLH
		Supplier:	No Established Limit

615463-67-7 Titanium dioxide
10 - 25% by Weight

OHSA,
CAN: 10 mg/m3 TWAEV (total dust)
Mexico: 10 mg/m3 TWA (nuisance particulate)20 mg/m3 STEL
Brazil: No Established Limit
Source Health Data
NIOSH: Lung tumors in animals
Source Carcinogen Data
OSHA: Select Carcinogen: No
NTP: Known Carcinogen: No; Suspected Carcinogen: No
IARC: Group 1: No; Group 2A: No;
Group 2b: No; Group 3: Yes; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
025036-25-3	Polymer of epoxy resin and bisphenol A 10 - 25% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source Health Data	
		NIOSH:	No Established Limit
		Source Carcinogen Data	
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
		OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit

064742-95-6

Petroleum naphtha, light aromatic
1.0 - 10% by Weight

Mexico: No Established Limit
Brazil: No Established Limit

Source

Health Data

NIOSH: No Established Limit

Source

Carcinogen Data

OSHA: Select Carcinogen: No

NTP: Known Carcinogen: No; Suspected Carcinogen: No

IARC: Group 1: No; Group 2A: No;
Group 2b: No; Group 3: No; Group 4: No

CAS No.

Ingredient Name & %

Source

Exposure Data

14807-96-6*

Talc (*non-asbestiform)
10 - 25% by Weight

OSHA: No Established Limit

ACGIH: No Established Limit

NIOSH: No Established Limit

Supplier: No Established Limit

OHSA, No Established Limit

CAN:

Mexico: No Established Limit

Brazil: No Established Limit

Source

Health Data

NIOSH: No Established Limit

Source

Carcinogen Data

OSHA: Select Carcinogen: No

NTP: Known Carcinogen: No; Suspected Carcinogen: No

IARC: Group 1: No; Group 2A: No;
Group 2b: No; Group 3: No; Group 4: No

3. HAZARD IDENTIFICATION

Overview:

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing. Contains 1,2,4-Trimethylbenzene which can cause central nervous system depression, anemia and bronchitis.

Inhalation:

May be harmful or fatal if inhaled. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.

Eyes:

Causes severe eye irritation. Do not get in eyes.

Skin:	Causes skin irritation. May cause allergic skin reaction. May be harmful if absorbed through the skin.		
Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.		
Chronic Effects:	Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient). Cancer hazard. Contains an ingredient which can cause cancer (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.		
HMIS Rating:	Health: Unknown	Flammability: Unknown	Reactivity: Unknown

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes:	Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin/Hand:	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls:	Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
Work Practices:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point: F: 80

C: 27

Lower Explosive Limit (LEL):

1 (%vol in air) at Normal Atmospheric Temp and Pressure

Fire and Explosion Hazards:

Flammable liquid and vapor. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.

Fire Fighting Procedures:

CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. SMALL FIRES: Use dry chemical, CO₂, water spray or alcohol-resistant foam. LARGE FIRES: Use water spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material.
Also Reference Emergency Response Guide Number: 127

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

pH: No Established Limit

Specific Gravity: 1.605109

Boiling Point (F): 279

Vapor Density: Heavier than air

VOC Content (lbs): Refer to the Technical Data Sheet for this product.

Evaporation Rate: Slower than ether

8. STABILITY AND REACTIVITY DATA

General: This product is stable and hazardous polymerization will not occur.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition: May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature: Store between 32 and 120 F

Handling and Storage Precautions: Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.

11. ECOLOGICAL DATA

General: No additional information provided for this product. See Section 2 for chemical specific data.

12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures: ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.

Public Safety: CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).

Also, Reference Emergency Response Guide Number: 127

13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)

IMO / IMDG (Ocean Transportation)

DOT Proper Shipping Name:

IMDG Proper Shipping Name:

PAINT

PAINT

DOT Hazard Class: 3

IMDG Hazard Class: 3.3 - High flashpoint flammable liquids

UN / NA Number: UN 1263

UN Number: UN 1263

DOT Packing Group: III

IMDG Packing Group: III

CERCLA/DOT RQ: 118 gal. / 1584 lbs.

System Reference Code: 28

15. REGULATORY INFORMATION

Regulatory Overview:

The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification: No Established Limit

Regulatory List

Product Ingredients on List

DOT Marine Pollutants (10%):

(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):

(No Product Ingredients Listed)

EPCRA 311/312**Chemicals and RQs****(>.1%) :**

000100-41-4	Ethyl benzene : 1000 lb final RQ; 454 kg final RQ
000071-36-3	n-Butyl alcohol : 5000 lb final RQ; 2270 kg final RQ
001330-20-7	Xylenes (o-, m-, p- isomers) : 100 lb final RQ; 45.4 kg final RQ

EPCRA 302 Extremely**Hazardous (>.1%) :****(No Product****Ingredients Listed)****EPCRA 313 Toxic****Chemicals (>.1%) :**

007727-43-7	Barium sulfate
000100-41-4	Ethyl benzene
000071-36-3	n-Butyl alcohol
000095-63-6	Pseudocumene
001330-20-7	Xylenes (o-, m-, p- isomers)

Mass RTK Substances**(>1%) :**

007727-43-7	Barium sulfate
012001-26-2	Mica (containing less than 1% quartz)
000071-36-3	n-Butyl alcohol
000095-63-6	Pseudocumene
013463-67-7	Titanium dioxide
001330-20-7	Xylenes (o-, m-, p- isomers)

Mass Extraordinarily**Sub (>.01%) :****(No Product****Ingredients Listed)****Penn RTK Substances****(>1%) :**

007727-43-7	Barium sulfate
012001-26-2	Mica (containing less than 1% quartz)
000071-36-3	n-Butyl alcohol
000095-63-6	Pseudocumene
013463-67-7	Titanium dioxide
001330-20-7	Xylenes (o-, m-, p- isomers)

Penn Special Hazardous**Substances (>.01%) :****(No Product****Ingredients Listed)****Rhode Island Hazardous****Substances (>.1%) :**

000064-17-5	Ethyl alcohol
000100-41-4	Ethyl benzene
012001-26-2	Mica (containing less than 1% quartz)
000071-36-3	n-Butyl alcohol
013463-67-7	Titanium dioxide
001330-20-7	Xylenes (o-, m-, p- isomers)

EPCRA Status (>.01%) :**(No Product****Ingredients Listed)**

N.J. RTK Substances**(>1%) :**

012001-26-2	Mica (containing less than 1% quartz)
00071-36-3	n-Butyl alcohol
0095-63-6	Pseudocumene
013463-67-7	Titanium dioxide
001330-20-7	Xylenes (o-, m-, p- isomers)

N.J. Special Hazardous**Substances (>.01%) :**

000098-82-8	Cumene
000064-17-5	Ethyl alcohol
000100-41-4	Ethyl benzene
000071-36-3	n-Butyl alcohol
000107-98-2	Propylene glycol monomethyl ether
001330-20-7	Xylenes (o-, m-, p- isomers)

N.J. Env. Hazardous**Substances (>.1%) :**

007727-43-7	Barium sulfate
000100-41-4	Ethyl benzene
000071-36-3	n-Butyl alcohol
000095-63-6	Pseudocumene
001330-20-7	Xylenes (o-, m-, p- isomers)

Proposition 65 -**Carcinogens (>0%):**

000050-00-0	Formaldehyde
007440-02-0	Nickel

Proposition 65 - Female**Repro Toxins (>0%):****(No Product****Ingredients Listed)****Proposition 65 - Male****Repro Toxins (>0%):****(No Product****Ingredients Listed)****Proposition 65 -****Developmental Toxins****(>0%):**

000064-17-5	Ethyl alcohol
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16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

MATERIAL SAFETY DATA SHEET

Sales Order: {SalesOrd}

D3707 HULL-GARD EPOXY PRIMER CONVERTER

MSDS Revision No: E2 -0
MSDS Revision Date: 08/24/2004



Akzo Nobel Coatings
Awlgrip North America
2270 Morris Avenue
P. O. Box 386
Union, NJ 07083

EMERGENCY NUMBERS:
(800) 424-9300 CHEMTREC (USA)
(703) 527-3887 CHEMTREC (Intl)
(800) 854-6813 Poison Control Center
CUSTOMER SERVICE: (Non-Emergency)
(888) 355-3090 AWLGRIP (Phone)
(908) 686-1752 AWLGRIP (Fax)

1. GENERAL INFORMATION

Product Identity: D3707 HULL-GARD EPOXY PRIMER CONVERTER

Bulk Sales Reference No: OD3707

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000071-36-3	n-Butyl alcohol 25 - 50% by Weight	OSHA:	100 ppm TWA; 300 mg/m3 TWA50 ppm Ceiling; 150 mg/m3 Ceiling
		ACGIH:	20 ppm TWA
		NIOSH:	50 ppm Ceiling; 150 mg/m3 Ceiling1400 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	50 ppm CEV; 150 mg/m3 CEV
		Mexico:	50 ppm STEL; 150 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Eye and mucous membrane irritation CNS depression
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000100-41-4	Ethyl benzene 1.0 - 10% by Weight	OSHA:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
		ACGIH:	100 ppm TWA125 ppm STEL
		NIOSH:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL800 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV125 ppm STEV; 540 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
		Brazil:	78 ppm TWA; 340 mg/m3 TWA
		Source	Health Data
		NIOSH:	Eye skin
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: Yes; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000112-24-3	Triethylene tetramine 1.0 - 10% by Weight	OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	No Data Available
		Supplier:	No Data Available
		OHSA, CAN:	0.5 ppm TWAEV; 3 mg/m3 TWAEV
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	No Data Available
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
001330-20-7	Xylenes (o-, m-, p- isomers) 25 - 50% by Weight	OSHA:	100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
		ACGIH:	100 ppm TWA150 ppm STEL
		NIOSH:	No Data Available
		Supplier:	No Data Available
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV150 ppm STEV; 650 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
		Brazil:	78 ppm TWA; 340 mg/m3 TWA
		Source	Health Data
		NIOSH:	Central nervous system depressant; respiratory and eye irritation
		Source	Carcinogen Data

OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 Group 1: No; Group 2A: No;
 IARC: Group 2b: No; Group 3: Yes; Group 4: No

3. HAZARD IDENTIFICATION

Overview:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.		
Inhalation:	Harmful if inhaled. Causes lung irritation. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.		
Eyes:	Causes eye burns. Do not get in eyes.		
Skin:	Causes skin burns. May be harmful if absorbed through the skin.		
Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.		
Chronic Effects:	Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient).		
HMIS Rating:	Health: Unknown	Flammability: Unknown	Reactivity: Unknown

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes:	Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin/Hand:	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls:	Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
Other Work Practices:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:	F: 80 C: 27
Lower Explosive Limit (LEL):	1 (%vol in air) at Normal Atmospheric Temp and Pressure
Fire and Explosion Hazards:	Flammable liquid and vapor. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated. CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. SMALL FIRES: Use dry chemical, CO ₂ , water spray or alcohol-resistant foam. LARGE FIRES: Use water spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material.
Fire Fighting Procedures:	Also Reference Emergency Response Guide Number: 127

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
pH:	Not Determined
Specific Gravity:	0.875804
Boiling Point (F):	243
Vapor Density:	Heavier than air
%OC Content (lbs):	Refer to the Technical Data Sheet for this product.
Evaporation Rate:	Slower than ether

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:	Store between 32 and 120 F
Handling and Storage Precautions:	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.
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11. ECOLOGICAL DATA

General: No additional information provided for this product. See Section 2 for chemical specific data.

12. ACCIDENTAL RELEASE MEASURES

**Spill Response
Procedures:**

ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.

Public Safety:

CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).

Also, Reference Emergency Response Guide Number: 127

13. DISPOSAL CONSIDERATION

Waste Disposal:

Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)

DOT Proper Shipping Name:

PAINT

DOT Hazard Class: 3

UN / NA Number: UN 1263

DOT Packing Group: III

CERCLA/DOT RQ: 46 gal. / 338 lbs.

IMO / IMDG (Ocean Transportation)

IMDG Proper Shipping Name:

PAINT

IMDG Hazard Class: 3.3 - High flashpoint flammable liquids

UN Number: UN 1263

IMDG Packing Group: III

**System Reference
Code:** 28

15. REGULATORY INFORMATION

Regulatory Overview:

The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification:

Not Determined

Regulatory List

Product Ingredients on List

DOT Marine Pollutants (10%):

(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):

(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs

(>.1%) :

000100-41-4

000071-36-3

001330-20-7

Ethyl benzene : 1000 lb final RQ; 454 kg final RQ

n-Butyl alcohol : 5000 lb final RQ; 2270 kg final RQ

Xylenes (o-, m-, p- isomers) : 100 lb final RQ; 45.4 kg final RQ

EPCRA 302 Extremely Hazardous (>.1%)

(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals (>.1%) :

000100-41-4 Ethyl benzene
000071-36-3 n-Butyl alcohol
001330-20-7 Xylenes (o-, m-, p- isomers)

Mass RTK Substances (>1%) :

000100-41-4 Ethyl benzene
000071-36-3 n-Butyl alcohol
000112-24-3 Triethylene tetramine
001330-20-7 Xylenes (o-, m-, p- isomers)

**Mass Extraordinarily Haz Sub (>.01%) :
(No Product Ingredients Listed)**

Penn RTK Substances (>1%) :

000100-41-4 Ethyl benzene
000071-36-3 n-Butyl alcohol
000112-24-3 Triethylene tetramine
001330-20-7 Xylenes (o-, m-, p- isomers)

**Penn Special Hazardous Substances
(>.01%) :**

(No Product Ingredients Listed)

Rhode Island Hazardous Substances

(>.1%) :

000100-41-4 Ethyl benzene
000071-36-3 n-Butyl alcohol
001330-20-7 Xylenes (o-, m-, p- isomers)

RCRA Status (>.01%) :

(No Product Ingredients Listed)

N.J. RTK Substances (>1%) :

000100-41-4 Ethyl benzene
000071-36-3 n-Butyl alcohol
000112-24-3 Triethylene tetramine
001330-20-7 Xylenes (o-, m-, p- isomers)

N.J. Special Hazardous Substances

(>.01%) :

000100-41-4 Ethyl benzene
000071-36-3 n-Butyl alcohol
000112-24-3 Triethylene tetramine
001330-20-7 Xylenes (o-, m-, p- isomers)

N.J. Env. Hazardous Substances (>.1%) :

000100-41-4 Ethyl benzene
000071-36-3 n-Butyl alcohol
001330-20-7 Xylenes (o-, m-, p- isomers)

Proposition 65 - Carcinogens (>0%):

(No Product Ingredients Listed)

Proposition 65 - Female Repro Toxins

(>0%):

(No Product Ingredients Listed)

Proposition 65 - Male Repro Toxins

(>0%):

(No Product Ingredients Listed)

Proposition 65 - Developmental Toxins

(>0%):

(No Product Ingredients Listed)

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

MATERIAL SAFETY DATA SHEET

T0002 FAST EVAP REDUCER AND EQUIPMENT CLEANER

Sales Order: {SalesOrd}

MSDS Revision No: A0 -1
 MSDS Revision Date: 02/09/2004



Akzo Nobel Coatings
 Awlgrip North America
 2270 Morris Avenue
 P. O. Box 386
 Union, NJ 07083

EMERGENCY NUMBERS:

(800) 424-9300 CHEMTREC (USA)
 (703) 527-3887 CHEMTREC (Intl)
 (800) 854-6813 Poison Control Center
CUSTOMER SERVICE: (Non-Emergency)
 (888) 355-3090 AWLGRIP (Phone)
 (908) 686-1752 AWLGRIP (Fax)

1. GENERAL INFORMATION

Product Identity: T0002 FAST EVAP REDUCER AND EQUIPMENT CLEANER

Bulk Sales Reference No: OT0002

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000078-93-3	Methyl ethyl ketone 100% by Weight	OSHA:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL
		ACGIH:	200 ppm TWA300 ppm STEL
		NIOSH:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL3000 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	200 ppm TWAEV; 590 mg/m3 TWAEV300 ppm STEV; 885 mg/m3 STEV
		Mexico:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL
		Brazil:	155 ppm TWA; 460 mg/m3 TWA
		Source	Health Data
		NIOSH:	Irritation; liver kidney
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

3. HAZARD IDENTIFICATION

Overview:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.		
Inhalation:	Harmful if inhaled. Causes lung irritation. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.		
Eyes:	Causes severe eye irritation. Do not get in eyes.		
Skin:	Causes skin irritation. May be harmful if absorbed through the skin.		
Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.		
Chronic Effects:			
HMIS Rating:	Health: 2	Flammability: 3	Reactivity: 0

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes:	Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin/Hand:	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls:	Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
Other Work Practices:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:	F: 23 C: -5
Lower Explosive Limit (LEL):	1 (%vol in air) at Normal Atmospheric Temp and Pressure
Fire and Explosion Hazards:	Flammable liquid and vapor. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.

Fire Fighting Procedures:

CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. SMALL FIRES: Use dry chemical, CO₂, water spray or alcohol-resistant foam. LARGE FIRES: Use water spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material.

Also Reference Emergency Response Guide Number: 127

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
pH:	Not Determined
Specific Gravity:	0.803
Boiling Point (F):	175
Vapor Density:	Heavier than air
VOC Content (lbs):	Refer to the Technical Data Sheet for this product.
Evaporation Rate:	Slower than ether

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:	Store between 32 and 120 F
Handling and Storage Precautions:	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.
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11. ECOLOGICAL DATA

General:	No additional information provided for this product. See Section 2 for chemical specific data.
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12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures:	ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material. CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).
Public Safety:	Also, Reference Emergency Response Guide Number: 127

13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	PAINT RELATED MATERIAL	IMDG Proper Shipping Name:	PAINT RELATED MATERIAL
DOT Hazard Class:	3	IMDG Hazard Class:	3.2 - Intermediate flashpoint flammable liquids
UN / NA Number:	UN 1263	UN Number:	UN 1263
DOT Packing Group:	II	IMDG Packing Group:	II
CERCLA/DOT RQ:	747 gal. / 5000 lbs.	System Reference Code:	29

15. REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.
Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification: B2; D2B; E

Regulatory List	Product Ingredients on List
DOT Marine Pollutants (10%): (No Product Ingredients Listed)	
DOT Severe Marine Pollutants (1%): (No Product Ingredients Listed)	
EPCRA 311/312 Chemicals and RQs (>.1%): 000078-93-3	Methyl ethyl ketone : 5000 lb final RQ; 2270 kg final RQ
EPCRA 302 Extremely Hazardous (>.1%): (No Product Ingredients Listed)	
EPCRA 313 Toxic Chemicals (>.1%): 000078-93-3	Methyl ethyl ketone
Mass RTK Substances (>1%): 000078-93-3	Methyl ethyl ketone
Mass Extraordinarily Haz Sub (>.01%): (No Product Ingredients Listed)	
Penn RTK Substances (>1%): 000078-93-3	Methyl ethyl ketone
Penn Special Hazardous Substances (>.01%): (No Product Ingredients Listed)	
Rhode Island Hazardous Substances (>.1%): 000078-93-3	Methyl ethyl ketone
RCRA Status (>.01%): 000078-93-3	Methyl ethyl ketone : 200.0 mg/L regulatory level; waste number D035
N.J. RTK Substances (>1%): 000078-93-3	Methyl ethyl ketone
N.J. Special Hazardous Substances (>.01%): 000078-93-3	Methyl ethyl ketone
N.J. Env. Hazardous Substances (>.1%): 000078-93-3	Methyl ethyl ketone
Proposition 65 - Carcinogens (>0%): (No Product Ingredients Listed)	
Proposition 65 - Female Repro Toxins (>0%): (No Product Ingredients Listed)	

Proposition 65 - Male Repro Toxins (>0%):

(No Product Ingredients Listed)

Proposition 65 - Developmental Toxins

(>0%):

(No Product Ingredients Listed)

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

MATERIAL SAFETY DATA SHEET

Sales Order: {SalesOrd}

T0006 STANDARD REDUCER FOR EPOXY PRIMERS

MSDS Revision No: A1 -1
 MSDS Revision Date: 02/09/2004



Akzo Nobel Coatings
 Awlgrip North America
 2270 Morris Avenue
 P. O. Box 386
 Union, NJ 07083

EMERGENCY NUMBERS:
 (800) 424-9300 CHEMTREC (USA)
 (703) 527-3887 CHEMTREC (Intl)
 (800) 854-6813 Poison Control Center
CUSTOMER SERVICE: (Non-Emergency)
 (888) 355-3090 AWLGRIP (Phone).
 (908) 686-1752 AWLGRIP (Fax)

1. GENERAL INFORMATION

Product Identity: T0006 STANDARD REDUCER FOR EPOXY PRIMERS

Bulk Sales Reference No: OT0006

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000071-36-3	n-Butyl alcohol 10 - 25% by Weight	OSHA:	100 ppm TWA; 300 mg/m3 TWA50 ppm Ceiling; 150 mg/m3 Ceiling
		ACGIH:	20 ppm TWA
		NIOSH:	50 ppm Ceiling; 150 mg/m3 Ceiling1400 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	50 ppm CEV; 150 mg/m3 CEV
		Mexico:	50 ppm STEL; 150 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Eye and mucous membrane irritation CNS depression
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000078-93-3	Methyl ethyl ketone 10 - 25% by Weight	OSHA:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL
		ACGIH:	200 ppm TWA300 ppm STEL
		NIOSH:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL3000 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	200 ppm TWAEV; 590 mg/m3 TWAEV300 ppm STEV; 885 mg/m3 STEV
		Mexico:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL
		Brazil:	155 ppm TWA; 460 mg/m3 TWA
		Source	Health Data
		NIOSH:	Irritation; liver kidney
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000107-98-2	Propylene glycol monomethyl ether 10 - 25% by Weight	OSHA:	150 ppm STEL; 540 mg/m3 STEL
		ACGIH:	100 ppm TWA150 ppm STEL
		NIOSH:	100 ppm TWA; 360 mg/m3 TWA150 ppm STEL; 540 mg/m3 STEL
		Supplier:	No Data Available
		OHSA, CAN:	100 ppm TWAEV; 365 mg/m3 TWAEV150 ppm STEV; 550 mg/m3 STEV
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Eye nose
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000108-88-3	Toluene 10 - 25% by Weight	OSHA:	200 ppm TWA150 ppm STEL; 560 mg/m3 STEL
		ACGIH:	50 ppm TWA
		NIOSH:	100 ppm TWA; 375 mg/m3 TWA150 ppm STEL; 560 mg/m3 STEL500 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	50 ppm TWAEV; 376 mg/m3 TWAEV
		Mexico:	100 ppm TWA; 375 mg/m3 TWA
		Brazil:	78 ppm TWA; 290 mg/m3 TWA
		Source	Health Data
		NIOSH:	Central nervous system depressant
		Source	Carcinogen Data

OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 Group 1: No; Group 2A: No;
 IARC: Group 2b: No; Group 3: Yes; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
000123-86-4	n-Butyl acetate 25 - 50% by Weight	OSHA:	150 ppm TWA; 710 mg/m3 TWA200 ppm STEL; 950 mg/m3 STEL
		ACGIH:	150 ppm TWA200 ppm STEL
		NIOSH:	150 ppm TWA; 710 mg/m3 TWA200 ppm STEL; 950 mg/m3 STEL1700 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	150 ppm TWAEV; 710 mg/m3 TWAEV200 ppm STEV; 950 mg/m3 STEV
		Mexico:	150 ppm TWA; 710 mg/m3 TWA200 ppm STEL; 950 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Mucous membrane and eye irritation; high concentrations cause nervous system effects in animals
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

3. HAZARD IDENTIFICATION

Overview:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.		
Inhalation:	Harmful if inhaled. Causes lung irritation. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.		
Eyes:	Causes severe eye irritation. Do not get in eyes.		
Skin:	Causes skin irritation. May be harmful if absorbed through the skin.		
Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.		
Chronic Effects:	Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient). Birth defect hazard. Contains an ingredient which can cause birth defects (See Section 2 and Section 15 for each ingredient).		
HMIS Rating:	Health: 2*	Flammability: 3	Reactivity: 0

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes:	Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin/Hand:	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls: Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.	
Other Work Practices: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.	

6. FIRE AND EXPLOSION INFORMATION

Flash Point:	F: 23 C: -5
Lower Explosive Limit (LEL):	0 (%vol in air) at Normal Atmospheric Temp and Pressure
Fire and Explosion Hazards:	Flammable liquid and vapor. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated. CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. SMALL FIRES: Use dry chemical, CO2, water spray or alcohol-resistant foam. LARGE FIRES: Use water spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material.
Fire Fighting Procedures:	Also Reference Emergency Response Guide Number: 127

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
pH:	Not Determined
Specific Gravity:	0.85
Boiling Point (F):	0 ERROR!!!
Vapor Density:	Heavier than air
VOC Content (lbs):	Refer to the Technical Data Sheet for this product.
Evaporation Rate:	Slower than ether

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature: Store between 32 and 120 F

Handling and Storage Precautions: Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.

11. ECOLOGICAL DATA

General: No additional information provided for this product. See Section 2 for chemical specific data.

12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures: ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.

Public Safety: CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).

Also, Reference Emergency Response Guide Number: 127

13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	PAINT RELATED MATERIAL	IMDG Proper Shipping Name:	PAINT RELATED MATERIAL
DOT Hazard Class:	3	IMDG Hazard Class:	3.2 - Intermediate flashpoint flammable liquids
UN / NA Number:	UN 1263	UN Number:	UN 1263
DOT Packing Group:	II	IMDG Packing Group:	II
CERCLA/DOT RQ:	706 gal. / 5000 lbs.	System Reference Code:	29

15. REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification: B2; D2B; E

Regulatory List**DOT Marine Pollutants (10%):**

(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):

(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs**(>.1%):**

000078-93-3

000123-86-4

000071-36-3

000108-88-3

Methyl ethyl ketone : 5000 lb final RQ; 2270 kg final RQ

n-Butyl acetate : 5000 lb final RQ; 2270 kg final RQ

n-Butyl alcohol : 5000 lb final RQ; 2270 kg final RQ

Toluene : 1000 lb final RQ; 454 kg final RQ

EPCRA 302 Extremely Hazardous (>.1%):

(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals (>.1%):

000078-93-3

000071-36-3

000107-98-2

000108-88-3

Methyl ethyl ketone

n-Butyl alcohol

Propylene glycol monomethyl ether

Toluene

Mass RTK Substances (>1%):

000078-93-3

000123-86-4

000071-36-3

000107-98-2

000108-88-3

Methyl ethyl ketone

n-Butyl acetate

n-Butyl alcohol

Propylene glycol monomethyl ether

Toluene

Mass Extraordinarily Haz Sub (>.01%):

(No Product Ingredients Listed)

Penn RTK Substances (>1%):

000078-93-3

000123-86-4

000071-36-3

000107-98-2

000108-88-3

Methyl ethyl ketone

n-Butyl acetate

n-Butyl alcohol

Propylene glycol monomethyl ether

Toluene

Penn Special Hazardous Substances**(>.01%):**

000108-88-3

Toluene

Rhode Island Hazardous Substances**(>.1%):**

000078-93-3

000123-86-4

000071-36-3

000107-98-2

000108-88-3

Methyl ethyl ketone

n-Butyl acetate

n-Butyl alcohol

Propylene glycol monomethyl ether

Toluene

RCRA Status (>.01%):

000078-93-3

Methyl ethyl ketone : 200.0 mg/L regulatory level; waste number D035

N.J. RTK Substances (>1%):

000078-93-3

000123-86-4

000071-36-3

000107-98-2

000108-88-3

Methyl ethyl ketone

n-Butyl acetate

n-Butyl alcohol

Propylene glycol monomethyl ether

Toluene

N.J. Special Hazardous Substances**(>.01%):**

000078-93-3

000123-86-4

000071-36-3

000107-98-2

000108-88-3

Methyl ethyl ketone

n-Butyl acetate

n-Butyl alcohol

Propylene glycol monomethyl ether

Toluene

N.J. Env. Hazardous Substances (>.1%):

000078-93-3

000071-36-3

000107-98-2

000108-88-3

Methyl ethyl ketone

n-Butyl alcohol

Propylene glycol monomethyl ether

Toluene

Proposition 65 - Carcinogens (>0%):

000108-88-3

Toluene

Proposition 65 - Female Repro Toxins**(>0%):**

(No Product Ingredients Listed)

Proposition 65 - Male Repro Toxins (>0%):

(No Product Ingredients Listed)

Proposition 65 - Developmental Toxins**(>0%):**

000108-88-3

Toluene

Product Ingredients on List

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

MATERIAL SAFETY DATA SHEET

Sales Order: {SalesOrd}

T0115 AWL-PREP PLUS WAX & GREASE REMOVER

MSDS Revision No: A0 -0
 MSDS Revision Date: 03/01/2004



Akzo Nobel Coatings
 Awlgrip North America
 2270 Morris Avenue
 P. O. Box 386
 Union, NJ 07083

EMERGENCY NUMBERS:

(800) 424-9300 CHEMTREC (USA)
 (703) 527-3887 CHEMTREC (Intl)
 (800) 854-6813 Poison Control Center
CUSTOMER SERVICE: (Non-Emergency)
 (888) 355-3090 AWLGRIP (Phone)
 (908) 686-1752 AWLGRIP (Fax)

1. GENERAL INFORMATION

Product Identity: T0115 AWL-PREP PLUS WAX & GREASE REMOVER

Bulk Sales Reference No: OT0115

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000100-41-4	Ethyl benzene 1.0 - 10% by Weight	OSHA:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
		ACGIH:	100 ppm TWA125 ppm STEL
		NIOSH:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL800 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV125 ppm STEV; 540 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
		Brazil:	78 ppm TWA; 340 mg/m3 TWA
			Health Data
		NIOSH:	Eye skin
			Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: Yes; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data		
001330-20-7	Xylenes (o-, m-, p- isomers) 50 - 75% by Weight	OSHA:	100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL		
		ACGIH:	100 ppm TWA150 ppm STEL		
		NIOSH:	No Data Available		
		Supplier:	No Data Available		
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV150 ppm STEV; 650 mg/m3 STEV		
		Mexico:	100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL		
		Brazil:	78 ppm TWA; 340 mg/m3 TWA		
		Source		Health Data	
		NIOSH:	Central nervous system depressant; respiratory and eye irritation		
		Source		Carcinogen Data	
OSHA:	Select Carcinogen: No				
NTP:	Known Carcinogen: No; Suspected Carcinogen: No				
IARC:	Group 1: No; Group 2A: No;				
	Group 2b: No; Group 3: Yes; Group 4: No				

3. HAZARD IDENTIFICATION

Overview:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.		
Inhalation:	Harmful if inhaled. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.		
Eyes:	Causes severe eye irritation. Do not get in eyes.		
Skin:	Causes skin irritation. May be harmful if absorbed through the skin.		
Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.		
Chronic Effects:	Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient).		
HMS Rating:	Health: Unknown	Flammability: Unknown	Reactivity: Unknown

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
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- Eyes:** Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
- Skin/Hand:** Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
- Engineering Controls:** Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
- Other Work Practices:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

- Flash Point:** F: 80
C: 27
- Lower Explosive Limit (LEL):** 1 (%vol in air) at Normal Atmospheric Temp and Pressure
- Fire and Explosion Hazards:** Flammable liquid and vapor. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.
- Fire Fighting Procedures:** CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. SMALL FIRES: Use dry chemical, CO₂, water spray or alcohol-resistant foam. LARGE FIRES: Use water spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material.
- Also Reference Emergency Response Guide Number: 127**

7. PHYSICAL AND CHEMICAL PROPERTIES

- Physical State:** Liquid
- pH:** Not Determined
- Specific Gravity:** 0.810283
- Boiling Point (F):** 245
- Vapor Density:** Heavier than air
- VOC Content (lbs):** Refer to the Technical Data Sheet for this product.
- Evaporation Rate:** Slower than ether

8. STABILITY AND REACTIVITY DATA

- General:** This product is stable and hazardous polymerization will not occur.
- Incompatible Materials:** Strong oxidizing agents.
- Hazardous Decomposition:** May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

- Storage Temperature:** Store between 32 and 120 F
- Handling and Storage Precautions:** Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.

11. ECOLOGICAL DATA

General:

No additional information provided for this product. See Section 2 for chemical specific data.

12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures:

ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.

Public Safety:

CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).

Also, Reference Emergency Response Guide Number: 127

13. DISPOSAL CONSIDERATION

Waste Disposal:

Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:		IMDG Proper Shipping Name:	
PAINT		PAINT	
DOT Hazard Class:	3	IMDG Hazard Class:	3.3 - High flashpoint flammable liquids
UN / NA Number:	UN 1263	UN Number:	UN 1263
DOT Packing Group:	III	IMDG Packing Group:	III
CERCLA/DOT RQ:	28 gal. / 192 lbs.	System Reference Code:	2

15. REGULATORY INFORMATION

Regulatory Overview:

The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification:

Not Determined

Regulatory List
Product Ingredients on List
DOT Marine Pollutants (10%):

(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):

(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs
(>.1%):

000100-41-4

Ethyl benzene : 1000 lb final RQ; 454 kg final RQ

001330-20-7

Xylenes (o-, m-, p- isomers) : 100 lb final RQ; 45.4 kg final RQ

EPCRA 302 Extremely Hazardous (>.1%) :**(No Product Ingredients Listed)****EPCRA 313 Toxic Chemicals (>.1%) :**

000100-41-4

Ethyl benzene

001330-20-7

Xylenes (o-, m-, p- isomers)

Mass RTK Substances (>1%) :

000100-41-4

Ethyl benzene

001330-20-7

Xylenes (o-, m-, p- isomers)

Mass Extraordinarily Haz Sub (>.01%) :**(No Product Ingredients Listed)****Penn RTK Substances (>1%) :**

000100-41-4

Ethyl benzene

001330-20-7

Xylenes (o-, m-, p- isomers)

Penn Special Hazardous Substances**(>.01%) :****(No Product Ingredients Listed)****Rhode Island Hazardous Substances****(>.1%) :**

000100-41-4

Ethyl benzene

001330-20-7

Xylenes (o-, m-, p- isomers)

RCRA Status (>.01%) :**(No Product Ingredients Listed)****N.J. RTK Substances (>1%) :**

000100-41-4

Ethyl benzene

001330-20-7

Xylenes (o-, m-, p- isomers)

N.J. Special Hazardous Substances**(>.01%) :**

000100-41-4

Ethyl benzene

001330-20-7

Xylenes (o-, m-, p- isomers)

N.J. Env. Hazardous Substances (>.1%) :

000100-41-4

Ethyl benzene

001330-20-7

Xylenes (o-, m-, p- isomers)

Proposition 65 - Carcinogens (>0%):**(No Product Ingredients Listed)****Proposition 65 - Female Repro Toxins****(>0%):****(No Product Ingredients Listed)****Proposition 65 - Male Repro Toxins (>0%):****(No Product Ingredients Listed)****Proposition 65 - Developmental Toxins****(>0%):****(No Product Ingredients Listed)****16. OTHER INFORMATION**

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

MATERIAL SAFETY DATA SHEET

Sales Order: {SalesOrd}

AWL-PREP 400 SLOW EVAPORATING SOLVENT

MSDS Revision No: A0 -0
 MSDS Revision Date: 03/01/2004



Akzo Nobel Coatings
 Awlgrip North America
 2270 Morris Avenue
 P. O. Box 386
 Union, NJ 07083

EMERGENCY NUMBERS:

(800) 424-9300 CHEMTREC (USA)
 (703) 527-3887 CHEMTREC (Intl)
 (800) 854-6813 Poison Control Center
CUSTOMER SERVICE: (Non-Emergency)
 (888) 355-3090 AWLGRIP (Phone)
 (908) 686-1752 AWLGRIP (Fax)

1. GENERAL INFORMATION

Product Identity: AWL-PREP 400 SLOW EVAPORATING SOLVENT

Bulk Sales Reference No: OT0170

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000095-63-6	Pseudocumene 1.0 - 10% by Weight	OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	25 ppm TWA; 125 mg/m3 TWA
		Supplier:	No Data Available
		OHSA, CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	No Data Available
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
008052-41-3	Stoddard solvent 50 - 75% by Weight	OSHA:	500 ppm TWA; 2900 mg/m3 TWA
		ACGIH:	100 ppm TWA
		NIOSH:	350 mg/m3 TWA 1800 mg/m3 Ceiling (15 minute) 20000 mg/m3 IDLH
		Supplier:	No Data Available
		OHSA, CAN:	525 mg/m3 TWAEV (140 Degree C Flash Aliphatic Solvent)
		Mexico:	100 ppm TWA; 523 mg/m3 TWA 200 ppm STEL; 1050 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Eye nose
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

3. HAZARD IDENTIFICATION

Overview:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing. Contains 1,2,4-Trimethylbenzene which can cause central nervous system depression, anemia and bronchitis.		
Inhalation:	May be harmful or fatal if inhaled. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.		
Eyes:	Causes severe eye irritation. Avoid contact with eyes.		
Skin:	Causes skin irritation. May be harmful if absorbed through the skin.		
Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.		
Chronic Effects:	Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient).		
HMIS Rating:	Health: Unknown	Flammability: Unknown	Reactivity: Unknown

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
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- Eyes:** Avoid contact with eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
- Skin/Hand:** Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
- Engineering Controls:** Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
- Other Work Practices:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

- Flash Point:** F: 50
C: 10
- Lower Explosive Limit (LEL):** 1 (%vol in air) at Normal Atmospheric Temp and Pressure
- Fire and Explosion Hazards:** Flammable liquid and vapor. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.
- Fire Fighting Procedures:** CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. SMALL FIRES: Use dry chemical, CO₂, water spray or alcohol-resistant foam. LARGE FIRES: Use water spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material.
- Also Reference Emergency Response Guide Number: 127**

7. PHYSICAL AND CHEMICAL PROPERTIES

- Physical State:** Liquid
- pH:** Not Determined
- Specific Gravity:** 0.770698
- Boiling Point (F):** 245
- Vapor Density:** Heavier than air
- VOC Content (lbs):** Refer to the Technical Data Sheet for this product.
- Evaporation Rate:** Slower than ether

8. STABILITY AND REACTIVITY DATA

- General:** This product is stable and hazardous polymerization will not occur.
- Incompatible Materials:** Strong oxidizing agents.
- Hazardous Decomposition:** May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

- Storage Temperature:** Store between 32 and 120 F
- Handling and Storage Precautions:** Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Avoid contact with eyes, skin and clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.

11. ECOLOGICAL DATA

General: No additional information provided for this product. See Section 2 for chemical specific data.

12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures: ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.

Public Safety: CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).

Also, Reference Emergency Response Guide Number: 127

13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	PAIN	IMDG Proper Shipping Name:	PAIN
DOT Hazard Class:	3	IMDG Hazard Class:	3.2 - Intermediate flashpoint flammable liquids
UN / NA Number:	UN 1263	UN Number:	UN 1263
DOT Packing Group:	II	IMDG Packing Group:	II
CERCLA/DOT RQ:	Not Applicable gal. / Not Applicable lbs.	System Reference Code:	2

15. REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.
Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification: Not Determined

Regulatory List

DOT Marine Pollutants (10%): (No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%): (No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs (>.1%): (No Product Ingredients Listed)

Product Ingredients on List

EPCRA 302 Extremely Hazardous (>.1%) :
 (No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals (>.1%) :
 000095-63-6 Pseudocumene

Mass RTK Substances (>1%) :
 000095-63-6 Pseudocumene
 008052-41-3 Stoddard solvent

Mass Extraordinarily Haz Sub (>.01%) :
 (No Product Ingredients Listed)

Penn RTK Substances (>1%) :
 000095-63-6 Pseudocumene
 008052-41-3 Stoddard solvent

Penn Special Hazardous Substances (>.01%) :
 (No Product Ingredients Listed)

Rhode Island Hazardous Substances (>.1%) :
 008052-41-3 Stoddard solvent

RCRA Status (>.01%) :
 (No Product Ingredients Listed)

N.J. RTK Substances (>1%) :
 000095-63-6 Pseudocumene
 008052-41-3 Stoddard solvent

N.J. Special Hazardous Substances (>.01%) :
 (No Product Ingredients Listed)

N.J. Env. Hazardous Substances (>.1%) :
 000095-63-6 Pseudocumene

Proposition 65 - Carcinogens (>0%):
 (No Product Ingredients Listed)

Proposition 65 - Female Repro Toxins (>0%):
 (No Product Ingredients Listed)

Proposition 65 - Male Repro Toxins (>0%):
 (No Product Ingredients Listed)

Proposition 65 - Developmental Toxins (>0%):
 (No Product Ingredients Listed)

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

OD7010_E1

MATERIAL SAFETY DATA SHEET
D7010 AWLFAIR LW FAST



Akzo Nobel Coatings
Awlgrip North America
2270 Morris Avenue
P. O. Box 386
Union, NJ 07083

Sales Order: (SalesOrd)
MSDS Revision No: E1 -6
MSDS Revision Date: 06/21/2007
EMERGENCY NUMBERS:
(800) 424-9300 CHEMTREC (USA)
(703) 527-3887 CHEMTREC (Intl)
(800) 854-6813 Poison Control Center
CUSTOMER SERVICE: (Non-Emergency)
(888) 355-3090 AWLGRIP (Phone)
(908) 686-1752 AWLGRIP (Fax)

1. GENERAL INFORMATION

Product Identity: D7010 AWLFAIR LW FAST
Bulk Sales Reference No: OD7010

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000090-72-2	TRI(DIMETHYLAMINOMETHYL)PHENOL 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000100-51-6	Benzyl alcohol 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

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CAS No.	Ingredient Name & %	Source	Exposure Data
001309-37-1	Iron oxide 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	5 mg/m3 TWA (dust and fume, as Fe)
		NIOSH:	5 mg/m3 TWA (dust and fume, as Fe) 2500 mg/m3 IDLH (dust and fume, as Fe)
		Supplier:	No Established Limit
		OHSA, CAN:	10 mg/m3 TWAEV (total dust, no asbestos and less than 1% crystalline silica)
		Mexico:	5 mg/m3 TWA (respirable dust) 10 mg/m3 STEL (fume)
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	Benign pneumoconiosis termed siderosis
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No;
			Group 2b: No; Group 3: Yes; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
001477-55-0	m-Xylene-alpha, alpha'-diamine 1.0 - 10% by Weight	OSHA:	0.1 mg/m3 Ceiling
		ACGIH:	0.1 mg/m3 Ceiling
		NIOSH:	0.1 mg/m3 Ceiling
		Supplier:	No Established Limit
		OHSA, CAN:	0.1 mg/m3 CEV
		Mexico:	0.1 mg/m3 TWA 0.1 mg/m3 STEL
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	Skin irritation systemic effects
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No;
			Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
002855-13-2	Isophorone diamine 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No;
			Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
065997-17-3	Glass, oxide, chemicals 10 - 25% by Weight	OSHA:	No Established Limit
		ACGIH:	2 mg/m3 TWA (as Sn, except tin hydride)
		NIOSH:	2 mg/m3 TWA (as Sn, except oxides) 100 mg/m3 IDLH (as Sn, except oxides)
		Supplier:	No Established Limit

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OHSA, CAN: 2 mg/m3 TWAEV (except stannane, as Sn)
 Mexico: 2 mg/m3 TWA4 mg/m3 STEL (as Sn)
 Brazil: No Established Limit
 Source Health Data
 NIOSH: No Established Limit
 Source Carcinogen Data
 OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No;
 Group 2b: Yes; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
084852-15-3	Phenol, 4-nonyl-, branched 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
14807-96-6*	Talc (*non-asbestiform) 10 - 25% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
TS-KH3028	Alkyl amine 10 - 25% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		

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NTP: Known Carcinogen: No; Suspected Carcinogen: No
IARC: Group 1: No; Group 2A: No;
Group 2b: No; Group 3: No; Group 4: No

3. HAZARD IDENTIFICATION

Overview: Avoid contact with eyes, skin and clothing.

Inhalation: Harmful if inhaled. Causes lung irritation. Causes nose and throat irritation.

Eyes: Causes eye burns. Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific condition of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.

Skin: Causes skin burns. May be harmful if absorbed through the skin.

Ingestion: Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.

Chronic Effects: Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient). Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.

HMS Rating: Health: Unknown Flammability: Unknown Reactivity: Unknown

4. FIRST AID MEASURES

General: Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin: In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.

Ingestion: If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory: Avoid breathing dust. Use a NIOSH approved respirator in accordance with 29CFR 1910.134 to remove particulates (and vapors if there is overexposure to vapors generated during the processing of this product). FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.

Eyes: Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific condition of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.

Skin/Hand: Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.

Engineering Controls: Depending on the site-specific conditions of use, provide adequate ventilation.

Other Work Practices: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water. Avoid contact with eyes and clothing. Avoid prolonged or repeated contact with skin.

6. FIRE AND EXPLOSION INFORMATION

Flash Point: F: 200
C: 93

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Lower Explosive Limit (LEL): No Established Limit (%vol in air) at Normal Atmospheric Temp and Pressure

Fire and Explosion Hazards: **FLAMMABLE/COMBUSTIBLE MATERIALS:** Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.

Fire Fighting Procedures: Also Reference Emergency Response Guide Number: Not Determined

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid

pH: 11

Specific Gravity: 0.649459

Boiling Point (F): 400

Vapor Density: Not Applicable

VOC Content (lbs): Refer to the Technical Data Sheet for this product.

Evaporation Rate: Not Applicable

8. STABILITY AND REACTIVITY DATA

General: This product is stable and hazardous polymerization will not occur. Not sensitive to mechanical impact. Excessive heat and fumes generation can occur if improperly handled.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition: May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature: Store between 32 and 120 F

Handling and Storage Precautions: Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Finely divided powders are potentially explosive when suspended in air. Isolate from heat, sparks, electrical equipment and open flame. Do not get in eyes, on skin or clothing. Do not breathe dust. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General: No additional information provided for this product. See Section 2 for chemical specific data.

11. ECOLOGICAL DATA

General: No additional information provided for this product. See Section 2 for chemical specific data.

12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures: **ELIMINATE ALL IGNITION SOURCES** (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material. CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. **LARGE SPILLS:** Consider initial downwind evacuation for at least 300 meters (1000 feet).

Public Safety: Also, Reference Emergency Response Guide Number: Not Determined

13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	CORROSIVE SOLID N.O.S	IMDG Proper Shipping Name:	CORROSIVE SOLID N.O.S
DOT Hazard Class:	CORRSV8	IMDG Hazard Class:	Corrosive,8
UN / NA Number:	UN1759	UN Number:	UN1759
DOT Packing Group:	III	IMDG Packing Group:	III
CERCLA/DOT RQ:	Not Applicable gal. / Not Applicable lbs.	System Reference Code:	190

15. REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.
Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification: No Established Limit

Regulatory List: Product Ingredients on List

DOT Marine Pollutants (10%):
 (No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):
 (No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs (>.1%) :
 (No Product Ingredients Listed)

EPCRA 302 Extremely Hazardous (>.1%) :
 (No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals (>.1%) :
 (No Product Ingredients Listed)

Mass RTK Substances (>1%) :
 000100-51-6 Benzyl alcohol
 001309-37-1 Iron oxide
 001477-55-0 m-Xylene-alpha, alpha'-diamine

Mass Extraordinarily Haz Sub (>.01%) :
 (No Product Ingredients Listed)

Penn RTK Substances (>1%) :
 000100-51-6 Benzyl alcohol
 001309-37-1 Iron oxide
 001477-55-0 m-Xylene-alpha, alpha'-diamine

Penn Special Hazardous Substances (>.01%) :
 (No Product Ingredients)

Listed)
 Rhode Island Hazardous
 Substances (>.1%) :
 (No Product Ingredients
 Listed)
 RCRA Status (>.01%) :
 (No Product Ingredients
 Listed)
 N.J. RTK Substances (>1%) :
 (No Product Ingredients
 Listed)
 N.J. Special Hazardous
 Substances (>.01%) :
 002855-13-2 Isophorone diamine
 N.J. Env. Hazardous Substances
 (>.1%) :
 (No Product Ingredients
 Listed)
 Proposition 65 – Carcinogens
 (>0%):
 (No Product Ingredients
 Listed)
 Proposition 65 – Female Repro
 Toxins (>0%):
 (No Product Ingredients
 Listed)
 Proposition 65 – Male Repro
 Toxins (>0%):
 (No Product Ingredients
 Listed)
 Proposition 65 – Developmental
 Toxins (>0%):
 (No Product Ingredients
 Listed)

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

FOR PROFESSIONAL USE ONLY

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

Brand names mentioned in this data sheet are trademarks of or are licensed to Akzo Nobel.

Head Office

International Paint, LLC, 6001 Antoine Drive, Houston, Texas 77091. <http://www.international-pc.com> or <http://www.international-marine.com>

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End Of Document

OD3001_E4

MATERIAL SAFETY DATA SHEET
D3001 545 EPOXY PRIMER



Akzo Nobel Coatings
Awlgrip North America
2270 Morris Avenue
P. O. Box 386
Union, NJ 07083

Sales Order: (SalesOrd)
MSDS Revision No: E4-1
MSDS Revision Date: 08/31/2005
EMERGENCY NUMBERS:
(800) 424-9300 CHEMTREC (USA)
(703) 527-3887 CHEMTREC (Intl)
(800) 854-6813 Poison Control Center
CUSTOMER SERVICE: (Non-Emergency)
(888) 355-3090 AWLGRIP (Phone)
(908) 686-1752 AWLGRIP (Fax)

1. GENERAL INFORMATION

Product Identity: D3001 545 EPOXY PRIMER

Bulk Sales Reference No: OD3001

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000078-93-3	Methyl ethyl ketone 10 - 25% by Weight	OSHA:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL
		ACGIH:	200 ppm TWA300 ppm STEL
		NIOSH:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL3000 ppm IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	200 ppm TWAEV; 590 mg/m3 TWAEV300 ppm STEV; 885 mg/m3 STEV
		Mexico:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL
		Brazil:	155 ppm TWA; 460 mg/m3 TWA
		Source	Health Data
		NIOSH:	Irritation; liver kidney
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000108-65-6	Propylene glycol monomethyl ether acetate 10 - 25% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	50 ppm TWAEV; 270 mg/m3 TWAEV
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		

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NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
000108-88-3	Toluene 10 - 25% by Weight	OSHA:	200 ppm TWA; 150 ppm STEL; 560 mg/m3 STEL
		ACGIH:	50 ppm TWA
		NIOSH:	100 ppm TWA; 375 mg/m3 TWA; 150 ppm STEL; 560 mg/m3 STEL; 500 ppm IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	50 ppm TWAEV; 376 mg/m3 TWAEV
		Mexico:	100 ppm TWA; 375 mg/m3 TWA
		Brazil:	78 ppm TWA; 290 mg/m3 TWA
		Source	Health Data
		NIOSH:	Central nervous system depressant
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
000123-86-4	n-Butyl acetate 10 - 25% by Weight	OSHA:	150 ppm TWA; 710 mg/m3 TWA; 200 ppm STEL; 950 mg/m3 STEL
		ACGIH:	150 ppm TWA; 200 ppm STEL
		NIOSH:	150 ppm TWA; 710 mg/m3 TWA; 200 ppm STEL; 950 mg/m3 STEL; 1700 ppm IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	150 ppm TWAEV; 710 mg/m3 TWAEV; 200 ppm STEV; 950 mg/m3 STEV
		Mexico:	150 ppm TWA; 710 mg/m3 TWA; 200 ppm STEL; 950 mg/m3 STEL
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	Mucous membrane and eye irritation; high concentrations cause nervous system effects in animals
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
025036-25-3	Polymer of epoxy resin and bisphenol A 25 - 50% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

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3. HAZARD IDENTIFICATION

Overview:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.		
Inhalation:	Harmful if inhaled. Causes lung irritation. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.		
Eyes:	Causes severe eye irritation. Do not get in eyes.		
Skin:	Causes skin irritation. May cause allergic skin reaction. May be harmful if absorbed through the skin.		
Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.		
Chronic Effects:	Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient).		
HMIS Rating:	Health: Unknown	Flammability: Unknown	Reactivity: Unknown

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes:	Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin/Hand:	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls:	Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
Other Work Practices:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:	F: 20 C: -7
Lower Explosive Limit (LEL):	1 (%vol in air) at Normal Atmospheric Temp and Pressure
Fire and Explosion Hazards:	Extremely flammable liquid and vapor. Vapors may cause flash fire. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.
Fire Fighting Procedures:	CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. SMALL FIRES: Use dry chemical, CO2, water spray or alcohol-resistant foam. LARGE FIRES: Use water

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spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material.

Also Reference Emergency Response Guide Number: 127

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
pH:	No Established Limit
Specific Gravity:	0.972844
Boiling Point (F):	175
Vapor Density:	Heavier than air
VOC Content (lbs):	Refer to the Technical Data Sheet for this product.
Evaporation Rate:	Slower than ether

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:	Store between 32 and 120 F
Handling and Storage Precautions:	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.
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11. ECOLOGICAL DATA

General:	No additional information provided for this product. See Section 2 for chemical specific data.
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12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures:	ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material. CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).
Public Safety:	Also, Reference Emergency Response Guide Number: 127

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13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	PAINT	IMDG Proper Shipping Name:	PAINT
DOT Hazard Class:	3	IMDG Hazard Class:	3.2 – Intermediate flashpoint flammable liquids
UN / NA Number:	UN 1263	UN Number:	UN 1263
DOT Packing Group:	II	IMDG Packing Group:	II
CERCLA/DOT RQ:	1056 gal. / 8562 lbs.	System Reference Code:	2

15. REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.
Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification: No Established Limit

Regulatory List
DOT Marine Pollutants (10%): Product Ingredients on List
 (No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%): Product Ingredients on List
 (No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs (>.1%) :
 000078-93-3 Methyl ethyl ketone : 5000 lb final RQ; 2270 kg final RQ
 000123-86-4 n-Butyl acetate : 5000 lb final RQ; 2270 kg final RQ
 000071-36-3 n-Butyl alcohol : 5000 lb final RQ; 2270 kg final RQ
 000108-88-3 Toluene : 1000 lb final RQ; 454 kg final RQ

EPCRA 302 Extremely Hazardous (>.1%) :
 (No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals (>.1%) :
 000078-93-3 Methyl ethyl ketone
 000071-36-3 n-Butyl alcohol
 000108-65-6 Propylene glycol monomethyl ether acetate
 000108-88-3 Toluene

Mass RTK Substances (>1%) :
 000078-93-3 Methyl ethyl ketone
 000123-86-4 n-Butyl acetate
 000108-88-3 Toluene

Mass Extraordinarily Haz Sub (>.01%) :
 000050-00-0 Formaldehyde

Penn RTK Substances (>1%) :
 000078-93-3 Methyl ethyl ketone
 000123-86-4 n-Butyl acetate
 000108-65-6 Propylene glycol monomethyl ether acetate
 000108-88-3 Toluene

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Penn Special Hazardous
Substances (>.01%) :
000050-00-0 Formaldehyde
000108-88-3 Toluene

Rhode Island Hazardous
Substances (>.1%) :
000078-93-3 Methyl ethyl ketone
000123-86-4 n-Butyl acetate
000071-36-3 n-Butyl alcohol
000108-88-3 Toluene

RCRA Status (>.01%) :
000078-93-3 Methyl ethyl ketone : 200.0 mg/L regulatory level; waste number
D035

N.J. RTK Substances (>1%) :
000078-93-3 Methyl ethyl ketone
000123-86-4 n-Butyl acetate
000108-88-3 Toluene

N.J. Special Hazardous
Substances (>.01%) :
000100-41-4 Ethyl benzene
000050-00-0 Formaldehyde
000078-93-3 Methyl ethyl ketone
000123-86-4 n-Butyl acetate
000071-36-3 n-Butyl alcohol
000108-88-3 Toluene
001330-20-7 Xylenes (o-, m-, p- isomers)

N.J. Env. Hazardous Substances
(>.1%) :
000078-93-3 Methyl ethyl ketone
000071-36-3 n-Butyl alcohol
000108-65-6 Propylene glycol monomethyl ether acetate
000108-88-3 Toluene

Proposition 65 – Carcinogens
(>0%):
000050-00-0 Formaldehyde
000108-88-3 Toluene

Proposition 65 – Female Repro
Toxins (>0%):
(No Product Ingredients
Listed)

Proposition 65 – Male Repro
Toxins (>0%):
(No Product Ingredients
Listed)

Proposition 65 – Developmental
Toxins (>0%):
000108-88-3 Toluene

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

MATERIAL SAFETY DATA SHEET
G8044 AWLGRIP TOPCOAT SNOW WHITE

Sales Order: (SalesOrd)

MSDS Revision No: 6-2
MSDS Revision Date: 08/13/2007

Akzo Nobel Coatings
Awlgrip North America
2270 Morris Avenue
P. O. Box 386
Union, NJ 07083

EMERGENCY NUMBERS:
(800) 424-9300 CHEMTREC (USA)
(703) 527-3887 CHEMTREC (Int'l)
(800) 854-6813 Poison Control Center
CUSTOMER SERVICE: (Non-Emergency)
(888) 355-3090 AWLGRIP (Phone)
(908) 686-1752 AWLGRIP (Fax)



1. GENERAL INFORMATION

Product Identity: G8044 AWLGRIP TOPCOAT SNOW WHITE

Bulk Sales Reference No: OG8044

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000100-41-4	Ethyl benzene 0.10 - 1.0% by Weight	OSHA:	125 ppm STEL; 545 mg/m3 STEL
		ACGIH:	100 ppm TWA; 125 ppm STEL
		NIOSH:	100 ppm TWA; 435 mg/m3 TWA; 125 ppm STEL; 545 mg/m3 STEL; 800 ppm IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV; 125 ppm STEV; 540 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA; 125 ppm STEL; 545 mg/m3 STEL
		Brazil:	78 ppm TWA; 340 mg/m3 TWA
		Source	Health Data
		NIOSH:	Eye skin
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: Yes; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000108-65-6	Propylene glycol monomethyl ether acetate 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	50 ppm TWAEV; 270 mg/m3 TWAEV
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		

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NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No;
 Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
000108-83-8	Diisobutylketone 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	25 ppm TWA
		NIOSH:	25 ppm TWA; 150 mg/m3 TWA500 ppm IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	25 ppm TWAEV; 145 mg/m3 TWAEV
		Mexico:	48 ppm TWA; 290 mg/m3 TWA
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	Irritation; liver kidney
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000123-86-4	n-Butyl acetate 1.0 - 10% by Weight	OSHA:	200 ppm STEL; 950 mg/m3 STEL
		ACGIH:	150 ppm TWA200 ppm STEL
		NIOSH:	150 ppm TWA; 710 mg/m3 TWA200 ppm STEL; 950 mg/m3 STEL1700 ppm IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	150 ppm TWAEV; 710 mg/m3 TWAEV200 ppm STEV; 950 mg/m3 STEV
		Mexico:	150 ppm TWA; 710 mg/m3 TWA200 ppm STEL; 950 mg/m3 STEL
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	Mucous membrane and eye irritation; high concentrations cause nervous system effects in animals
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
001330-20-7	Xylenes (o-, m-, p- isomers) 1.0 - 10% by Weight	OSHA:	150 ppm STEL; 655 mg/m3 STEL
		ACGIH:	100 ppm TWA150 ppm STEL
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV150 ppm STEV; 650 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
		Brazil:	78 ppm TWA; 340 mg/m3 TWA
		Source	Health Data
		NIOSH:	Central nervous system depressant; respiratory and eye irritation
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No		

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CAS No.	Ingredient Name & %	Source	Exposure Data
007631-86-9	Silica, amorphous 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	6 mg/m3 TWA 3000 mg/m3 IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	0.10 mg/m3 TWAEV
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
013463-67-7	Titanium dioxide 10 - 25% by Weight	OSHA:	No Established Limit
		ACGIH:	10 mg/m3 TWA
		NIOSH:	5000 mg/m3 IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	10 mg/m3 TWAEV (total dust)
		Mexico:	10 mg/m3 TWA (nuisance particulate) 20 mg/m3 STEL
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	Lung tumors in animals
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
019549-80-5	HEPTANONE, 4,6-DIMETHYL- 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
021645-51-2	Aluminum hydroxide 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit

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CAS No.	Ingredient Name & %	Source	Health Data
148462-57-1	2-Propanol, 1-methoxy-, propanoate 10 - 25% by Weight	NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

3. HAZARD IDENTIFICATION

Overview:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.		
Inhalation:	Harmful if inhaled. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.		
Eyes:	Causes severe eye irritation. Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific condition of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.		
Skin:	Causes skin irritation. May cause allergic skin reaction. May be harmful if absorbed through the skin.		
Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.		
Chronic Effects:	Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient). Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.		
HMIS Rating:	Health: Unknown	Flammability: Unknown	Reactivity: Unknown

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates
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dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.

- Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific condition of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
- Eyes:** Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
- Skin/Hand:** Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
- Engineering Controls:** Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
- Other Work Practices:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

- Flash Point:** F: 114
C: 46
- Lower Explosive Limit (LEL):** 1 (%vol in air) at Normal Atmospheric Temp and Pressure
- Fire and Explosion Hazards:** Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use. **FLAMMABLE/COMBUSTIBLE MATERIALS:** Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.
- Fire Fighting Procedures:** CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. **SMALL FIRES:** Use dry chemical, CO₂, water spray or alcohol-resistant foam. **LARGE FIRES:** Use water spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material.
- Also Reference Emergency Response Guide Number: 127

7. PHYSICAL AND CHEMICAL PROPERTIES

- Physical State:** Liquid
- pH:** No Established Limit
- Specific Gravity:** 1.369993
- Boiling Point (F):** 241
- Vapor Density:** Heavier than air
- VOC Content (lbs):** Refer to the Technical Data Sheet for this product.
- Evaporation Rate:** Slower than ether

8. STABILITY AND REACTIVITY DATA

- General:** This product is stable and hazardous polymerization will not occur. Not sensitive to mechanical impact. Excessive heat and fumes generation can occur if improperly handled.
- Incompatible Materials:** Strong oxidizing agents.
- Hazardous Decomposition:** May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature: Store between 40–100F (4–38C).
 Handling and Storage Precautions: Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.

11. ECOLOGICAL DATA

General: No additional information provided for this product. See Section 2 for chemical specific data.

12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures: ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material. CALL CHEMTREC at (800)–424–9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).
 Public Safety: Also, Reference Emergency Response Guide Number: 127

13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	PAINT	IMDG Proper Shipping Name:	PAINT
DOT Hazard Class:	3	IMDG Hazard Class:	3.3 – High flashpoint flammable liquids
UN / NA Number:	UN 1263	UN Number:	UN 1263
DOT Packing Group:	III	IMDG Packing Group:	III
CERCLA/DOT RQ:	335 gal. / 3824 lbs.	System Reference Code:	1

15. REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.
Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a

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concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification: No Established Limit
 Regulatory List Product Ingredients on List
 DOT Marine Pollutants (10%):
 (No Product Ingredients Listed)
 DOT Severe Marine Pollutants (1%):
 (No Product Ingredients Listed)
 EPCRA 311/312 Chemicals and RQs (>.1%):
 (No Product Ingredients Listed)
 EPCRA 302 Extremely Hazardous (>.1%):
 (No Product Ingredients Listed)
 EPCRA 313 Toxic Chemicals (>.1%):
 000100-41-4 Ethyl benzene
 000071-36-3 n-Butyl alcohol
 001330-20-7 Xylenes (o-, m-, p- isomers)
 Mass RTK Substances (>1%):
 000108-83-8 Diisobutylketone
 000123-86-4 n-Butyl acetate
 007631-86-9 Silica, amorphous
 013463-67-7 Titanium dioxide
 001330-20-7 Xylenes (o-, m-, p- isomers)
 Mass Extraordinarily Haz Sub (>.01%):
 (No Product Ingredients Listed)
 Penn RTK Substances (>1%):
 000108-83-8 Diisobutylketone
 000123-86-4 n-Butyl acetate
 000108-65-6 Propylene glycol monomethyl ether acetate
 007631-86-9 Silica, amorphous
 013463-67-7 Titanium dioxide
 001330-20-7 Xylenes (o-, m-, p- isomers)
 Penn Special Hazardous Substances (>.01%):
 (No Product Ingredients Listed)
 Rhode Island Hazardous Substances (>.1%):
 000071-36-3 n-Butyl alcohol
 RCRA Status (>.01%):
 (No Product Ingredients Listed)
 N.J. RTK Substances (>1%):
 (No Product Ingredients Listed)
 N.J. Special Hazardous Substances (>.01%):
 000100-41-4 Ethyl benzene
 000123-86-4 n-Butyl acetate
 000071-36-3 n-Butyl alcohol
 001330-20-7 Xylenes (o-, m-, p- isomers)
 N.J. Env. Hazardous Substances (>.1%):
 000100-41-4 Ethyl benzene
 000071-36-3 n-Butyl alcohol
 001330-20-7 Xylenes (o-, m-, p- isomers)
 Proposition 65 - Carcinogens (>0%):
 000100-41-4 Ethyl benzene
 014808-60-7 Quartz

Proposition 65 – Female Repro
Toxins (>0%):
(No Product Ingredients
Listed)
Proposition 65 – Male Repro
Toxins (>0%):
(No Product Ingredients
Listed)
Proposition 65 – Developmental
Toxins (>0%):
(No Product Ingredients
Listed)

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

FOR PROFESSIONAL USE ONLY

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

Brand names mentioned in this data sheet are trademarks of or are licensed to Akzo Nobel.

Head Office

International Paint, LLC, 6001 Antoine Drive, Houston, Texas 77091. <http://www.international-pc.com> or <http://www.international-marine.com>

End Of Document



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product name Never-Seez Regular Grade Cmpd.
Product name(s) covered See Section 16 for Product Names Covered.
MSDS name Never-Seez Regular Grade Compound Series
CAS number Mixture
Generic description Miscellaneous
Manufacturer Bostik, Inc.
211 Boston Street
Middleton, MA 01949 USA
24 hour emergency assistance Telephone: 1-800-227-0332
General assistance Telephone: 1-978-777-0100
MSDS assistance Telephone: 1-414-607-1347

2. COMPOSITION / INFORMATION ON INGREDIENTS

Component(s)	CAS #	Percent
Copper Powder	7440-50-8	7 - 13
Aluminum	7429-90-5	1 - 5

3. HAZARDS IDENTIFICATION

Emergency overview Extended contact with this material may cause irritation to the skin, eyes, and mucous membranes. Primary Routes of Exposure: eyes, skin, and inhalation. Irritating fumes and gases may be released upon thermal processing or during combustion.

Potential health effects

Skin This product may cause irritation to the skin. Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.
Eyes This product may cause irritation to the eyes.
Inhalation Fumes released during thermal processing may irritate respiratory system, skin and eyes.
Ingestion Ingestion may cause gastrointestinal tract discomfort or damage.
Target organs Skin.

4. FIRST AID MEASURES

First aid

Skin For minor exposures, wash thoroughly with soap and clean water. In situations involving considerable skin contact, place the contaminated person in a deluge shower for at least 15 minutes. Remove contaminated clothing to prevent further skin exposure and dispose of properly. Get medical attention if irritation persists.
Eye Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.
Inhalation Move person to non-contaminated air. If the affected person is not breathing, apply artificial respiration. Seek medical attention.
Ingestion Do not induce vomiting. If person is conscious and can swallow, immediately give two glasses of water. Seek immediate medical attention. Do not give anything by mouth to an unconscious or convulsing person.
Notes to physician Treat symptomatically and supportively. Contact Bostik to determine whether any additional information is available.

Medical conditions aggravated by exposure Dermatitis.

5. FIRE FIGHTING MEASURES

Extinguishing media Use dry chemical, carbon dioxide, or foam. Water spray (fog).

Dust explosion hazard	None Known
Sensitivity to mechanical impact	None Known
Sensitivity to static discharge	None Known
Unusual fire & explosion hazards	Product may burn and produce toxic gases in a fire.
Fire fighting equipment/instructions	Firefighters should wear full protective clothing including self contained breathing apparatus.
Flash point	475 °F (246.1 °C)

6. ACCIDENTAL RELEASE MEASURES

Emergency action	Appropriate safety measures and protective equipment should be used. See Section 8. Do not discharge to lakes, streams, ponds, or sewers. Dispose of in compliance with local, state, and federal regulations.
Spill or leak procedure	Scrape up grease and deposit into appropriate containers for disposal.
Reporting	See Federal reporting requirements listed in Section 15. We recommend you contact local authorities to determine if there may be other local reporting requirements.

7. HANDLING & STORAGE

Handling	Wear appropriate protective equipment to avoid contact with skin and eyes. See Section 8.
Storage	Store in a clean, dry area. Keep containers closed.
Empty container precaution	Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption, or where skin contact can occur.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls	Ventilation is not normally required.
Eye protection	Wear safety glasses with side shields.
Skin and body protection	Wear protective impervious gloves to minimize skin exposure. Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves.
Respiratory protection	Not normally needed. Special applications may necessitate the use of more stringent respiratory protection equipment. When dusts or thermal processing fumes are generated and ventilation is not sufficient to effectively remove them, appropriate NIOSH/MSHA approved respiratory protection must be provided.

Exposure limits

ACGIH - Threshold Limits Values - Time Weighted Averages (TLV-TWA)

Aluminum	7429-90-5	<u>10 mg/m3 TWA (metal dust)</u>
Copper Powder	7440-50-8	<u>0.2 mg/m3 TWA (fume); 1 mg/m3 TWA (dust and mist, as Cu)</u>

NIOSH - Pocket Guide - TWAs

Aluminum	7429-90-5	<u>10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)</u>
Copper Powder	7440-50-8	<u>1 mg/m3 TWA (dust and mist)</u>

OSHA - Final PELs - Time Weighted Averages (TWAs)

Aluminum	7429-90-5	<u>15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)</u>
Copper Powder	7440-50-8	<u>0.1 mg/m3 TWA (fume); 1 mg/m3 TWA (dust and mist)</u>

OSHA - Vacated PELs - TWAs

Aluminum	7429-90-5	<u>15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)</u>
Copper Powder	7440-50-8	<u>0.1 mg/m3 TWA (fume, dusts, mists as Cu)</u>

9. PHYSICAL & CHEMICAL PROPERTIES

Target solids	100 %
Density	1.19 g/cc
Odor	Greaselike
Color	Silver - Gray
Physical state	Paste
Freeze protect	No

10. STABILITY & REACTIVITY

Hazardous reactions/decomposition products	If product is burned hazardous gases such as oxides of carbon and nitrogen and various hydrocarbons may be produced.
Hazardous polymerization	Will not occur.
Materials to avoid	Avoid contact with Strong Oxidizers and Strong Acids.
Stability	Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Toxicological data	If any toxicological data is available, it will be listed below:
Chronic effects	Chronic overexposure to the hazardous materials in this product has been associated with dermatitis.
Carcinogenicity	If this product contains any carcinogens, they will be noted below:

12. ECOLOGICAL INFORMATION

Ecotoxicological information No data available for this product.

13. DISPOSAL CONSIDERATIONS

It is the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable local, state and federal regulations.

Waste disposal Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Be aware that State and Local requirements may differ widely depending on location and may in many cases be different from Federal rules.

14. TRANSPORT INFORMATION

Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

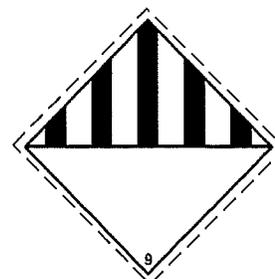
IATA

Not regulated as dangerous goods.

IMDG

Basic shipping requirements:

Proper shipping name	Environmentally Hazardous Substances, Liquid, N.O.S., (COPPER)
Hazard class	9
UN number	UN3082
Packing group	III
Marine pollutant	Marine Pollutant



15. REGULATORY INFORMATION

This MSDS is prepared and distributed pursuant to the Federal Hazard Communication Standard, 29 CFR 1910.1200.

Federal regulations All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Copper Powder	7440-50-8	<u>5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is equal to or exceeds 0.004 inches); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is equal to or exceeds 0.004 inches)</u>
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CERCLA/SARA - Section 313 - Emission Reporting

Aluminum	7429-90-5	<u>1.0 % de minimis concentration (dust or fume only)</u>
Copper Powder	7440-50-8	<u>1.0 % de minimis concentration</u>

State regulations If this product contains any ingredients listed under California Proposition 65, they will be noted below:

California - Proposition 65 - Developmental Toxicity

Lithium carbonate

554-13-2 developmental toxicity, initial date 1/1/91

International regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and contains all the information required by the Controlled Products Regulations.
All components are included on the Canadian Domestic Substances List (DSL).

HMS Ratings

Health: 1*
Flammability: 1
Physical hazard: 0
Personal protection: X

SARA 311/312 HAZARD CATEGORIES

Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

WHMIS status

Controlled

WHMIS labeling



WHMIS classification

D2B - Other Toxic Effects-TOXIC

16. OTHER INFORMATION

Product name(s) covered

V047740 - NEV-SZ REG NS40 24/ 1/4LB CAN
V048740 - NEV-SZ REG NS160 12/1LB CAN
V052440 - NEV-SZ REG NS168 12/ 8LB CAN
V054350 - NEV-SZ REG NS42B 42LB PL
V056440 - NEV-SZ REG NSB16 12/1LB BT CAN
V057640 - NEV-SZ REG NSBT8 8OZ BT CAN
V057740 - NEV-SZ REG NSBT16 1LB BT CAN
V057840 - NEV-SZ REG NSC1 1LB CTG
V057940 - NEV-SZ REG NS10 150/1OZ TUBE
V058240 - NEV-SZ REG NSB4 1/4LB TUBE
V058650 - NEV-SZ REG NS130B 130LB DR
V059052 - NEV-SZ REG NS425B 425LB DR
V166252 - NEV-SZ REG NS425B W/LINER
V332731 - NEV-SZ REG 7.5GR PP
V435703 - NEV-SZ REG NSBT4 STD LBL

Disclaimer

The data in this MSDS has been compiled from publicly available sources. This data relates only to the designated product and not to the use of said product in combination with other materials. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Responsibility for proper precautions and safe use of the product lies with the user. All data in this MSDS is typical of the product as a whole, and does not represent any individual lot or batch, therefore, Bostik, Inc. makes no warranty about the accuracy of the data herein and assumes no liability for the use of such data. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

Issue date

01-MAR-07

Prepared by

Pam Larsen

Supersedes

11-DEC-06

MSDS sections updated

Regulatory Information: International Regulations

MSDS

SECTION 1 – Chemical Product and Company Identification

CATALYST SYSTEMS
U S Chemical & Plastics
Alco Industries Companies
PO Box 88
2290 Zimmerman Rd SE
Gnadenhutten, OH 44629
PH: 740-254-4311

CHEMTREC: 1-800-424-9300
CANUTEC: 1-613-996-6666
(For Canada call collect)

PRODUCT NAME: CREAM HARDENER
PRODUCT CODE: 27640/White, 27641/Red, 27642/Green,
27643/Blue, 28050/Black, 28070/Lt. Red
Additional Product Codes on Page 5.
SYNONYM/CROSS REFERENCE: Polyester Cream Hardener/Polyester Catalyst,
Benzoyl Peroxide Paste
SCHEDULE B NUMBER: 3815.90.0000

SECTION 2 – Hazard Identification

OVEREXPOSURE EFFECTS

ACUTE EFFECTS:

EYES: Contact with eyes can cause irritation, redness, tearing, blurred vision, and/or swelling.

SKIN: Contact with skin can cause irritation, (minor itching, burning, and/or redness), dermatitis, defatting may be readily absorbed through the skin.

INHALATION: Inhalation of vapors can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, headache, possible unconsciousness, and/or asphyxiation. Aspiration of material into lungs may result in chemical pneumonitis which can be fatal.

INGESTION: Ingestion can cause gastro-intestinal irritation, nausea, vomiting, diarrhea.

PRIMARY ROUTES OF EXPOSURE: Skin, inhalation

SECTION 3 – Composition, Information or Ingredients

<u>INGREDIENTS</u>	<u>WGT%</u>	<u>CAS #</u>
Benzoyl Peroxide	47.5 – 50.0	94-36-0

SECTION 4 – First Aid Measures

INHALATION: If inhaled, remove victim from exposure to a well-ventilated area. Make them comfortably warm, but not hot. Use oxygen or artificial respiration as required. Consult a physician.

SKIN: For skin contact, wash promptly with soap and excess water.

EYES: For eye contact, flush promptly with excess water for at least fifteen minutes. Consult a physician.

INGESTION: If ingested, do not induce vomiting. Give victim a glass of water. Call a physician immediately.

SECTION 5 – Fire-Fighting Measures

FIRE EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, foam

SPECIAL FIRE FIGHTING PROCEDURES: Fight like a fuel oil fire. Cool fire exposed containers with water spray. Firefighter should wear OSHA/NIOSH approved self-contained breathing apparatus.

MSDS

UNUSUAL FIRE AND EXPLOSION HAZARD: Closed containers exposed to high temperatures, such as fire conditions may rupture.

SECTION 6 – Accidental Release Measures

SPILLS, LEAK OR RELEASE: Ventilate area. Remove all possible sources of ignition. Avoid prolonged breathing of vapor. Contain spill with inert absorbent.

SECTION 7 – Handling and Storage

STORAGE AND HANDLING: Use with adequate ventilation. Avoid contact with eyes and skin. Avoid breathing vapors. Do not store the product above 100°F/38°C. Do not flame, cut, braze weld or melt empty containers. Keep the product away from heat, open flame, and other sources of ignition. Avoid contact with strong acids, alkalis, and oxidizers.

SECTION 8 – Exposure Controls and Personal Protection

<u>INGREDIENTS</u>	<u>CAS #</u>	<u>TLV/PEL</u>
Benzoyl Peroxide	47.5 – 50.0	Combustible when dry: TLV 5 mg/m ³ *

*Refer to 29 CFR 1910.0000, subpart Z.

Also see TLV for Chemical Substances and Physical Agents in the Work Environment (ACGIH).

RESPIRATORY PROTECTION: If component TLV limits are exceeded, use NIOSH/MSHA approved respirator to remove vapors. Use an air-supplied respirator if necessary.

VENTILATION: Use adequate ventilation in volume and pattern to keep TLV/PEL below recommended levels. Explosion-proof ventilation may be necessary.

PROTECTIVE GLOVES: To prevent prolonged exposure use rubber gloves; solvents may be absorbed through the skin.

EYE PROTECTION: Safety Glasses or goggles with splash guards or side shields.

OTHER PROTECTIVE EQUIPMENT: Wear protective clothing as required to prevent skin contact.

SECTION 9 – Physical and Chemical Properties

APPEARANCE: Red, white, blue, green, or light red paste

SPECIFIC GRAVITY: 1.20

VAPOR PRESSURE (mmHG): N/E

BOILING POINT: Decomposes

VAPOR DENSITY: (Air=1) >1

EVAPORATION RATE (Ethyl Ether = 1): <1

VOLATILES BY WEIGHT: 10 - 20%

SOLUBILITY IN WATER: Insoluble

FLASH POINT: 184°F/84°C

LOWER FLAMMABLE LIMIT %: N/E

UPPER FLAMMABLE LIMIT %: N/E

VOC: Grams/Liter = Nil

Lbs/Gallon = Nil

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SECTION 10 – Stability and Reactivity

STABILITY: Stable

CONDITIONS TO AVOID: Open flames, sparks, heat, electrical and static discharge.

INCOMPATIBILITY MATERIALS TO AVOID: Strong acids, alkalis, oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Dioxide, Carbon Monoxide, and Carbon.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11 – Toxicological Information

CHRONIC EFFECTS: Overexposure to this material has apparently been known to cause the following effects in lab animals: skin damage and tumors.

CARCINOGEN: YES NO

TERATOGEN: YES NO

MUTAGEN: YES NO

Benzoyl Peroxide has caused tumorigenic effects in laboratory animals.

SECTION 12 – Ecological Information

None.

SECTION 13 – Disposal Considerations

WASTE DISPOSAL: Dispose of in accordance with local, state, and federal regulations.

SECTION 14 – Transport Information

For Ground Transport: In USA – In inner containers less than 500 grams each: Consumer Commodity ORM-D. In large containers, UN3108, Organic Peroxide Type E, Solid ($\leq 52\%$ Dibenzoyl Peroxide as a paste), 5.2, PG II.

For Air Transport: Must be re-boxed to UN specified packaging. UN3108, Organic Peroxide Type E, Solid ($\leq 52\%$ Dibenzoyl Peroxide as a paste), 5.2, Packaging Instruction 510 or 513.

For Ocean Transport: UN3108, Organic Peroxide Type E, Solid, 5.2, PG II, EMS#F-J, S-R (the activator is $\leq 52\%$ Dibenzoyl Peroxide as a paste). Limited quantity if inner containers are less than 500 grams each.

SECTION 15 – Regulatory Information

CALIFORNIA PROPOSITION 65:

Trace amounts of some chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm may be present in this product.

SECTION 313 SUPPLIER NOTIFICATION:

MSDS

This product contains the following toxic chemicals subject to the reporting requirements of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR 372:

<u>CHEMICAL NAME</u>	<u>CAS</u>	<u>% BY WGT</u>
Benzoyl Peroxide	94-36-0	47.5 – 50%

This information must be included in all MSDS that are copied and distributed for this chemical.

SECTION 16 – Other Information

HMIS RATING:	Health	2	4 = Extreme
	Fire	2	3 = High
	Reactivity	2	2 = Moderate
			1 = Slight
			0 = Insignificant

Personal Protection - See Section VIII

NOTE: ADDITIONAL PART NUMBERS:

Bulk Red	27641 27008, 27027, 27110, 27120, 27121, 27125, 27169, 27170, 27172, 27173, 27174, 27607, 27604, 27607, 27610, 27616, 27626, 27632, 27644, 27649, 27663, 27673, 27690, 27690-1, 27697, 27750, 27751, 28015, 28016, 28028, 28139, 28144, 28149, 28164, 28187
Bulk Lt. Red/Red Raspberry	28070 27032, 27034, 27111, 27128, 27171, 27633, 27656, 28071, 28143, 28148, 28153
Bulk Light Blue	27642 27615, 28169
Bulk Blue	27643 27012, 27022, 27041, 27112, 27115, 27122, 27160, 27619, 27622, 27628, 27634, 27646, 27665, 27675, 27676, 27677, 27678, 27679, 28029, 28030, 28136, 28141, 28146, 28151, 28156, 28159, 28163, 28165, 28167
Bulk White	27640 27014, 27024, 27036, 27038, 27114, 27124, 27132, 27168, 27201, 27211, 27621, 27627, 27647, 27648, 27664, 27674, 28025, 28031, 28042, 28043, 28059, 28145, 28150, 28171, 28184, 28185
Bulk Black	28050 27031, 27035, 27037, 27624, 27669, 28032, 28052, 28183, 28186
Bulk Green	27638 27637, 28038, 28147
Bulk Yellow	27636 27614, 28168

ABBREVIATIONS

IARC	= International Agency for Research on Cancer
ACGIH	= American Conference of Governmental Industrial Hygienists
NIOSH	= National Institute of Occupational Safety and Health
TLV	= Threshold Limit Value
PEL	= Permissible Emission Level
DOT	= Department of Transportation

MSDS

NTP = National Toxicology Program
N/AV = Not Available
N/AP = Not Applicable
N/E = Not Established
N/D = Not Determined

PREPARED BY:

CATALYST SYSTEMS
U S Chemical & Plastics
Alco Industries Companies
PO Box 88
2290 Zimmerman Rd SE
Gnadenhutten, OH 44629
PH: 740-254-4311

DATE REVIEWED: October 2, 2007
DATE REVISED: October 2, 2007
REVISION: New Format

The information in the Material Safety Data Sheet has been compiled from our experience and from data presented in various technical publications. It is the user's responsibility to determine the suitability of this information for the adoption of the safety precautions as may be necessary. We reserve the right to revise Material Safety Data Sheets from time to time as new technical information becomes available. The user has the responsibility to contact the Company to make sure that the MSDS is the latest one issued.

Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Chevron Delo® 400 Synthetic SAE 5W-40

Product Use: Engine Oil

Product Number(s): CPS 235194

Company Identification

Chevron Products Company
a division of Chevron U.S.A. Inc.
6001 Bollinger Canyon Road
San Ramon, CA 94583
United States of America
www.chevronlubricants.com

Transportation Emergency Response

CHEMTREC: (800) 424-9300 or (703) 527-3887

Health Emergency

Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

Product Information

email : lubemsds@chevron.com
Product Information: (800) LUBE TEK
MSDS Requests: (800) 414-6737

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Distillates, hydrotreated heavy paraffinic	64742-54-7	60 - 100 %weight
ZINC ALKYL DITHIOPHOSPHATE	Mixture	0 - 5 %weight

SECTION 3 HAZARDS IDENTIFICATION

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Not expected to be harmful if swallowed.

Inhalation: Not expected to be harmful if inhaled. Contains a synthetic hydrocarbon oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean

before reuse.

Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

SECTION 5 FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

FLAMMABLE PROPERTIES:

Flashpoint: (Cleveland Open Cup) 200 °C (392 °F) (Min)

Autoignition: Not Applicable

Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: Keep out of the reach of children.

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:

Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.

Respiratory Protection: No respiratory protection is normally required.

If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Amber

Physical State: Liquid

Odor: Petroleum odor

pH: Not Applicable

Vapor Pressure: <0.01 mmHg @ 37.8 °C (100 °F)

Vapor Density (Air = 1): >1

Boiling Point: >315°C (599°F)

Solubility: Soluble in hydrocarbons; insoluble in water

Freezing Point: Not Applicable

Specific Gravity: 0.86 @ 15.6°C (60.1°F) / 15.6°C (60.1°F)

Viscosity: 15 cSt @ 100°C (212°F) (Min)

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Hazardous Decomposition Products: None known (None expected)

Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION**IMMEDIATE HEALTH EFFECTS**

Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.

Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.

Skin Sensitization: The skin sensitization hazard is based on evaluation of data for similar materials or product components.

Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials or product

components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

ADDITIONAL TOXICOLOGY INFORMATION:

During use in engines, contamination of oil with low levels of cancer-causing combustion products occurs. Used motor oils have been shown to cause skin cancer in mice following repeated application and continuous exposure. Brief or intermittent skin contact with used motor oil is not expected to have serious effects in humans if the oil is thoroughly removed by washing with soap and water.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.

ENVIRONMENTAL FATE

Ready Biodegradability: This material is not expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: PETROLEUM OIL, N.E.C.; NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER 49 CFR

Additional Information: NOT HAZARDOUS BY U.S. DOT. ADR/RID HAZARD CLASS NOT APPLICABLE.

IMO/IMDG Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION UNDER THE IMDG CODE

ICAO/IATA Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION UNDER ICAO

SECTION 15 REGULATORY INFORMATION

- EPCRA 311/312 CATEGORIES:** 1. Immediate (Acute) Health Effects: NO
2. Delayed (Chronic) Health Effects: NO
3. Fire Hazard: NO
4. Sudden Release of Pressure Hazard: NO
5. Reactivity Hazard: NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

No components of this material were found on the regulatory lists above.

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), IECSC (China), KECl (Korea), PICCS (Philippines), TSCA (United States).

One or more components is listed on ELINCS (European Union). Secondary notification by the importer may be required. All other components are listed or exempted from listing on EINECS.

One or more components does not comply with the following chemical inventory requirements: ENCS (Japan).

NEW JERSEY RTK CLASSIFICATION:

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: (Motor oil)

WHMIS CLASSIFICATION:

This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 1 Flammability: 1 Reactivity: 0

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

LABEL RECOMMENDATION:

Label Category : ENGINE OIL 1 - ENG1

REVISION STATEMENT: This is a new Material Safety Data Sheet.

Revision Date: April 02, 2007

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Chevron Energy Technology Company, 100 Chevron Way, Richmond, California 94802.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may

suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.



The Clorox Company
 1221 Broadway
 Oakland, CA 94612
 Tel. (510) 271-7000

Material Safety Data Sheet

I Product:	CLOROX REGULAR-BLEACH	
Description:	CLEAR, LIGHT YELLOW LIQUID WITH A CHARACTERISTIC CHLORINE ODOR	
Other Designations	Distributor	Emergency Telephone Nos.
Clorox Bleach EPA Reg. No. 5813-50	Clorox Sales Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies call: (800) 446-1014 For Transportation Emergencies Chemtrec (800) 424-9300

II Health Hazard Data

DANGER: CORROSIVE. May cause severe irritation or damage to eyes and skin. Vapor or mist may irritate. Harmful if swallowed. Keep out of reach of children.

Some clinical reports suggest a low potential for sensitization upon exaggerated exposure to sodium hypochlorite if skin damage (e.g., irritation) occurs during exposure. Under normal consumer use conditions the likelihood of any adverse health effects are low.

Medical conditions that may be aggravated by exposure to high concentrations of vapor or mist: heart conditions or chronic respiratory problems such as asthma, emphysema, chronic bronchitis or obstructive lung disease.

FIRST AID:
Eye Contact: Hold eye open and rinse with water for 15-20 minutes. Remove contact lenses, after first 5 minutes. Continue rinsing eye. Call a physician.
Skin Contact: Wash skin with water for 15-20 minutes. If irritation develops, call a physician.
Ingestion: Do not induce vomiting. Drink a glassful of water. If irritation develops, call a physician. Do not give anything by mouth to an unconscious person.
Inhalation: Remove to fresh air. If breathing is affected, call a physician.

III Hazardous Ingredients

Ingredient	Concentration	Exposure Limit
Sodium hypochlorite CAS# 7681-52-9	6.15%	Not established
Sodium hydroxide CAS# 1310-73-2	<1%	2 mg/m ³ : ¹ 2 mg/m ³ : ²

¹ACGIH Threshold Limit Value (TLV) - Ceiling
²OSHA Permissible Exposure Limit (PEL) - Time Weighted Average (TWA)

None of the ingredients in this product are on the IARC, NTP or OSHA carcinogen lists.

IV Special Protection and Precautions

No special protection or precautions have been identified for using this product under directed consumer use conditions. The following recommendations are given for production facilities and for other conditions and situations where there is increased potential for accidental, large-scale or prolonged exposure.

Hygienic Practices: Avoid contact with eyes, skin and clothing. Wash hands after direct contact. Do not wear product-contaminated clothing for prolonged periods.

Engineering Controls: Use general ventilation to minimize exposure to vapor or mist.

Personal Protective Equipment: Wear safety glasses. Use rubber or nitrile gloves if in contact liquid, especially for prolonged periods.

KEEP OUT OF REACH OF CHILDREN

V Transportation and Regulatory Data

DOT/IMDG/IATA - Not restricted.

EPA - SARA TITLE III/CERCLA: Bottled product is not reportable under Sections 311/312 and contains no chemicals reportable under Section 313. This product does contain chemicals (sodium hydroxide <0.2% and sodium hypochlorite <7.35%) that are regulated under Section 304/CERCLA.

TSCA/DSL STATUS: All components of this product are on the U.S. TSCA Inventory and Canadian DSL.

VI Spill Procedures/Waste Disposal

Spill Procedures: Control spill. Containerize liquid and use absorbents on residual liquid; dispose appropriately. Wash area and let dry. For spills of multiple products, responders should evaluate the MSDS's of the products for incompatibility with sodium hypochlorite. Breathing protection should be worn in enclosed, and/or poorly ventilated areas until hazard assessment is complete.

Waste Disposal: Dispose of in accordance with all applicable federal, state, and local regulations.

VII Reactivity Data

Stable under normal use and storage conditions. Strong oxidizing agent. Reacts with other household chemicals such as toilet bowl cleaners, rust removers, vinegar, acids or ammonia containing products to produce hazardous gases, such as chlorine and other chlorinated species. Prolonged contact with metal may cause pitting or discoloration.

VIII Fire and Explosion Data

Flash Point: None

Special Firefighting Procedures: None

Unusual Fire/Explosion Hazards: None. Not flammable or explosive. Product does not ignite when exposed to open flame.

IX Physical Data

Boiling point.....approx. 212°F/100°C
 Specific Gravity (H₂O=1) ~ 1.1 at 70°F
 Solubility in Water complete
 pH ~11.4

IV. FIRE AND EXPLOSION HAZARD DATA

FLAMMABLE LIMIT IN AIR % BY VOLUME: LOWER - 1.0 UPPER - 7.0
FLASH POINT (TEST METHOD) : 90° F (32°C) , Open cup
EXTINGUISHING MEDIA: Small fires: Extinguish with dry chemical, CO2, or foam. Large fires: The use of dry chemical or foam is recommended. Water may be an ineffective extinguishing agent.
SPECIAL FIRE FIGHTING PROCEDURES: The use of self-contained breathing apparatus is recommended for fire fighters. Water spray may be useful in minimizing vapors and cooling containers exposed to heat and flame.
UNUSUAL FIRE & EXPLOSION HAZARDS: None Known

V. REACTIVITY DATA

STABILITY: STABLE - X UNSTABLE -
CONDITIONS TO AVOID: None
INCOMPATIBILITY (MATERIALS TO AVOID) : This product is incompatible with strong oxidizing agents, strong acids or bases, selected amines.
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS: Thermal decomposition in the presence of air may yield carbon monoxide and/or carbon dioxide.
HAZARDOUS POLYMERIZATION: MAY OCCUR - _____ WILL NOT OCCUR - X
CONDITIONS TO AVOID: None

VI. HEALTH HAZARD DATA

TLV AND SOURCE: (See Section III)

***ACUTE EFFECTS OF OVEREXPOSURE ***

INGESTION (SWALLOWING): Ingestion of excessive quantities may cause: irritation of the digestive tract, signs of nervous system depression (e.g., drowsiness, dizziness, loss of coordination, and fatigue).
Aspiration hazard: This material can enter lungs during swallowing or vomiting and cause lung inflammation and damage.

INHALATION: Excessive concentrations of vapors/mists may cause: Irritation of nose and throat. Signs of nervous system depression (e.g., drowsiness, dizziness, loss of coordination and fatigue). Prolonged or repeated exposure to vapors/mists may cause: Liver damage, kidney damage. Persons with impaired lung function or asthma - like conditions may experience additional breathing difficulties due to irritant properties of material.

EYE: May be an eye irritant. Direct contact with the liquid or exposure to its vapors or mists may cause burning, tearing, and redness.

SKIN CONTACT: Substance has not been identified as a carcinogen or probable carcinogen by NTP, IARC, or OSHA. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Pre-existing Liver and/or kidney disorders may be aggravated by exposure to this material.

*** EMERGENCY AND FIRST AID PROCEDURES ***

SWALLOWING: SEEK EMERGENCY MEDICAL ATTENTION. Material is slightly toxic by ingestion and an aspiration hazard. If victim is drowsy/unconscious place on the left side with head down. Do not give anything by mouth. If victim is conscious and alert, vomiting should be induced for ingestion of large amounts (more than 5 ounces for adult) preferably with syrup of IPECAC under direction from a physician or poison center. If syrup of IPECAC is not available, vomiting can be induced by giving 3 tablespoons of liquid dishwashing soap in a glass of water or by gently placing 2 fingers in back of throat. If possible do not leave victim unattended.

VII. PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Keep sources of ignition and hot metal surfaces isolated from the spill. If spill is indoors, ventilate area of spill. Foam, especially high expansion foam, may be used to suppress vapors. Keep out of drains, sewers, or waterways. Use sand or other inert material to dam and contain spill. Do not flush area with water. For small spills, do not flush area with water. Use absorbent pads. Call spill response team if large spill. Notify appropriate state/local agencies. If spill in excess of EPA reportable quantity is made into the environment, immediately notify National Response Center (800-424-8802). Reportable quantity: 1,000 pounds. Stay upwind and away from spill.

WASTE DISPOSAL METHOD: Dispose of used product in accordance with applicable local, county, state, and federal regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store drums well sealed in a cool, dry, well-ventilated area away from all sources of ignition ground containers when transferring material.

OTHER PRECAUTIONS

EMPTY CONTAINERS ARE HAZARDOUS! OBSERVE ALL LABEL PRECAUTIONS.

THE FOLLOWING CHEMICAL MAY BE SUBJECT TO REPORTING UNDER SEC. 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372.

Xylene (mixed isomers) (CAS#1330-20-7) 89.15 WT %

NOTE: Xylene (mixed isomers) contains 17% Ethyl Benzene (CAS#100-41-4)

VIII. CONTROL MEASURES

RESPIRATORY PROTECTION: Above PEL/TLV use NIOSHA/MSHA approved respirator for organic vapors.

VENTILATION - LOCAL EXHAUST: To a fire-safe area:

PROTECTIVE GLOVES: Impervious

EYE PROTECTION: Chemical Splash Goggles

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: As needed to eliminate skin contact. Eye wash and safety.

WORK/HYGIENIC PRACTICE: Shower in work area.



MATERIAL SAFETY DATA SHEET

Benite®

Product Number(s): 11000 Series
Manufacturer: Daly's Wood Finishing Products
3525 Stone Way North
Seattle, WA 98103

HMIS Information
Health 1
Flammability 2
Reactivity 0

Emergency Telephone Number:
Chemtel (24 Hour): 800-255-3924

Preparer's Name: S. Banta
Date Prepared: 07/24/01
Date Reviewed: 08/07/03

SECTION I - PRODUCT IDENTITY

Chemical Name: Vegetable Oil/Petroleum Solvent Mixture. **Chemical Formula:** N/A Product is a mixture.
Shipping Classification: Flammable Liquid, UN 1263, Class 3, PGIII

SECTION II - HAZARDOUS INGREDIENTS

Chemical & Common Name:	CAS Number:	Wt. %:	OSHA PEL:	ACGIH TLV:	OTHER:
Mineral Spirits	64742-47-8	85	100ppm	500ppm	
Alkylbenzenes	68515-25-3	1	N/A	N/A	

SECTION III - PHYSICAL CHARACTERISTICS

Boiling Range:	300-405°F	% Volatile by Volume:	88%
Specific Gravity:	0.80	Evaporation Rate(BuOAc=1):	0.13
Vapor Pressure (mm Hg): 5mm Hg@77°F		Maximum Volatile	
Vapor Density (Air=1):	4.9	Organic Compound (V.O.C.):	680 gr/L

Solubility (specific solvents):
Soluble in petroleum solvents; insoluble in water.

Appearance & Odor:
Clear amber liquid; petroleum distillate odor.

SECTION IV - FIRE & EXPLOSION DATA

Flash Point (Setaflash):	107°F	Flammable Limits (% in Air):	LEL:1.0, UEL: 6.0
Extinguishing Media:	CO2, dry chemical, foam, water fog.		
Special Firefighting Procedures:	Fight as a volatile fire, do not enter enclosed or confined fire spaces without proper protective equipment. This may include self-contained breathing apparatus.		
Unusual Fire & Explosion Hazards:	None known.		
Reactivity:	Product is stable.	Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	None known.		
Incompatibilities (materials to avoid):	Avoid strong oxidizing agents.		
Hazardous Decomposition Products:	Usual products of combustion CO, CO2, possibly acrolein, and oxides of nitrogen.		

SECTION V - HEALTH HAZARDS

Primary Routes of Entry: Eye contact, inhalation, ingestion, skin contact.

ACUTE HEALTH EFFECTS:

EYE CONTACT: May cause redness, irritation.

INHALATION: May cause dizziness, headache, nausea, possible nervous system depression.

INGESTION: May cause nausea, gastrointestinal irritation, or vomiting.

SKIN CONTACT: May cause rash, cracking, dryness or defatting of skin.

EMERGENCY FIRST AID PROCEDURES:

EYE CONTACT: Wash with clean water for at least fifteen minutes; get medical attention.

INHALATION: Move individual to fresh air. If breathing has stopped, apply artificial respiration, get medical attention immediately.

INGESTION: DO NOT INDUCE VOMITING. Give water or milk to drink; get medical attention.

SECTION V - HEALTH HAZARDS(cont'd)

SKIN CONTACT: Wash area with soap and water.

CHRONIC HEALTH EFFECTS: Not listed as a carcinogen by the NTP, IARC, or OSHA. No adverse long term affects are known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing lung or skin conditions could be aggravated by repeated exposure.

SECTION VI - SPILL OR LEAK PROCEDURES

Steps to be taken in case material is spilled or released: Remove all sources of ignition and provide ventilation. Provide respiratory protection required.

Waste disposal method: Rags and absorbent material should be immersed in water. Dispose of in accordance with all federal, state and local regulations.

SECTION VII - SPECIAL PROTECTION DATA

Respiratory protection: Wear NIOSH-approved respirator for organic vapors. Ensure workers are trained in their proper use.

Ventilation: Adequate to keep exposure below TLV.

Protective Gloves: Neoprene or rubber.

Eye Protection: Goggles or face shield.

Other protective clothing or equipment: Eyewash station should be available;

SECTION VIII - HANDLING & STORAGE DATA

Precautions to be taken in handling and storage: Store away from high temperature, sparks, or open flame. Read and observe all precautions on product label.

Other precautions: Store in original container; keep tightly closed. Do not reuse container for other purposes.

KEEP OUT OF REACH OF CHILDREN.

SECTION IX - OTHER INFORMATION

Daly's, Inc. certifies that this MSDS meets the requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (SARA Title III) and of the OSHA Hazard Communication Standard (40 CFR 372):

This product contains no chemicals subject to reporting.

The information contained herein is based on data considered to be accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained for the use thereof. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable regarding all current regulations.

Daly's Wood Finishing Products

3525 Stone Way N, Seattle, WA 98103

phone(206) 633-4200

toll free(800) 735-7019

fax(206)632-2565



MATERIAL SAFETY DATA SHEET

SeaFin Teak Oil™

Product Number(s): 15000 Series
Manufacturer: Daly's Wood Finishing Products
3525 Stone Way North
Seattle, WA 98103

HMIS Information
Health 1
Flammability 2
Reactivity 0

Emergency Telephone Number:
Chemtel (24 Hour): 800-255-3924

Preparer's Name: H. Paulson
Date Prepared: 01/10/01
Date Reviewed: 08/07/03

SECTION I - PRODUCT IDENTITY

Chemical Name: Oil/Resin/Petroleum Solvent Mixture **Chemical Formula:** N/A Product is a mixture.
Shipping Classification: Flammable Liquid, UN 1263, Class 3, PGIII

SECTION II - HAZARDOUS INGREDIENTS

Chemical & Common Name:	CAS Number:	Wt. %:	OSHA PEL:	ACGIH TLV:	OTHER:
Mineral Spirits	64742-47-8	65	100ppm	500ppm	
Alkylbenzenes	68515-25-3	1	N/A	N/A	

SECTION III - PHYSICAL CHARACTERISTICS

Boiling Range:	300-405°F	% Volatile by Volume:	70%
Specific Gravity:	0.84	Evaporation Rate(BuOAc=1):	0.13
Vapor Pressure (mm Hg):	5mm Hg@77°F	Maximum Volatile	
Vapor Density (Air=1):	4.9	Organic Compound (V.O.C.):	550 gr/L

Solubility (specific solvents):
Soluble in petroleum solvents; insoluble in water.

Appearance & Odor:
Clear amber liquid; petroleum distillate odor.

SECTION IV - FIRE & EXPLOSION DATA

Flash Point (Setaflash): 107°F **Flammable Limits (% in Air):** LEL:1.0, UEL: 6.0

Extinguishing Media: CO2, dry chemical, foam, water fog.

Special Firefighting Procedures: Fight as a volatile fire, do not enter enclosed or confined fire spaces without proper protective equipment. This may include self-contained breathing apparatus.

Unusual Fire & Explosion Hazards:None known.

Reactivity: Product is stable. **Hazardous Polymerization:** Will not occur.

Conditions to Avoid: None known.

Incompatibilities (materials to avoid): Avoid strong oxidizing agents.

Hazardous Decomposition Products: Usual products of combustion CO, CO2, possibly acrolein, and oxides of nitrogen.

SECTION V - HEALTH HAZARDS

Primary Routes of Entry: Eye contact, inhalation, ingestion, skin contact.

ACUTE HEALTH EFFECTS:

EYE CONTACT: May cause redness, irritation.

INHALATION: May cause dizziness, headache, nausea, possible nervous system depression.

INGESTION: May cause nausea, gastrointestinal irritation, or vomiting.

SKIN CONTACT: May cause rash, cracking, dryness or defatting of skin.

EMERGENCY FIRST AID PROCEDURES:

EYE CONTACT: Wash with clean water for at least fifteen minutes; get medical attention.

INHALATION: Move individual to fresh air. If breathing has stopped, apply artificial respiration, get medical attention immediately.

INGESTION: DO NOT INDUCE VOMITING. Give water or milk to drink; get medical attention.

SECTION V - HEALTH HAZARDS(cont'd)

SKIN CONTACT: Wash area with soap and water.

CHRONIC HEALTH EFFECTS: Not listed as a carcinogen by the NTP, IARC, or OSHA. No adverse long term effects are known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing lung or skin conditions could be aggravated by repeated exposure.

SECTION VI - SPILL OR LEAK PROCEDURES

Steps to be taken in case material is spilled or released: Remove all sources of ignition and provide ventilation. Provide respiratory protection required.

Waste disposal method: Rags and absorbent material should be immersed in water. Dispose of in accordance with all federal, state and local regulations.

SECTION VII - SPECIAL PROTECTION DATA

Respiratory protection: Wear NIOSH-approved respirator for organic vapors. Ensure workers are trained in their proper use.

Ventilation: Adequate to keep exposure below TLV.

Protective Gloves: Neoprene or rubber.

Eye Protection: Goggles.

Other protective clothing or equipment: Eyewash station should be available; impervious protective clothing.

SECTION VIII - HANDLING & STORAGE DATA

Precautions to be taken in handling and storage: Store away from high temperature, sparks, or open flame. Read and observe all precautions on product label.

Other precautions: Store in original container; keep tightly closed. Do not reuse container for other purposes. KEEP OUT OF REACH OF CHILDREN.

SECTION IX - OTHER INFORMATION

Daly's, Inc. certifies that this MSDS meets the requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (SARA Title III) and of the OSHA Hazard Communication Standard (40 CFR 372):

This product contains no chemicals subject to reporting.

The information contained herein is based on data considered to be accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained for the use thereof. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable regarding all current regulations.

Daly's Wood Finishing Products

3525 Stone Way N, Seattle, WA 98103

phone(206) 633-4200

toll free(800) 735-7019

fax(206)632-2565

M A T E R I A L S A F E T Y D A T A S H E E T**PRODUCT NAME:** 10% SURFACING AGENT**HMS CODES:** H F R P**PRODUCT CODE:** 39SURF103

3 2 1 H

U.S. DOT. PROPER SHIPPING NAME: RESIN SOLUTION, 3, UN1866, PGII===== **SECTION I - MANUFACTURER IDENTIFICATION** =====**MANUFACTURER'S NAME:** DURA TECHNOLOGIES, INC.**ADDRESS :** 2720 SOUTH WILLOW AVE.

BLOOMINGTON, CA 92316

EMERGENCY PHONE : 800-424-9300**DATE PRINTED :** 01/27/05**INFORMATION PHONE :** 909-877-8477**NAME OF PREPARER :** Richard Stewart===== **SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION** =====

REPORTABLE COMPONENTS	CAS NUMBER	VAPOUR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
* STYRENE OSHA TWA: 50 PPM ; ACGIH TWA 20 PPM CERCLA RQ: 1000 LBS ; DOT RQ: 3336 LBS	100-42-5	4.5 70	82.2
HEPTANE ACGIH TLV: 500 OSHA VPBL: 400 PPM	142-82-5	45 68	7

* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

NOTE: A ZERO IN THE WEIGHT PERCENT COLUMN INDICATES THAT THERE IS LESS THAN ONE-HALF OF ONE PERCENT PRESENT.

WARNING ! THERE ARE CERTAIN HEALTH HAZARDS INVOLVED WITH HANDLING AND STORING THIS MATERIAL. PLEASE READ AND FOLLOW THE SAFETY RECOMMENDATIONS PUT FORWARD ON THIS MSDS.

===== **SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS** =====**BOILING RANGE:** 200 deg F - 295 deg F**SPECIFIC GRAVITY (H2O=1):** 0.88**VAPOR DENSITY:** HEAVIER THAN AIR**EVAPORATION RATE:** SLOWER THAN ETHER**COATING VOC:** 6.57 lb/gl**MATERIAL V.O.C.:** 6.57 lb/gl**NO DATA****SOLUBILITY IN WATER:** negligible**APPEARANCE AND ODOR:** WAX SOLUTION WITH STRONG STYRENE ODOR===== **SECTION IV - FIRE AND EXPLOSION HAZARD DATA** =====**FLASH POINT:** 20 deg F**METHOD USED:** T.C.C.**FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER:** 1.1 **UPPER:** 6.1**EXTINGUISHING MEDIA:** FOAM, CO2, DRY-CHEMICAL, WATER FOG**SPECIAL FIREFIGHTING PROCEDURES**

Wear full protective equipment including SELF-CONTAINED BREATHING APPARATUS. If water is used, fog nozzles are preferable. Water may be used to cool containers to prevent pressure build-up or autoignition. Water spray may be ineffective. WARNING: Burning liquid chemicals are usually lighter than water and will float spreading flames as the water flows from the site of the fire fighting efforts. WARNING!: Stay away from hot drums due to explosion hazard.

UNUSUAL FIRE AND EXPLOSION HAZARDS

At high temperatures this material may self polymerize. If polymerization occurs, there is the possibility of violent rupture of sealed containers. Styrene vapors are uninhibited and may form polymers in the vents or flame arrestors of storage tanks rendering them useless. These vents should be inspected frequently for blockage. Vapors may cause flash fires. Keep storage containers tightly closed and isolated from heat, electrical equipment, sparks and flames.

===== **SECTION V - REACTIVITY DATA** =====**STABILITY:** STABLE**CONDITIONS TO AVOID**

AVOID HEAT, Sparks or open flames. Never allow the PROMOTER/ACCELERATOR to come in direct contact with the CATALYST (When mixed in an undiluted form, cobalt and peroxide will react violently and cause an explosion). Do not use plastic or non-conducting containers to store and handle flammable liquids. These containers can not be properly grounded and static charge may build up in the flammable liquid.

INCOMPATIBILITY (MATERIALS TO AVOID)

Avoid contact with strong acids, oxidizers (bleaches), and strong bases (caustic soda).

HAZARDOUS DECOMPOSITION OR BYPRODUCTS

M A T E R I A L S A F E T Y D A T A S H E E T

If ignited this product will release carbon dioxide, carbon monoxide, and some organic acids. Do not breath fumes.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

===== **SECTION VI - HEALTH HAZARD DATA** =====

INHALATION HEALTH RISKS AND SYMPTOMS OF OVEREXPOSURE

The excessive inhalation of vapors may cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, and headaches. The symptoms of inhalation exposure are very similiar to common complaints caused by colds and other minor medical problems and must be monitored scrupulously to detect the appearance of overexposure.

NO DATA

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF OVEREXPOSURE

EYE CONTACT: This material can be irritating to the eyes. The symptoms of this are tearing, redness, and discomfort. **SKIN CONTACT:** This material may cause severe skin irritation. Symptons include redness, burning drying and cracking.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF OVEREXPOSURE

Exposure by skin contact can cause severe skin irritation. Prolonged or repeated exposure may induce redness, burning, and cracking of the skin. Skin absorption is possible but no adverse effects are expected from this route of exposure under normal conditions of handling and use.

INGESTION HEALTH RISKS AND SYMPTOMS OF OVEREXPOSURE

Swallowing can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration of the liquid material can cause pneumonitis which can be FATAL. Care should be taken that such aspiration DOES NOT OCCUR SHOULD THE VICTIM VOMIT.

HEALTH HAZARDS (ACUTE AND CHRONIC)

Reports have associated repeated or prolonged occupational exposure to solvents with permanent brain and nervous system damage, and liver or kidney atrophy. Intentional misuse by concentrating and inhaling the vapors can be fatal. This material has not been tested as a whole for health effects. **WARNING!** Although all intentional PROP 65 chemicals will be listed, THERE MAY BE DETECTABLE LEVELS OF UNINTENTIONAL CHEMICALS WHICH ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR OTHER REPRODUCTIVE HARM PRESENT IN THIS PRODUCT.

TARGET ORGAN INFORMATION:

Overexposure to this material has been suggested as a cause of the following effects in laboratory animals, and may aggravate pre-existing disorders of these organs in humans; mild, reversible kidney effects, effects on hearing respiratory tract damage, testis damage, and liver damage. Overexposure to this material has been suggested as a cause of the following effects in humans and may aggravate pre-existing disorders of these organs: central nervous system effects, effects on hearing, respiratory tract damage.

MUTAGENICITY:

NTP CARCINOGEN: NO IARC MONOGRAPHS: NO OSHA REGULATED: NO

PROPOSITION 65: YES

WARNING: BENZENE IS AN IMPURITY IN STYRENE AT LEVELS LESS THAN ONE TENTH OF ONE PERCENT. THIS PRODUCT CONTAINS BENZENE WHICH IS A CHEMICAL KNOWN BY THE STATE OF CALIFORNIA TO CAUSE CANCER.

NOT LISTED

THIS MATERIAL CONTAINS OSHA REGULATED HAZARDOUS MATERIALS.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

Respiratory problems such as asthma; Skin disorders such as dermatitis; eye disorders or overly sensitive eyes.

EMERGENCY AND FIRST AID PROCEDURES

FOR ANY OVEREXPOSURE MOVE VICTIM TO FRESH AIR AND SEEK MEDICAL AID. EYE CONTACT: Immediately flush eyes with warm clean water. If symptoms persists seek medical attention. **SKIN CONTACT:** Immediately flush contaminated skin with water using mild soap if necessary. Remove all contaminated clothing and do not reuse clothes until thoroughly clean. **INHALATION OVEREXPOSURE:** Where breathing has stopped give artificial respiration. If breathing is difficult have qualified persons give medical oxygen. **INGESTION:** Give victim water to dilute chemical. NEVER induce vomiting in an unconscious or convulsing victim. aspiration of this material may occur during vomiting and can lead to lung damage or death. Seek immediate medical help

===== **SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE** =====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Evacuate personnel, remove sources of ignition, provide ventilation, equip cleanup crew with safty equipment, contain the spill with dikes, then use an absorbant or vacuum equipment to remove material. Store waste in a sealed container. Use only nonsparking tools during clean up. Do not allow this material to flow into the environment. If the spill exceeds the reportable quantity notify EPA and DOT officials.

WASTE DISPOSAL METHOD

M A T E R I A L S A F E T Y D A T A S H E E T

Dispose of in accordance with Local, State and Federal regulations. Closed containers may explode if incinerated and all wastes should be incinerated in approved facilities only. In it's uncatalyzed liquid state this material is a hazardous waste due to it's flammability and should not be released into the environment. The preferred waste management option is to send material that has been declared waste to a licensed or permitted recycler, reclaimer, or incinerator. Use proper waste manifests and permitted haulers for transportation of and material which has been declared a waste. Waste disposal and characterization are the responsibility of the waste generator.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Do not store above 120 deg. F. Store large quantities in buildings designed to comply with Osha, BPA, and local fire department regulations. **KEEP AWAY FROM HEAT, SPARKS AND FLAMES.** Keep containers closed and upright when not in use to prevent the escape of fumes and liquid into the work or storage area. Inspect containers frequently to detect any possible damage or deterioration which might cause release of the material to the environment.

Polymerization of this coating during storage may cause the container to burst explosively. **STORE IN COOL DRY AREA.**

OTHER PRECAUTIONS

Containers should be grounded when the material is being transferred/mixed to prevent static build up. Empty containers retain all of the hazardous characteristics of the material itself and should be handled carefully until they are thoroughly clean or destroyed. Large quantities of this material should be stored only in buildings which conform to OSHA standards. If any materials (such as catalysts, colorants, or thinners) are added to this product read all relevant MSDS as the mixture will retain ALL of the hazardous characteristics of the chemicals added.

===== **SECTION VIII - CONTROL MEASURES** =====

RESPIRATORY PROTECTION

During the application of this product or at any time vapors escape into the work space, exposed persons should use appropriate cartridge respirators (NIOSH/MSHA approved) or in instances of high concentrations, air provided breathing apparatus. Refer to OSHA regulations to maintain workspace safety. If respirators are required, employees must be trained to use the respirators, the fit of the respirator must be tested, and the employee's lung capacity must be tested for ability to use the respirator. Respiratory protection should be used during the curing, cutting, sanding, or polishing of this product. If Respirators are required they must carefully selected according to the conditions present at customers location.

VENTILATION

Clean air dilution and local exhaust may be used to maintain the vapor concentration below current exposure limits and 20% below the LEL, except in confined areas where forced ventilation may be necessary. Refer to OSHA guidelines for handling these types of materials.

PROTECTIVE GLOVES

Solvent impermeable gloves should be worn to prevent physical contact with the product.

EYE PROTECTION

To protect your eyes, wear safety glasses with side shields, chemical goggles, or face shields.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

Solvent impermeable, protective clothing should be worn to minimize skin contact with this product. Emergency showers and eye wash stations should be provided in the work space. Wear steel toed shoes when handling heavy objects.

WORK/HYGIENIC PRACTICES

Inspect Fire extinguishers at regular intervals. Keep work space clean. Retain safety features on all equipment.

===== **SECTION IX - OTHER REGULATORY INFORMATION** =====

WHMIS INFO. :

===== **SECTION X - DISCLAIMER** =====

To the best of our knowledge this MSDS is accurate. To the extent allowed by law, this statement is made in lieu of any other warranties, expressed or implied including but not limited to any implied warranty of merchantability or fitness for a particular purpose and is in lieu of any other obligations or liability on the part of DURA TECHNOLOGIES, INC.

PRODUCT NAME: TACOMA WHITE GEL COAT IMIS CODES: H F R P
PRODUCT CODE: 314-009T 2 3 2 H
D.O.T. PROPER SHIPPING NAME: RESIN SOLUTION, 3, UN1866, PGI1
===== SECTION I - MANUFACTURER IDENTIFICATION =====

MANUFACTURER'S NAME: DURA TECHNOLOGIES, INC.
ADDRESS : 2720 SOUTH WILLOW AVE.
BLOOMINGTON, CA 92316

EMERGENCY PHONE : 800-424-9300 DATE PRINTED : 02/18/08
INFORMATION PHONE : 909-877-8477 NAME OF PREPARER : Richard Stewart
===== SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION =====

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
--- * STYRENE OSHA TWA: 50 PPM ; ACGIH TWA 20 PPM CERCLA RQ: 1000 LBS ; DOT RQ: 3336 LBS	100-42-5	4.5 70	28.31
METHYL ETHYL KETONE OSHA PEL: 200 PPM, ; ACGIH TLV: 200 PPM ORAL LD50 (RAT) = 2.7-5.6 g/kg ; DERMAL LD50 5-13 g/kg (RABBIT) DOT RQ: 5000 LBS	78-93-3	70 68	2.19
* DIMETHYL BENZENE (XYLENE) ACGIH TLV: 100PPM, ; OSHA PEL 100 PPM	1330-20-7	5.1 68	0.14
NAPHTHA - LIGHT AROMATIC OSHA PEL: 400, ACGIH TLV: 50	64742-95-6	4 0	0.13

* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

NOTE: A ZERO IN THE WEIGHT PERCENT COLUMN INDICATES THAT THERE IS LESS THAN ONE-HALF OF ONE PERCENT PRESENT.

WARNING ! THERE ARE CERTIAN HEALTH HAZARDS INVOLVED WITH HANDLING AND STORING THIS MATERIAL. PLEASE READ AND FOLLOW THE SAFTY RECOMMENDATIONS PUT FORWARD ON THIS MSDS.

===== SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS =====

BOILING RANGE: 175 deg F - 295 deg F SPECIFIC GRAVITY (H2O=1): 1.34
VAPOR DENSITY: HEAVIER THAN AIR EVAPORATION RATE: SLOWER THAN ETHER
COATING VOC: 3.44 lb/gal
MATERIAL V.O.C.: 3.44 lb/gal

The VOC is calculated using the assumption that ONE HUNDRED percent of the styrene monomer will EVAPORATE. You should use the emissions factor approved by the Regulatory Agency responsible for air quality in your area for reporting the emissions of MONOMERS.

SOLUBILITY IN WATER: negligible

APPEARANCE AND ODOR: POLYESTER COATING WITH CHARACTERISTIC STYRENE ODOR

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: 20 DEG F METHOD USED: TCC

FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1 UPPER: 12

EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL, WATER FOG

SPECIAL FIREFIGHTING PROCEDURES

Wear full protective equipment including SELF-CONTAINED BREATHING APPARATUS. If water is used, fog nozzles are preferable. Water may be used to cool containers to prevent pressure build-up or auto ignition. Water spray may be ineffective. WARNING: Burning liquid chemicals are usually lighter than water and will float spreading flames as the water flows from the site of the fire fighting efforts. WARNING!: Stay away from hot drums due to explosion hazard.

UNUSUAL FIRE AND EXPLOSION HAZARDS

At high temperatures this material may self polymerize. If polymerization occurs, there is the possibility of violent rupture of sealed containers. Styrene vapors are uninhibited and may form polymers in the vents or flame arrestors of storage tanks rendering them useless. These vents should be inspected frequently for blockage. Vapors may cause flash fires. Keep storage containers tightly closed and isolated from heat, electrical equipment, sparks

M A T E R I A L S A F E T Y D A T A S H E E T

===== SECTION V - REACTIVITY DATA =====

STABILITY: STABLE

CONDITIONS TO AVOID

AVOID HEAT, Sparks or open flames. Never allow the PROMOTER/ACCELERATOR to come in direct contact with the CATALYST (When mixed in an undiluted form, cobalt and peroxide will react violently and cause an explosion). Do not use plastic or non-conducting containers to store and handle flammable liquids. These containers can not be properly grounded and static charge may build up in the flammable liquid.

INCOMPATIBILITY (MATERIALS TO AVOID)

Avoid contact with strong acids, oxidizers (bleaches), and strong bases (caustic soda).

HAZARDOUS DECOMPOSITION OR BYPRODUCTS

If ignited this product will release carbon dioxide, carbon monoxide, and some organic acids. Do not breathe fumes.

HAZARDOUS POLYMERIZATION: MAY OCCUR

===== SECTION VI - HEALTH HAZARD DATA =====

INHALATION HEALTH RISKS AND SYMPTOMS OF OVEREXPOSURE

WARNING: Based on studies of components similar to the ones used in this coating, it has been shown that Acrolein (TLV:0.1) and Acetaldehyde (TLV: 100 PPM) can be released during the curing of the product.

The excessive inhalation of vapors may cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, and headaches. The symptoms of inhalation exposure is very similar to common complaints caused by colds and other minor medical problems and must be monitored scrupulously to detect the appearance of overexposure.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF OVEREXPOSURE

EYE CONTACT: This material can be irritating to the eyes. The symptoms of this are tearing, redness, and discomfort. SKIN CONTACT: This material may cause severe skin irritation. Symptoms include redness, burning drying and cracking.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF OVEREXPOSURE

Exposure by skin contact can cause severe skin irritation. Prolonged or repeated exposure may induce redness, burning, and cracking of the skin. Skin absorption is possible but no adverse effects are expected from this route of exposure under normal conditions of handling and use.

INGESTION HEALTH RISKS AND SYMPTOMS OF OVEREXPOSURE

Swallowing can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration of the liquid material can cause pneumonitis which can be FATAL. Care should be taken that such aspiration DOES NOT OCCUR SHOULD THE VICTIM VOMIT.

HEALTH HAZARDS (ACUTE AND CHRONIC)

Reports have associated repeated or prolonged occupational exposure to solvents with permanent brain and nervous system damage, and liver or kidney atrophy. Intentional misuse by concentrating and inhaling the vapors can be fatal. This material has not been tested as a whole for health effects. WARNING! Although all intentional PROP 65 chemicals will be listed, THERE MAY BE DETECTABLE LEVELS OF UNINTENTIONAL CHEMICALS WHICH ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR OTHER REPRODUCTIVE HARM PRESENT IN THIS PRODUCT.

TARGET ORGAN INFORMATION:

Overexposure to this material has been suggested as a cause of the following effects in laboratory animals, and may aggravate pre-existing disorders of these organs in humans: mild, reversible kidney effects, effects on hearing respiratory tract damage, testis damage, and liver damage. Overexposure to this material has been suggested as a cause of the following effects in humans and may aggravate pre-existing disorders of these organs: central nervous system effects, effects on hearing, respiratory tract damage.

CARCINOGENICITY:

NTP CARCINOGEN: No IARC MONOGRAPHS: No OSHA REGULATED: No

PROPOSITION 65: YES

WARNING: TOLUENE IS AN IMPURITY IN XYLENE. THIS PRODUCT CONTAINS TOLUENE A CHEMICAL KNOWN BY THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. WARNING: Benzene may be present in styrene monomer as an impurity. This product contains styrene monomer which is believed to be free of

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benzene. WARNING: BASED ON THE STUDY OF COMPONENTS SIMILAR TO THE ONES USED

M A T E R I A L S A F E T Y D A T A S H E E T

IN THIS COATING, IT HAS BEEN SHOWN THAT ACETALDEHYDE (TLV: 100 PPM) CAN BE RELEASED DURING THE CURING OF THE PRODUCT. ACETALDEHYDE IS KNOWN BY THE STATE OF CALIFORNIA TO CAUSE CANCER.

WARNING! THE INTERNATIONAL FOR RESEARCH ON CANCER STATES THAT STYRENE IS 'POSSIBLY CARCINOGENIC TO HUMANS' (GROUP 2B) BASED ON 'INADEQUATE EVIDENCE' IN HUMANS, 'LIMITED EVIDENCE' IN ANIMALS, AND OTHER 'RELEVANT DATA'. THIS MATERIAL CONTAINS OSHA REGULATED HAZARDOUS MATERIALS.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

Respiratory problems such as asthma; Skin disorders such as dermatitis; eye disorders or overly sensitive eyes.

EMERGENCY AND FIRST AID PROCEDURES

FOR ANY OVEREXPOSURE MOVE VICTIM TO FRESH AIR AND SEEK MEDICAL AID. EYE CONTACT: Immediately flush eyes with warm clean water. If symptoms persist seek medical attention. SKIN CONTACT: Immediately flush contaminated skin with water using mild soap if necessary. Remove all contaminated clothing and do not reuse clothes until thoroughly clean. INHALATION OVEREXPOSURE: Where breathing has stopped give artificial respiration. If breathing is difficult have qualified persons give medical oxygen. INGESTION: Give victim water to dilute chemical. NEVER induce vomiting in an unconscious or convulsing victim. Aspiration of this material may occur during vomiting and can lead to lung damage or death. Seek immediate medical help

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Evacuate personnel, remove sources of ignition, provide ventilation, equip cleanup crew with safety equipment, contain the spill with dikes, then use an absorbent or vacuum equipment to remove material. Store waste in a sealed container. Use only nonsparking tools during clean up. Do not allow this material to flow into the environment. If the spill exceeds the reportable quantity notify EPA and DOT officials.

WASTE DISPOSAL METHOD

Dispose of in accordance with Local, State and Federal regulations. Closed containers may explode if incinerated and all wastes should be incinerated in approved facilities only. In its uncatalyzed liquid state this material is a hazardous waste due to its flammability and should not be released into the environment. The preferred waste management option is to send material that has been declared waste to a licensed or permitted recycler, reclaimer, or incinerator. Use proper waste manifests and permitted haulers for transportation of and material which has been declared a waste. Waste disposal and characterization are the responsibility of the waste generator.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Do not store above 120 deg. F. Store large quantities in buildings designed to comply with OSHA, EPA, and local fire department regulations. KEEP AWAY FROM HEAT, SPARKS AND FLAMES. Keep containers closed and upright when not in use to prevent the escape of fumes and liquid into the work or storage area. Inspect containers frequently to detect any possible damage or deterioration which might cause release of the material to the environment. Polymerization of this coating during storage may cause the container to burst explosively. STORE IN COOL DRY AREA.

OTHER PRECAUTIONS

Containers should be grounded when the material is being transferred/mixed to prevent static build up. Empty containers retain all of the hazardous characteristics of the material itself and should be handled carefully until they are thoroughly clean or destroyed. Large quantities of this material should be stored only in buildings which conform to OSHA standards. If any materials (such as catalysts, colorants, or thinners) are added to this product and all relevant MSDS as the mixture will retain ALL of the hazardous

Material Safety Data Sheet

HMIS®



HEALTH

2

REACTIVITY

1

FLAMMABILITY

3

PERSONAL PROTECTION

B

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identity: Steel Blue Layout Fluid, Transparent Blue Staining Color Item No.: 80200,80300,80400,80600,80700,80800, 80900 81417,81717,81817 Formula: 8706	<i>Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.</i>
Another Exclusive Product of: ITW Dykem	Emergency Telephone Number 1-800-535-5053 (Domestic), 1-352-323-3500 (International)
Address (Number, Street, City, State, and ZIP Code) 805 East Old 56 Highway Olathe, KS 66061-4914	Telephone Number for Information 1-800-443-9536 or 1-913-397-9889
Product Class: Layout Fluids, Staining Colors	Date Prepared 5/29/07
	Signature of Preparer (Optional) Regulatory Dept.

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components (Specific Chemical Identity, Common Name(s))	CAS No.	OSHA PEL	ACGIH-TLV	Other Limits	
				Recommended	%(Opt.)
Ethanol	64-17-5	TWA 1000 ppm	TWA 1000 ppm	No data	30 - 50
Butyl Acetate	123-86-4	TWA 150 ppm	TWA 150 ppm	No data	20 - 30
Butanol	71-36-3	TWA 50 ppm	TWA 50 ppm	No data	10 - 20
Nitrocellulose	9004-70-0	No data	No data	No data	1 - 5
n-Propyl Acetate	109-60-4	TWA 200 ppm	TWA 200 ppm	No data	1 - 5
Isopropanol	67-63-0	TWA 400 ppm	TWA 400 ppm	No data	1 - 5
Malachite Green	569-64-2	No data	No data	No data	< 1
Methyl Violet	8004-87-3	No data	No data	No data	< 1

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW – Blue thin viscosity liquid with sweet solvent odor. **Warning! Flammable liquid and vapor. Keep away from heat sparks and flames. May cause eye, skin and respiratory tract irritation. If swallowed do not induce vomiting. Get immediate medical attention.**

POTENTIAL HEALTH EFFECTS

Eyes: Liquid is moderately irritating to the eyes.

Skin: Liquid is mildly irritating to the skin.

Ingestion: Ingestion of liquid may cause vomiting.

Inhalation: High concentration of vapors may produce irritation of the respiratory tract, headache, dizziness, and nausea.

CHRONIC HEALTH EFFECTS

Prolonged or repeated contact may cause skin sensitization or dermatitis. Reports have associated repeated and prolonged occupational overexposure to solvents with irreversible brain and nervous system damage. Intentional misuse by deliberately concentrating or inhaling this product may be harmful or fatal.

SECTION 4 FIRST AID MEASURES

Eyes – Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Inhalation – Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Skin – Flush skin with plenty of water. Remove contaminated clothing and shoes.

Ingestion – If large quantities of this material are swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

SECTION 5 FIRE FIGHTING MEASURES

Flash Point (Method Used) 53 F	Flammable Limits	LEL 1.40	UEL 19.0
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Extinguishing Media -

Use water fog, foam, dry chemical or CO₂. Use water spray to cool fire-exposed containers and to protect personnel.

Special Fire Fighting Procedures -

Keep containers cool and vapors down with water spray. Prevent spill from entering drains, sewers, streams or other bodies of water. If run-off occurs, notify proper authorities. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus.

Unusual Fire and Explosion Hazards – Vapors are heavier than air and may travel along ground, or be moved by ventilation and be ignited by ignition source.

SECTION 6 ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Absorb liquid with non-combustible floor absorbent and place in non-leaking container; seal properly and dispose of properly in compliance with federal, state, and local regulations.

LARGE SPILL: Evacuate area of unprotected personnel. Eliminate all ignition sources. Stop spill at source if safe to do so.

Handling equipment must be grounded to prevent sparking. Prevent spill from entering drains, sewers, streams or other bodies of water. If run-off occurs, notify proper authorities. Pump or vacuum transfer spilled product to clean containers for recovery.

Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Dispose of properly in compliance with federal, state, and local regulations.

SECTION 7 HANDLING AND STORAGE

HANDLING: Empty containers retain residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, sparks, flames, static electricity, or other sources of ignition. Many hot organic chemical vapors or mists are susceptible to sudden spontaneous combustion when mixed with air. Ignition may occur at temperatures below those published in the literature as “autoignition” or ignition temperatures. Ignition temperatures decrease with increasing vapor volume and vapor volume and vapor/air contact time, and are influenced by pressure changes. Ignition of organic chemical vapors may occur at typical elevated-temperature process conditions, especially in processes operating under vacuum if subjected to sudden ingress of air, or outside process equipment operating under elevated pressure if sudden escape of vapors or mists to the atmosphere occurs. Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained.

STORAGE:

Keep away from heat, sparks and open flames. Keep out of reach of children. Keep container tightly sealed when not in use. Store in cool, well-ventilated place away from incompatible materials.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**Respiratory Protection (Specify Type) –**

Not usually necessary. Use with adequate ventilation. Use NIOSH/MSHA approved respirator if PELs or TLVs are exceeded.

Engineering Controls	Local Exhaust	Not usually needed	Special	None
	Mechanical (General)	Yes	Other	None

Protective Gloves – Chemical resistant gloves (nitrile) if skin contact is possible (consult your safety equipment supplier). Replace gloves if they show signs of wear.

Eye Protection – Not normally required if used as intended. Wear chemical splash goggles in compliance with OSHA regulation if splashing is possible.

Other Protective Clothing or Equipment -

Not usually necessary. For bulk material, if direct contact is possible, wear apron, boots, face shield, etc. as needed.

Work/Hygienic Practices -

Follow label instructions. Wash hands after use and before eating, drinking, smoking, using restrooms, etc.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point	170°F- 257°F	Specific Gravity (H₂O = 1) @70° F	0.85
Vapor Pressure (mm-Hg @ 70° F)	No Data	Melting Point	No Data
Vapor Density (AIR = 1)	Greater than one (1)	Evaporation Rate (Butyl Acetate = 1)	Greater than (1)

Solubility in Water	Negligible	pH	No Data
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Appearance and Odor – Blue thin viscosity liquid with sweet solvent odor.

VOC: This product contains 790 grams per liter or 93.24% by weight VOC's.

SECTION 10 STABILITY AND REACTIVITY

Chemical	Unstable		Conditions to Avoid – None known.
Stability	Stable	X	

Incompatibility (Materials to Avoid) -

Strong oxidizing and reducing agents, strong alkalies and strong acids.

Hazardous Decomposition or Byproducts -

Carbon dioxide, carbon monoxide, smoke, soot and various organic oxidation by-products.

Hazardous Polymerization	May Occur		Conditions to Avoid - No data
	Will Not Occur	X	

SECTION 11 TOXICOLOGICAL INFORMATION

	Oral LD50 (Rat)	Dermal LD50 (Rabbit)	Inhalation LC50 (Rat)
Ethanol	7060 mg/kg	No data	20000 ppm/10H
Butyl Acetate	14 g/kg	No data	No data
Butanol	2500 mg/kg	Slight	>8000 ppm/4H
Nitrocellulose	>5000 mg/kg	No data	No data
Isopropanol	5045 mg/kg	No data	No data

Please refer to Section 3 for available information on potential health effects.

SECTION 12 ECOLOGICAL INFORMATION

No specific ecological data are available for this product. Please refer to Section 6 for information regarding accidental releases and Section 15 for regulatory reporting information.

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable local, state and federal regulations.

SECTION 14 TRANSPORT INFORMATION (Not meant to be all inclusive)

Domestic Highway (Containers < 1 Quart are ORM-D)	Domestic Air Shipments: Varies
Proper Shipping Name: Paint	Proper Shipping Name: No data
Hazard Class/Subsidiary Hazard: 3	Hazard Class/Subsidiary Hazard: No data
UN/NA No.: UN1263	UN/NA No.: No data
Packing Group: II	Packing Group: No data
Label Required: Flammable Liquid (3)	Label Required: No data

SECTION 15 REGULATORY INFORMATION (Not meant to be all inclusive - selected regulations represented)

U.S. FEDERAL REGULATIONS:

TSCA: Components of this product are listed on the TSCA inventory.

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	No	No	No

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

SECTION 313: This product contains Butanol (71-36-3) which is listed and may require reporting under SARA Title III Sec. 313 if used over the threshold reporting quantity. This information must be included in all MSDSs that are copied and distributed for this material.

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65: This product is not known to contain any material listed under California's Proposition 65.

SECTION 16 OTHER INFORMATION

MSDS Status: Revised Section(s):
3/14/06 – Added 80700 to part numbers.

WARNING! The use of this product is beyond the control of the manufacturer and distributor; therefore, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice. The user must assume all responsibility, including injury or damage, resulting from its misuse as such, or in combination with other materials. The manufacturer and distributor warrant only that this product meets the specifications for such product. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AS TO DESCRIPTION, QUALITY, MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, PRODUCTIVENESS, OR ANY OTHER MATTER OF THIS PRODUCT. THE MANUFACTURER AND DISTRIBUTOR SHALL BE IN NO WAY RESPONSIBLE FOR THE PROPER USE OF THIS PRODUCT. The sole and exclusive remedy against the manufacturer and distributor for breach of warranty shall be reimbursement of the purchase price of the product in the event that a defective condition of the product shall be found to exist. NO OTHER REMEDY (INCLUDING BUT NOT LIMITED TO INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR INJURY TO PERSON OR PROPERTY OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE.

ITEM: 1TLG6 - Extreme Pressure Grease 14 Oz

PICK REQ: 1112930293

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: B0024

This MSDS should be attached or kept with the respective product with which it is associated.

L SAFETY DATA SHEET - B0024

ociated Grainger Item: 1TLG6 - Extreme Pressure Grease 14 Oz

EXXON MOBIL
PRODUCT NAME: MOBILGREASE CM-S
REVISION DATE: 27 SEP 2006
MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT:
PRODUCT NAME: MOBILGREASE CM-S
PRODUCT DESCRIPTION: BASE OIL AND ADDITIVES
PRODUCT CODE: 2015A0202065, 530121-00, 971843
INTENDED USE: GREASE
COMPANY IDENTIFICATION:
SUPPLIER:
EXXON MOBIL CORPORATION
3225 GALLOWES RD.
FAIRFAX, VA. 22037
USA

24 HOUR HEALTH EMERGENCY: 609-737-4411
TRANSPORTATION EMERGENCY PHONE: 800-424-9300
EXXONMOBIL TRANSPORTATION NO.: 281-834-3296
MSDS REQUESTS: 713-613-3661

PRODUCT TECHNICAL INFORMATION:
800-662-4525
800-947-9147

MSDS INTERNET ADDRESS:
HTTP://WWW.EXXON.COM
HTTP://WWW.MOBIL.COM

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

Table with 3 columns: NAME, CAS#, CONCENTRATION*. Row 1: ZINC DIALKYL DITHIOPHOSPHATE, 68457-79-4, <2.5%

* ALL CONCENTRATIONS ARE PERCENT BY WEIGHT UNLESS MATERIAL IS A GAS. GAS CONCENTRATIONS ARE IN PERCENT BY VOLUME.

SECTION 3 HAZARDS IDENTIFICATION

THIS MATERIAL IS NOT CONSIDERED TO BE HAZARDOUS ACCORDING TO REGULATORY GUIDELINES (SEE (M)SDS SECTION 15).

POTENTIAL HEALTH EFFECTS:
LOW ORDER OF TOXICITY. EXCESSIVE EXPOSURE MAY RESULT IN EYE, SKIN, OR RESPIRATORY IRRITATION. HIGH-PRESSURE INJECTION UNDER SKIN MAY CAUSE SERIOUS DAMAGE.

NFPA HAZARD ID:
HEALTH 0
FLAMMABILITY 1
REACTIVITY 0

HMS HAZARD ID:
HEALTH 0
FLAMMABILITY 1
REACTIVITY 0

NOTE:
THIS MATERIAL SHOULD NOT BE USED FOR ANY OTHER PURPOSE THAN THE INTENDED USE IN SECTION 1 WITHOUT EXPERT ADVICE. HEALTH STUDIES HAVE SHOWN THAT CHEMICAL EXPOSURE MAY CAUSE POTENTIAL HUMAN HEALTH RISKS WHICH MAY VARY FROM PERSON TO PERSON.

SECTION 4 FIRST AID MEASURES

INHALATION:
UNDER NORMAL CONDITIONS OF INTENDED USE, THIS MATERIAL IS NOT EXPECTED TO BE AN INHALATION HAZARD.

SKIN CONTACT:
WASH CONTACT AREAS WITH SOAP AND WATER. IF PRODUCT IS INJECTED INTO OR UNDER THE SKIN OR INTO ANY PART OF THE BODY, REGARDLESS OF THE APPEARANCE OF THE WOUND OR ITS SIZE, THE INDIVIDUAL SHOULD BE EVALUATED IMMEDIATELY BY A PHYSICIAN AS A SURGICAL EMERGENCY. EVEN THOUGH INITIAL SYMPTOMS FROM HIGH PRESSURE INJECTION MAY BE MINIMAL OR ABSENT, EARLY SURGICAL TREATMENT WITHIN THE FIRST FEW HOURS MAY SIGNIFICANTLY REDUCE THE ULTIMATE EXTENT OF INJURY.

EYE CONTACT:
FLUSH THOROUGHLY WITH WATER. IF IRRITATION OCCURS, GET MEDICAL ASSISTANCE.

INGESTION:
FIRST AID IS NORMALLY NOT REQUIRED. SEEK MEDICAL ATTENTION IF DISCOMFORT OCCURS.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:
APPROPRIATE EXTINGUISHING MEDIA:
USE WATER FOG, FOAM, DRY CHEMICAL OR CARBON DIOXIDE (CO2) TO EXTINGUISH FLAMES.
INAPPROPRIATE EXTINGUISHING MEDIA: STRAIGHT STREAMS OF WATER
FIRE FIGHTING:
FIRE FIGHTING INSTRUCTIONS:
EVACUATE AREA. PREVENT RINOFF FROM FIRE CONTROL OR DILUTION FROM ENTERING STREAMS, SEWERS, OR DRINKING WATER SUPPLY. FIREFIGHTERS SHOULD USE STANDARD PROTECTIVE EQUIPMENT AND IN ENCLOSED SPACES, SELF-CONTAINED BREATHING APPARATUS (SCBA). USE WATER SPRAY TO COOL FIRE EXPOSED SURFACES AND TO PROTECT PERSONNEL.
HAZARDOUS COMBUSTION PRODUCTS:
ALDEHYDES, SMOKE, FUME, SULFUR OXIDES, INCOMPLETE COMBUSTION PRODUCTS, OXIDES OF CARBON
FLAMMABILITY PROPERTIES:
FLASH POINT (METHOD): >204C (400F) (EST. FOR OIL, ASIM D-92 (COC))
FLAMMABLE LIMITS (APPROXIMATE VOLUME % IN AIR):
LEL: N/D
UEL: N/D
AUTO IGNITION TEMPERATURE: N/D

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES:
IN THE EVENT OF A SPILL OR ACCIDENTAL RELEASE, NOTIFY RELEVANT AUTHORITIES IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. U.S. REGULATIONS REQUIRE REPORTING RELEASES OF THIS MATERIAL TO THE ENVIRONMENT WHICH EXCEED THE REPORTABLE QUANTITY OR OIL SPILLS WHICH COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. THE NATIONAL RESPONSE CENTER CAN BE REACHED AT (800) 424-8802.

SPILL MANAGEMENT:
LAND SPILL:
SCRAPE UP SPILLED MATERIAL WITH SHOVELS INTO A SUITABLE CONTAINER FOR RECYCLE OR DISPOSAL.
WATER SPILL:
STOP LEAK IF YOU CAN DO IT WITHOUT RISK. CONFINE THE SPILL IMMEDIATELY WITH BOOMS. WARN OTHER SHIPPING. SKIM FROM SURFACE.

WATER SPILL AND LAND SPILL RECOMMENDATIONS ARE BASED ON THE MOST LIKELY SPILL SCENARIO FOR THIS MATERIAL; HOWEVER, GEOGRAPHIC CONDITIONS, WIND, TEMPERATURE, (AND IN THE CASE OF A WATER SPILL) WAVE AND CURRENT DIRECTION AND SPEED MAY GREATLY INFLUENCE THE APPROPRIATE ACTION TO BE TAKEN. FOR THIS REASON, LOCAL EXPERTS SHOULD BE CONSULTED.

NOTE: LOCAL REGULATIONS MAY PRESCRIBE OR LIMIT ACTION TO BE TAKEN.
ENVIRONMENTAL PRECAUTIONS:
PREVENT ENTRY INTO WATERWAYS, SEWERS, BASEMENTS OR CONFINED AREAS.

SECTION 7 HANDLING AND STORAGE

HANDLING: PREVENT SMALL SPILLS AND LEAKAGE TO AVOID SLIP HAZARD.
STATIC ACCUMULATOR: THIS MATERIAL IS NOT A STATIC ACCUMULATOR.
STORAGE: DO NOT STORE IN OPEN OR UNLABELLED CONTAINERS.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES:
NOTE:
LIMITS/STANDARDS SHOWN FOR GUIDANCE ONLY. FOLLOW APPLICABLE REGULATIONS.
ENGINEERING CONTROLS:
THE LEVEL OF PROTECTION AND TYPES OF CONTROLS NECESSARY WILL VARY DEPENDING UPON POTENTIAL EXPOSURE CONDITIONS.
CONTROL MEASURES TO CONSIDER:
NO SPECIAL REQUIREMENTS UNDER ORDINARY CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.
PERSONAL PROTECTION:
PERSONAL PROTECTIVE EQUIPMENT SELECTIONS VARY BASED ON POTENTIAL EXPOSURE CONDITIONS SUCH AS APPLICATIONS, HANDLING PRACTICES, CONCENTRATION AND VENTILATION. INFORMATION ON THE SELECTION OF PROTECTIVE EQUIPMENT FOR USE WITH THIS MATERIAL, AS PROVIDED BELOW, IS BASED UPON INTENDED, NORMAL USAGE.
RESPIRATORY PROTECTION:
IF ENGINEERING CONTROLS DO NOT MAINTAIN AIRBORNE CONTAMINANT CONCENTRATIONS AT A LEVEL WHICH IS ADEQUATE TO PROTECT WORKER HEALTH, AN APPROVED RESPIRATOR MAY BE APPROPRIATE. RESPIRATOR SELECTION, USE, AND MAINTENANCE MUST BE IN ACCORDANCE WITH REGULATORY REQUIREMENTS, IF APPLICABLE.
TYPES OF RESPIRATORS TO BE CONSIDERED FOR THIS MATERIAL INCLUDE:
NO PROTECTION IS ORDINARILY REQUIRED UNDER NORMAL CONDITIONS OF USE AND WITH ADEQUATE VENTILATION.
FOR HIGH AIRBORNE CONCENTRATIONS, USE AN APPROVED SUPPLIED-AIR RESPIRATOR, OPERATED IN POSITIVE PRESSURE MODE. SUPPLIED AIR RESPIRATORS WITH AN ESCAPE BOTTLE MAY BE APPROPRIATE WHEN OXYGEN LEVELS ARE INADEQUATE, GAS/VAPOR WARNING PROPERTIES ARE POOR, OR IF AIR PURIFYING FILTER CAPACITY/RATING MAY

BE EXCEEDED.

HAND PROTECTION:
ANY SPECIFIC GLOVE INFORMATION PROVIDED IS BASED ON PUBLISHED LITERATURE AND GLOVE MANUFACTURER DATA. WORK CONDITIONS CAN GREATLY AFFECT GLOVE DURABILITY; INSPECT AND REPLACE WORN OR DAMAGED GLOVES.

THE TYPES OF GLOVES TO BE CONSIDERED FOR THIS MATERIAL INCLUDE:
NO PROTECTION IS ORDINARILY REQUIRED UNDER NORMAL CONDITIONS OF USE.

PROTECTION:
CONTACT IS LIKELY, SAFETY GLASSES WITH SIDE SHIELDS ARE RECOMMENDED.

SKIN AND BODY PROTECTION:
ANY SPECIFIC CLOTHING INFORMATION PROVIDED IS BASED ON PUBLISHED LITERATURE OR MANUFACTURER DATA.

THE TYPES OF CLOTHING TO BE CONSIDERED FOR THIS MATERIAL INCLUDE:
NO SKIN PROTECTION IS ORDINARILY REQUIRED UNDER NORMAL CONDITIONS OF USE. IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE PRACTICES, PRECAUTIONS SHOULD BE TAKEN TO AVOID SKIN CONTACT.

SPECIFIC HYGIENE MEASURES:
ALWAYS OBSERVE GOOD PERSONAL HYGIENE MEASURES, SUCH AS WASHING AFTER HANDLING THE MATERIAL AND BEFORE EATING, DRINKING, AND/OR SMOKING. ROUTINELY WASH WORK CLOTHING AND PROTECTIVE EQUIPMENT TO REMOVE CONTAMINANTS. DISCARD CONTAMINATED CLOTHING AND FOOTWEAR THAT CANNOT BE CLEANED. PRACTICE GOOD HOUSEKEEPING.

ENVIRONMENTAL CONTROLS: SEE SECTIONS 6, 7, 12, 13.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES ARE GIVEN BELOW. CONSULT THE SUPPLIER IN SECTION 1 FOR ADDITIONAL DATA.

GENERAL INFORMATION:

PHYSICAL STATE: SOLID

FORM: SEMI-FLUID

COLOR: ORANGE

ODOR: CHARACTERISTIC

ODOR THRESHOLD: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION:

RELATIVE DENSITY (AT 15 C): 0.908

FLASH POINT (METHOD): >204C (400F) (EST. FOR OIL, ASTM D-92 (COC))

FLAMMABLE LIMITS (APPROXIMATE VOLUME % IN AIR):

LEL: N/D

UEL: N/D

AUTOIGNITION TEMPERATURE: N/D

SMELTING POINT / RANGE: >316C (600F)

VAPOR DENSITY (AIR = 1): N/D

VAPOR PRESSURE: <0.013 KPA (0.1 MMHg) AT 20 C

EVAPORATION RATE (n-BUTYL ACETATE = 1): N/D

pH: N/A

LOG POW (n-OCTANOL/WATER PARTITION COEFFICIENT): >3.5

SOLUBILITY IN WATER: NEGLIGIBLE

VISCOSITY: 320 CST (320 MM2/SEC) AT 40 C

OXIDIZING PROPERTIES: SEE SECTIONS 3, 15, 16.

OTHER INFORMATION:

FREEZING POINT: N/D

MELTING POINT: 260 DEG. C (500 DEG. F)

DMSO EXTRACT (MINERAL OIL ONLY), IP-346: <3 %WT

NOTE:
MOST PHYSICAL PROPERTIES ABOVE ARE FOR THE OIL COMPONENT IN THE MATERIAL.

SECTION 10 STABILITY AND REACTIVITY

STABILITY: MATERIAL IS STABLE UNDER NORMAL CONDITIONS.

CONDITIONS TO AVOID: EXCESSIVE HEAT, HIGH ENERGY SOURCES OF IGNITION.

MATERIALS TO AVOID: STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS:
MATERIAL DOES NOT DECOMPOSE AT AMBIENT TEMPERATURES.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

ROUTE OF EXPOSURE CONCLUSION / REMARKS

INHALATION:

TOXICITY (RAT): MINIMALLY TOXIC, BASED ON ASSESSMENT
LD50: >5000 MG/M3 OF THE COMPONENTS. NEGLIGIBLE HAZARD

IRRITATION: NO END POINT DATA. AT AMBIENT/NORMAL HANDLING
TEMPERATURES. BASED ON ASSESSMENT
OF THE COMPONENTS.

INGESTION:

TOXICITY (RAT): MINIMALLY TOXIC, BASED ON TEST DATA
LD50: >2000 MG/KG FOR STRUCTURALLY SIMILAR MATERIALS.

SKIN:

TOXICITY (RABBIT): MINIMALLY TOXIC, BASED ON TEST DATA
LD50: >2000 MG/KG FOR STRUCTURALLY SIMILAR MATERIALS.

IRRITATION (RABBIT): DATA AVAILABLE. NEGLIGIBLE IRRITATION TO SKIN AT
AMBIENT TEMPERATURES. BASED ON
ASSESSMENT OF THE COMPONENTS.

EYE:

IRRITATION (RABBIT): DATA AVAILABLE. MAY CAUSE MILD, SHORT-LASTING
DISCOMFORT TO EYES, BASED ON
ASSESSMENT OF THE COMPONENTS.

CHRONIC/OTHER EFFECTS:

CONTAINS:

BASE OIL SEVERELY REFINED:
NOT CARCINOGENIC IN ANIMAL STUDIES. REPRESENTATIVE MATERIAL PASSES IP-346,
MODIFIED AMES TEST AND/OR OTHER SCREENING TESTS. DERMAL AND INHALATION
STUDIES SHOWED MINIMAL EFFECTS; LUNG NON-SPECIFIC INFILTRATION OF IMMUNE
CELLS, OIL DEPOSITION AND MINIMAL GRANULOMA FORMATION. NOT SENSITIZING IN
TEST ANIMALS.

ADDITIONAL INFORMATION IS AVAILABLE BY REQUEST.

THE FOLLOWING INGREDIENTS ARE CITED ON THE LISTS BELOW: NONE.

REGULATORY LISTS SEARCHED:

- 1 = NTP CARC
- 2 = NTP SUS
- 3 = IARC 1
- 4 = IARC 2A
- 5 = IARC 2B
- 6 = OSHA CARC

SECTION 12 ECOLOGICAL INFORMATION

THE INFORMATION GIVEN IS BASED ON DATA AVAILABLE FOR THE MATERIAL, THE COMPONENTS OF THE MATERIAL, AND SIMILAR MATERIALS.

ECOTOXICITY:
MATERIAL: NOT EXPECTED TO BE HARMFUL TO AQUATIC ORGANISMS.

MOBILITY:

BASE OIL COMPONENT:
LOW SOLUBILITY AND FLOATS AND IS EXPECTED TO MIGRATE FROM WATER TO THE LAND.
EXPECTED TO PARTITION TO SEDIMENT AND WASTEWATER SOLIDS.

PERSISTENCE AND DEGRADABILITY:

BIODEGRADATION:
BASE OIL COMPONENT: EXPECTED TO BE INHERENTLY BIODEGRADABLE

BIOACCUMULATION POTENTIAL:

BASE OIL COMPONENT:
HAS THE POTENTIAL TO BIOACCUMULATE, HOWEVER METABOLISM OR PHYSICAL
PROPERTIES MAY REDUCE THE BIOCONCENTRATION OR LIMIT BIOAVAILABILITY.

SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSAL RECOMMENDATIONS BASED ON MATERIAL AS SUPPLIED. DISPOSAL MUST BE
IN ACCORDANCE WITH CURRENT APPLICABLE LAWS AND REGULATIONS, AND MATERIAL
CHARACTERISTICS AT TIME OF DISPOSAL.

DISPOSAL RECOMMENDATIONS:
PRODUCT IS SUITABLE FOR BURNING IN AN ENCLOSED CONTROLLED BURNER FOR FUEL
VALUE OR DISPOSAL BY SUPERVISED INCINERATION AT VERY HIGH TEMPERATURES TO
PREVENT FORMATION OF UNDESIRABLE COMBUSTION PRODUCTS.

REGULATORY DISPOSAL INFORMATION:

RCRA INFORMATION:
THE UNUSED PRODUCT, IN OUR OPINION, IS NOT SPECIFICALLY LISTED BY THE EPA AS
A HAZARDOUS WASTE (40 CFR, PART 261), NOR IS IT FORMULATED TO CONTAIN
MATERIALS WHICH ARE LISTED AS HAZARDOUS WASTES. IT DOES NOT EXHIBIT THE
HAZARDOUS CHARACTERISTICS OF IGNITABILITY, CORROSIVITY OR REACTIVITY AND
IS NOT FORMULATED WITH CONTAMINANTS AS DETERMINED BY THE TOXICITY
CHARACTERISTIC LEACHING PROCEDURE (TCLP). HOWEVER, USED PRODUCT MAY BE
REGULATED.

EMPTY CONTAINER WARNING:

PRECAUTIONARY LABEL TEXT:
EMPTY CONTAINERS MAY RETAIN RESIDUE AND CAN BE DANGEROUS. DO NOT PRESSURIZE,
CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT,
FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY
EXPLODE AND CAUSE INJURY OR DEATH. DO NOT ATTEMPT TO REFILL OR CLEAN
CONTAINER SINCE RESIDUE IS DIFFICULT TO REMOVE. EMPTY DRUMS SHOULD BE
COMPLETELY DRAINED, PROPERLY BUNGED AND PROMPTLY RETURNED TO A DRUM
RECONDITIONER. ALL CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY
SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS.

SECTION 14 TRANSPORT INFORMATION

LAND (DOT): NOT REGULATED FOR LAND TRANSPORT

LAND (TDG): NOT REGULATED FOR LAND TRANSPORT

SEA (IMDG): NOT REGULATED FOR SEA TRANSPORT ACCORDING TO IMDG-CODE

AIR (IATA): NOT REGULATED FOR AIR TRANSPORT

SECTION 15 REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD:
WHEN USED FOR ITS INTENDED PURPOSES, THIS MATERIAL IS NOT CLASSIFIED AS

HAZARDOUS IN ACCORDANCE WITH OSHA 29 CFR 1910.1200.

NATIONAL CHEMICAL INVENTORY LISTING: TSCA

EPCRA: THIS MATERIAL CONTAINS NO EXTREMELY HAZARDOUS SUBSTANCES.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: NONE.

SARA (313) TOXIC RELEASE INVENTORY:

CHEMICAL NAME	CAS NUMBER	TYPICAL VALUE
ZINC DIALKYL DITHIOPHOSPHATE	68457-79-4	<2.5%

THE FOLLOWING INGREDIENTS ARE CITED ON THE LISTS BELOW:*

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS
DIPHENYLAMINE	122-39-4	5, 9, 18
ZINC DIALKYL DITHIOPHOSPHATE	68457-79-4	13, 15, 17
ZINC DINONYLNAPHTHALENE SULFONATE	28016-00-4	15

REGULATORY LISTS SEARCHED:

- 1 = ACGIH ALL
- 2 = ACGIH A1
- 3 = ACGIH A2
- 4 = OSHA Z
- 5 = TSCA 4
- 6 = TSCA 5A2
- 7 = TSCA 5E
- 8 = TSCA 6
- 9 = TSCA 12B
- 10 = CA P65 CARC
- 11 = CA P65 REPRO
- 12 = CA RTK
- 13 = IL RTK
- 14 = LA RTK
- 15 = MI 293
- 16 = MN RTK
- 17 = NJ RTK
- 18 = PA RTK
- 19 = RI RTK

CODE KEY:
CARC=CARCINOGEN
REPRO=REPRODUCTIVE

* EPA RECENTLY ADDED NEW CHEMICAL SUBSTANCES TO ITS TSCA SECTION 4 TEST RULES. PLEASE CONTACT THE SUPPLIER TO CONFIRM WHETHER THE INGREDIENTS IN THIS PRODUCT CURRENTLY APPEAR ON A TSCA 4 OR TSCA 12B LIST.

SECTION 16 OTHER INFORMATION

N/D = NOT DETERMINED
N/A = NOT APPLICABLE

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:
NO REVISION INFORMATION IS AVAILABLE.

THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE, TO THE BEST OF EXXON MOBIL'S KNOWLEDGE AND BELIEF, ACCURATE AND RELIABLE AS OF THE DATE ISSUED. YOU CAN CONTACT EXXON MOBIL TO INSURE THAT THIS DOCUMENT IS THE MOST CURRENT AVAILABLE FROM EXXON MOBIL. THE INFORMATION AND RECOMMENDATIONS ARE OFFERED FOR THE USER'S CONSIDERATION AND EXAMINATION. IT IS THE USER'S RESPONSIBILITY TO SATISFY ITSELF THAT THE PRODUCT IS SUITABLE FOR THE INTENDED USE. IF BUYER REPACKAGES THIS PRODUCT, IT IS THE USER'S RESPONSIBILITY TO INSURE PROPER HEALTH, SAFETY AND OTHER NECESSARY INFORMATION IS INCLUDED WITH AND/OR ON THE CONTAINER. APPROPRIATE WARNINGS AND SAFE-HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS. ALTERATION OF THIS DOCUMENT IS STRICTLY PROHIBITED. EXCEPT TO THE EXTENT REQUIRED BY LAW, RE-PUBLICATION OR RETRANSMISSION OF THIS DOCUMENT, IN WHOLE OR IN PART, IS NOT PERMITTED. THE TERM, "EXXON MOBIL" IS USED FOR CONVENIENCE, AND MAY INCLUDE ANY ONE OR MORE OF EXXON MOBIL CHEMICAL COMPANY, EXXON MOBIL CORPORATION, OR ANY AFFILIATES IN WHICH THEY DIRECTLY OR INDIRECTLY HOLD ANY INTEREST.

INTERNAL USE ONLY:
#HC: 0, 0, 0, 0, 0, 0
#PEC: A
#GN: 2006079XUS (553320)

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MATERIAL SAFETY DATA SHEET

Date Revised: 10/2/07
Glaze Coat

Page: 1
MSDS Number: 120012

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: Glaze Coat
Product Numbers: 100417
Product Use: Polyester Finishing and Blending Putty

Company

Fibre Glass-Evercoat
a Division of Illinois Tool Works Inc.
6600 Cornell Road
Cincinnati, Ohio USA
Phone: 513-489-7600

Emergency Telephone Numbers:

CHEMTREC: 1-800-424-9300
CANUTEC: 1-613-996-6666

Prepared By: Safety Department

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredient(s)</u>	<u>CAS Number</u>	<u>EINECS Number</u>	<u>% (by weight)</u>
Polyester Resin (Non-Hazardous)	Proprietary	Proprietary	30 - 35
Styrene	100-42-5	202-851-5	20 - 25
Talc	14807-96-6	238-877-9	10 - 15
Calcium Carbonate	1317-65-3	215-279-6	10 - 15
Inert Filler	Proprietary	Proprietary	5 - 10
Titanium Dioxide	13463-67-7	236-675-5	1 - 5

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING! FLAMMABLE LIQUID AND VAPOR.
CAUSES EYE, SKIN, NOSE AND THROAT IRRITATION.

Potential Health Effects

Acute Effects (Short Term):

Eye: Contact with liquid or vapor may result in irritation, redness, tearing, and blurred vision.

Skin: May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns.

Swallowing: Ingestion of this material may cause gastrointestinal irritation, nausea, diarrhea, and vomiting. Aspiration of this material into the lungs due to vomiting may produce chemical pneumonitis which can be fatal.

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Inhalation: Excessive inhalation of vapors may cause nasal and respiratory irritation, acute nervous system depression, fatigue, weakness, nausea, headache, and dizziness. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

Chronic Effects of Overexposure (Long Term):

Styrene: Excessive overexposure to styrene has been found to cause the following effects in humans and may aggravate pre-existing disorders of these organs; central nervous system effects, effects on hearing, mild effects on color vision and respiratory tract damage.

Cancer Information: The International Agency for Research on Cancer (IARC) has classified styrene as a group 2B carcinogen (possibly carcinogenic to humans). This classification is not based on evidence that styrene may be carcinogenic, but rather on a revised definition for Group 2B, and consideration of new data on styrene oxide (Group 2A). Titanium Dioxide is listed by IARC as possibly carcinogenic to humans (Group 2B). This listing is based on inadequate evidence of carcinogenicity in humans and sufficient evidence in experimental animals. This material may contain trace amounts of chemicals considered to be carcinogenic by OSHA, (1,3- Butadiene-IARC Group 2A and Benzene-IARC Group 1).

Other Health Effects:

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Primary Route(s) of Entry: Inhalation, Skin contact, Eye contact, Ingestion, Skin absorption.

SECTION 4. FIRST AID MEASURES

Eyes: Flush eyes gently with water for at least 15 minutes. Seek immediate medical attention.

Skin: Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Swallowing: Consult a physician or poison control center immediately. DO NOT INDUCE VOMITING. If individual is drowsy or unconscious, do not

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give anything by mouth; place individual on the left side with the head down. If possible, do not leave individual unattended.

Inhalation: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, oxygen may be beneficial if administered by trained personnel.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point: 92 °F (33.3 °C)

Explosive Limit: Lower: 1.1% Upper: 6.1%

Autoignition Temperature: 914.0 °F (490.0 °C)

OSHA Flammability Class: Flammable Liquid – Class IC

Hazardous Products of Combustion: May form: carbon dioxide, carbon monoxide, styrene oxide, and various hydrocarbons.

Fire and Explosion Hazards: Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point.

Extinguishing Media: Regular foam, carbon dioxide, dry chemical.

Fire Fighting Instructions: Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breathing apparatus NIOSH approved with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment.

NFPA Rating: Health - 2, Flammability - 3, Reactivity - 2

SECTION 6. ACCIDENTAL RELEASE MEASURES

In Case of Spill: Eliminate all sources of ignition such as flares, flames (including pilot lights), and electrical sparks. Ventilate the area. Wear proper protective equipment (Section 8). Avoid breathing vapors. Collect with an inert absorbant and dispose of properly.

SECTION 7. HANDLING AND STORAGE

Handling: All hazard precautions given in the data sheet must be observed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Use only with

MATERIAL SAFETY DATA SHEET

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adequate ventilation. Do not breathe sanding dust, vapors or spray mist. Do not take internally. Close container after each use. **Keep out of reach of children.**

Storage: Store material in a cool, well-ventilated area. For maximum product quality, avoid prolonged storage at temperatures above 75°F (25°C). Do not use or store near heat, sparks, or open flame. Keep container tightly closed. Avoid contact with incompatible materials.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: Chemical splash goggles in compliance with OSHA regulations are recommended.

Skin Protection: Protective gloves and proper clothing should be worn to prevent skin contact. Gloves should be made of neoprene or natural rubber. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protection: Use a NIOSH approved respirator designed to remove particulate matter and organic solvent vapors.

Engineering Controls: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below acceptable limits. Explosion-proof ventilation system is acceptable.

Exposure Guidelines:

Hazardous Ingredients	CAS Number	OSHA PEL/TWA	ACGIH TLV
Calcium Carbonate	1317-65-3	15 mg/m ³	10 mg/m ³
Inert Filler	Proprietary	5 mg/m ³	10 mg/m ³
Styrene	100-42-5	100 ppm	20 ppm
Talc	14807-96-6	20 mppcf	2 mg/m ³
Titanium Dioxide	13463-67-7	15 mg/m ³	10 mg/m ³

Mppcf- millions of particles per cubic foot of air N/E-Not Established

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	293 °F / 145 °C (Styrene)	Vapor Density:	Heavier than air.
Specific Gravity / Density:	0.95 / 7.9 lbs/gal	Percent Volatiles by weight:	20 - 25 %
Evaporation Rate:	Slower than ethyl ether.	Physical State:	Thick Liquid
Melting Point:	-23.1 °F / -30.6 °C (Styrene)	pH:	Neutral
Odor:	Sharp, aromatic odor.	Solubility:	Insoluble in water.
Vapor Pressure:	5.0 mmHg @ 68 °F / 20 °C	Appearance:	Yellow Liquid
Octanol/Water Partition Coefficient:	Unknown		
VOC (as packaged-less exempts and	1.80 lbs/gal or 216 g/L	VOC (as applied*- 2%by wt hardener- less exempts and water):	0.53 lbs/gal or 64 g/L
Percent Solids by weight – as packaged:	77.1 %	Percent Solids by weight – as applied* - 2 % by wt hardener:	93.1 %
VHAP Content by weight – as packaged:	22.9 %	VHAP Content by weight – as applied* - 2 % by weight hardener:	6.9 %

*NOTE: The applied VOC and VHAP Content is lower than the packaged VOC and VHAP Content due to a reactive diluent (styrene) that reacts and becomes non-volatile (bonded in the solid material) when the hardener is added.

SECTION 10. STABILITY AND REACTIVITY

Hazardous Polymerization: Product may undergo hazardous polymerization if exposed to extreme heat.

Hazardous Decomposition: May form: carbon dioxide, carbon monoxide, styrene oxide and various hydrocarbons.

Chemical Stability: Stable under normal handling conditions.

Incompatibility: Avoid contact in uncontrolled conditions with: peroxides, strong acids, strong oxidizing agents and polymerization catalysts.

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SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity Data:

Ingredient	CAS #	LD ₅₀ Oral-Rat	LC ₅₀ Inhalation-Rat
Styrene	100-42-5	5,000 mg/kg	24 g/m ³ /4H
Calcium Carbonate	1317-65-3	6,450 mg/kg	N/E

N/E-Not Established

Carcinogenicity: See Cancer Information, Section 3.

Mutagenicity: No significant evidence found.

Teratogenicity: No significant risk of birth defects or reproductive toxicity of styrene to humans.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: Styrene is toxic to aquatic organisms and should not be released to sewage, draining systems or any body of water exceeding concentrations of approved limits under applicable regulations and permits.

SECTION 13. DISPOSAL CONSIDERATION

RCRA Hazardous Waste: This material as supplied, if discarded, would be regulated as a hazardous waste under RCRA (40 CFR 261). Dispose of in accordance with applicable federal, state, and local regulations.

RCRA Hazard Class: This material would be regulated as EPA Hazardous Waste Number D001 based on the characteristic of ignitability.

SECTION 14. TRANSPORT INFORMATION

DOT Description: The DOT Classification for shipping is dependant on quantity, type of packaging (a kit may include other components), or method of shipment.

SECTION 15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status

TSCA (USA) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4(a)

Component	RQ (lbs.)
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Styrene	1000
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SARA Title III: Section 302- Extremely Hazardous Substances

None

SARA Title III: Section 313- Toxic Chemical List

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<u>Component</u>	<u>CAS Number</u>	<u>Percentage</u>
Styrene	100-42-5	22.9 %
EPA Hazardous Air Pollutants (HAPS) 40 CFR 63		
<u>Component</u>	<u>CAS Number</u>	<u>Percentage</u>
Styrene	100-42-5	22.9 %

International Regulations

EINECS (Europe) The intentional ingredients of this product are listed.

DSL (Canada) The intentional ingredients of this product are listed.

WHMIS Classification

Health Hazard: D2A, D2B (Other Toxic Effects)

Physical Hazard: B2 (Flammable)

State and Local Regulations

California Proposition 65:

This product contains the following chemical(s) known to the state of California to cause cancer. BENZENE, STYRENE OXIDE, 1,3-BUTADIENE, CRYSTALLINE SILICA.

Styrene, in the presence of air and high temperature or prolonged exposure of styrene/air mixture to sunlight, can react to form styrene oxide.

This product contains the following chemical(s) known to the state of California to cause birth defects or reproductive harm. BENZENE, 1,3-BUTADIENE

SECTION 16. OTHER INFORMATION

HMIS Rating: Health – 2*, Flammability - 3, Reactivity - 2
Key- 0=Least, 1=Slight, 2=Moderate, 3=Serious, 4=Extreme, *=Chronic Effects

Other Precautions for Use: This product must be mixed with Cream Hardener prior to use. Please refer to the Material Safety Data Sheet (#100340) for catalyst before using. If product is to be sanded, the OSHA PEL/TLV of 10 mg/m³ for nuisance dust should be observed.

Additional Information may be obtained by calling the Evercoat MSDS Hotline at 1-800-729-7600.

NOTICE: The information accumulated herein is believed to be correct as of the date issued from sources, which are believed to be accurate and reliable. Since it is not possible to anticipate all circumstances of use, recipients are advised to confirm, in advance of need, that the information is current, applicable and suitable to their circumstances.

MATERIAL SAFETY DATA SHEET

Date Revised: 08/13/07
Cream Hardener

Page: 1
MSDS Number: 100340

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: Cream Hardener
Product Numbers: Red- 100358,
Blue- 100354, 100359, 100360, 100361,
101474 and 101475
White-100340, and 101607
Product Use: Polymerization initiator

Company

Fibre Glass-Evercoat
a Division of Illinois Tool Works Inc.
6600 Cornell Road
Cincinnati, Ohio USA 45242
Phone: 513-489-7600

Emergency Telephone Numbers:

CHEMTREC: 1-800-424-9300
CANUTEC: 1-613-996-6666

Prepared By: Safety Department

Packaged By:

Rocket Plastics Co.
P.O. Box 429514
Montgomery, Ohio USA 45242

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	EINECS Number	% (by weight)
Benzoyl Peroxide	94-36-0	202-327-6	45 – 50
Plasticizer, non-phthalate	Proprietary	Proprietary	25 – 30
Water	7732-18-5	231-791-2	15 – 20
Silica, amorphous	7631-86-9	231-545-4	0 – 2
Calcium Carbonate	1317-65-3	215-279-6	0 – 2
Pigments	Various	Various	0 – 2

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING! CAUSES EYE AND SKIN IRRITATION. HARMFUL IF SWALLOWED. OXIDIZER.

Potential Health Effects

Acute Effects (Short Term):

Eye: Contact with paste may result in irritation, redness, tearing, and blurred vision.

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Cream Hardener

MSDS Number: 100340

Skin: May cause skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns.

Swallowing: Ingestion of this material may cause gastrointestinal irritation, nausea, diarrhea, and vomiting. Aspiration of this material into the lungs due to vomiting may produce chemical pneumonitis which can be fatal. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs.

Inhalation: Not expected to be an inhalation hazard.

Chronic Effects of Overexposure (Long Term):

Benzoyl Peroxide: Repeated or prolonged contact may cause skin sensitization. Overexposure to this material has been known to cause the following effects in lab animals: skin damage. Benzoyl Peroxide has caused tumorigenic effects in laboratory animals.

Cancer Information: This product does not contain any substance, which is listed as a carcinogen by NTP, IARC or OSHA in quantities greater than 0.1%.

Primary Route(s) of Entry: Inhalation, Skin contact, Eye contact, Ingestion, Skin absorption.

SECTION 4. FIRST AID MEASURES

- Eyes:** Flush eyes gently with water for at least 15 minutes. Seek medical attention.
- Skin:** Immediately remove contaminated clothing. Wash exposed area with soap and water. Seek medical attention. Launder clothing before reuse.
- Swallowing:** Consult a physician or poison control center immediately. DO NOT INDUCE VOMITING. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. If possible, do not leave individual unattended.
- Inhalation:** If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, oxygen may be beneficial if administered by trained personnel.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point: 184 °F (84 °C)

Explosive Limit: Lower: N/D Upper: N/D

MATERIAL SAFETY DATA SHEET

Date Revised: 08/13/07

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Cream Hardener

MSDS Number: 100340

Autoignition Temperature: Not Determined

OSHA Flammability Class: Combustible Liquid – Class IIIA

Hazardous Products of Combustion: May form toxic and corrosive gases: carbon dioxide, carbon monoxide, benzoic acid and various hydrocarbons.

Fire and Explosion Hazards: Fire hazard increases when material becomes dry. Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point.

Extinguishing Media: Regular foam, carbon dioxide, dry chemical.

Fire Fighting Instructions: Fight fire like a fuel oil fire. Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breathing apparatus NIOSH approved with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment.

NFPA Rating: Health - 2, Flammability - 2, Reactivity - 2

SECTION 6. ACCIDENTAL RELEASE MEASURES

In Case of Spill: Eliminate all sources of ignition such as flares, flames (including pilot lights), and electrical sparks. Ventilate the area. Wear proper protective equipment (Section 8). Avoid breathing vapors. Collect with an inert absorbant and dispose of properly.

SECTION 7. HANDLING AND STORAGE

Handling: All hazard precautions given in the data sheet must be observed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Use only with adequate ventilation. Do not breathe vapors or spray mist. Do not take internally. Close container after each use. **Keep out of reach of children.**

Storage: Store material in a cool, well-ventilated area. For maximum product quality, avoid prolonged storage at temperatures above 75°F (25°C). To prevent possible decomposition, temperatures in the storage facility must not exceed 217°F (103°C). Do not use or store near heat, sparks, or open flame. Keep container tightly closed. Avoid contact with incompatible materials.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: Chemical splash goggles in compliance with OSHA regulations are recommended.

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Cream Hardener

MSDS Number: 100340

Skin Protection: Protective gloves and proper clothing should be worn to prevent skin contact. Gloves should be made of neoprene or natural rubber. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protection: Use a NIOSH approved respirator designed to remove particulate matter and organic solvent vapors.

Engineering Controls: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below acceptable limits. Explosion-proof ventilation system is acceptable.

Exposure Guidelines:

Hazardous Ingredients	CAS Number	OSHA PEL/TWA	ACGIH TLV
Benzoyl Peroxide	94-36-0	5 mg/m ³	5 mg/m ³
Calcium Carbonate	1317-65-3	15 mg/m ³	10 mg/m ³
Silica, amorphous	7631-86-9	20 mppcf	N/E

Mppcf- millions of particles per cubic foot of air

N/E-Not Established

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	Decomposes explosively	Vapor Density:	Heavier than air.
Specific Gravity / Density:	1.2/ 10.0 lbs/gal	Percent Volatiles by weight:	10-20%
Evaporation Rate:	Slower than ethyl ether.	Physical State:	Paste
Melting Point:	217 °F / 103 °C (decomposes)	pH:	Neutral
Odor:	Slight ester odor.	Solubility:	Slightly in water.
Vapor Pressure:	<1 mmHg @ 68 °F / 20 °C	Appearance:	Red, White, or Blue Paste
Octanol/Water Partition Coefficient:	Unknown	VOC* (as packaged-less exempts and water):	0 lbs/gal or 0 g/L
VHAP Content by weight – as packaged:	0%		

*NOTE: This material is used as a catalyst with a variety of products, refer to the other MSDS for additional VOC information for the mixture.

SECTION 10. STABILITY AND REACTIVITY

MATERIAL SAFETY DATA SHEET

Date Revised: 08/13/07
Cream Hardener

Page: 5
MSDS Number: 100340

Hazardous Polymerization: Product will not undergo polymerization under normal conditions of use.

Hazardous Decomposition: May form toxic and corrosive gases: carbon dioxide, carbon monoxide, benzoic acid and various hydrocarbons.

Chemical Stability: Stable under normal handling conditions.

Incompatibility: Avoid contact in uncontrolled conditions with: organic materials, inorganic acids, strong oxidizing agents, accelerators, reducing materials, alcohols, amines and strong bases.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity Data:

Ingredient	CAS #	LD ₅₀ Oral-Rat	LC ₅₀ Inhalation-Rat
Benzoyl Peroxide	94-36-0	7,710 mg/kg	N/E
Calcium Carbonate	1317-65-3	6,450 mg/kg	N/E

Carcinogenicity: See Cancer Information, Section 3.

Mutagenicity: No significant evidence found.

Teratogenicity: No significant evidence found.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: The ecological toxicity of this product is not known.

SECTION 13. DISPOSAL CONSIDERATION

RCRA Hazardous Waste: This material as supplied, if discarded, would be regulated as a hazardous waste under RCRA (40 CFR 261). Dispose of in accordance with applicable federal, state, and local regulations. Incineration is the preferred method for disposal. DO NOT incinerate in closed containers.

RCRA Hazard Class: This material would be regulated as EPA Hazardous Waste Number D001 based on the characteristic of ignitability (oxidizer).

SECTION 14. TRANSPORT INFORMATION

DOT Description: The DOT Classification for shipping is dependant on quantity, type of packaging (a kit may include other components), or method of shipment.

SECTION 15. REGULATORY INFORMATION

US Federal Regulations

MATERIAL SAFETY DATA SHEET

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Cream Hardener

MSDS Number: 100340

TSCA (Toxic Substances Control Act) Status

TSCA (USA) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4(a)

None

SARA Title III: Section 302- Extremely Hazardous Substances

None

SARA Title III: Section 313- Toxic Chemical List

<u>Component</u>	<u>CAS Number</u>	<u>Percentage</u>
Benzoyl Peroxide	94-36-0	45-50%

EPA Hazardous Air Pollutants (HAPS) 40 CFR 63

None

International Regulations

EINECS (Europe) The intentional ingredients of this product are listed.

DSL (Canada) The intentional ingredients of this product are listed.

WHMIS Classification

Health Hazard: D2B, C, F (Toxic Effects, Oxidizer,
Dangerously Reactive Materials)

Physical Hazard: B3 (Combustible)

State and Local Regulations

California Proposition 65:

This product contains the following chemical(s) known to the state of California to cause cancer. NONE

This product contains the following chemical(s) known to the state of California to cause birth defects or reproductive harm. NONE

SECTION 16. OTHER INFORMATION

HMIS Rating: Health - 2, Flammability - 2, Reactivity - 2
Key- 0=Least, 1=Slight, 2=Moderate, 3=Serious, 4=Extreme, *=Chronic Effects

Other Precautions for Use: DO NOT return unused material to the original container. DO NOT contaminate product with foreign materials, it may cause hazardous decomposition. DO NOT add to hot material. This product must be mixed with other components prior to use. Please refer to the Material Safety Data Sheet for all components before using.

Additional Information may be obtained by calling the Evercoat MSDS Hotline at 1-800-729-7600.

NOTICE: The information accumulated herein is believed to be correct as of the date issued from sources, which are believed to be accurate and reliable. Since it is not possible to anticipate all circumstances of use, recipients are advised to confirm, in advance of need, that the information is current, applicable and suitable to their circumstances.

MATERIAL SAFETY DATA SHEET

Date Prepared: 06/06/06

Revision Date: 09/4/07

Lite Weight

Page: 1

MSDS Number: 120002

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: Lite Weight
Product Numbers: 100156, 100157, 100159, 100664, 100666,
100667, 101157
Product Use: Light weight bodyfiller

Company

Fibre Glass-Evercoat
a Division of Illinois Tool Works Inc.
6600 Cornell Road
Cincinnati, Ohio USA
Phone: 513-489-7600

Emergency Telephone Numbers:

CHEMTREC: 1-800-424-9300
CANUTEC: 1-613-996-6666

Prepared By: Safety Department

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	EINECS Number	% (by weight)
Talc	14807-96-6	238-877-9	30 – 35
Polyester Resin (Non-Hazardous)	Proprietary	Proprietary	30 – 35
Styrene	100-42-5	202-851-5	15 – 20
Magnesite	546-93-0	208-915-9	5 – 10
Calcium Carbonate	1317-65-3	215-279-6	5 – 10
Inert Filler	Proprietary	Proprietary	1 – 5
Titanium Dioxide	13463-67-7	236-675-5	0 - 1

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING! FLAMMABLE LIQUID AND VAPOR.

CAUSES EYE, SKIN, NOSE AND THROAT IRRITATION.

Potential Health Effects

Acute Effects (Short Term):

Eye: Contact with liquid or vapor may result in irritation, redness, tearing, and blurred vision.

Skin: May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns.

Swallowing: Ingestion of this material may cause gastrointestinal irritation, nausea, diarrhea, and vomiting. Aspiration of this material into the lungs due to vomiting may produce chemical pneumonitis which can be fatal.

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Inhalation: Excessive inhalation of vapors may cause nasal and respiratory irritation, acute nervous system depression, fatigue, weakness, nausea, headache, and dizziness. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

Chronic Effects of Overexposure (Long Term):

Styrene: Excessive overexposure to styrene has been found to cause the following effects in humans and may aggravate pre-existing disorders of these organs; central nervous system effects, effects on hearing, mild effects on color vision and respiratory tract damage.

Cancer Information: The International Agency for Research on Cancer (IARC) has classified styrene as a group 2B carcinogen (possibly carcinogenic to humans). This classification is not based on evidence that styrene may be carcinogenic, but rather on a revised definition for Group 2B, and consideration of new data on styrene oxide (Group 2A). This material may contain trace amounts of chemicals considered to be carcinogenic by OSHA, (1,3- Butadiene- IARC Group 2A and Crystalline Silica- IARC Group 1). Titanium Dioxide is listed by IARC as possibly carcinogenic to humans (Group 2B). This listing is based on inadequate evidence of carcinogenicity in humans and sufficient evidence in experimental animals.

Other Health Effects: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Primary Route(s) of Entry: Inhalation, Skin contact, Eye contact, Ingestion, Skin absorption.

SECTION 4. FIRST AID MEASURES

- Eyes:** Flush eyes gently with water for at least 15 minutes. Seek immediate medical attention.
- Skin:** Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.
- Swallowing:** Consult a physician or poison control center immediately. DO NOT INDUCE VOMITING. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. If possible, do not leave individual unattended.
- Inhalation:** If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention;

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keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, oxygen may be beneficial if administered by trained personnel.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point: 95 °F (35 °C)

Explosive Limit: Lower: 1.1% Upper: 6.1%

Autoignition Temperature: 914.0 °F (490.0 °C)

OSHA Flammability Class: Flammable Liquid – Class IC

Hazardous Products of Combustion: May form: carbon dioxide, carbon monoxide, styrene oxide, and various hydrocarbons.

Fire and Explosion Hazards: Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point.

Extinguishing Media: Regular foam, carbon dioxide, dry chemical.

Fire Fighting Instructions: Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breathing apparatus NIOSH approved with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment.

NFPA Rating: Health - 2, Flammability - 3, Reactivity - 2

SECTION 6. ACCIDENTAL RELEASE MEASURES

In Case of Spill: Eliminate all sources of ignition such as flares, flames (including pilot lights), and electrical sparks. Ventilate the area. Wear proper protective equipment (Section 8). Avoid breathing vapors. Collect with an inert absorbant and dispose of properly.

SECTION 7. HANDLING AND STORAGE

Handling: All hazard precautions given in the data sheet must be observed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Use only with adequate ventilation. Do not breathe sanding dust, vapors or spray mist. Do not take internally. Close container after each use. **Keep out of reach of children.**

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Storage: Store material in a cool, well-ventilated area. For maximum product quality, avoid prolonged storage at temperatures above 75°F (25°C). Do not use or store near heat, sparks, or open flame. Keep container tightly closed. Avoid contact with incompatible materials.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: Chemical splash goggles in compliance with OSHA regulations are recommended.

Skin Protection: Protective gloves and proper clothing should be worn to prevent skin contact. Gloves should be made of neoprene or natural rubber. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protection: Use a NIOSH approved respirator designed to remove particulate matter and organic solvent vapors.

Engineering Controls: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below acceptable limits. Explosion-proof ventilation system is acceptable.

Exposure Guidelines:

Hazardous Ingredients	CAS Number	OSHA PEL/TWA	ACGIH TLV
Talc	14807-96-6	20 mppcf	2 mg/m ³
Styrene	100-42-5	100 ppm	20 ppm
Magnesite	546-93-0	15 mg/m ³	10 mg/m ³
Inert Filler	Proprietary	5 mg/m ³	10 mg/m ³
Calcium Carbonate	1317-65-3	15 mg/m ³	10 mg/m ³
Titanium Dioxide	13463-67-7	15 mg/m ³	10 mg/m ³

Mppcf- millions of particles per cubic foot of air

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	293 °F / 145 °C (Styrene)	Vapor Density:	Heavier than air.
Specific Gravity / Density:	1.25 / 10.4 lbs/gal	Percent Volatiles by weight:	15 – 20 %
Evaporation Rate:	Slower than ethyl ether.	Physical State:	Paste
Melting Point:	-23.1 °F / -30.6 °C (Styrene)	pH:	Neutral
Odor:	Sharp, aromatic odor.	Solubility:	Insoluble in water.
Vapor Pressure:	5.0 mmHg @ 68 °F / 20 °C	Appearance:	Gray Paste

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Octanol/Water Partition Coefficient:	Unknown		
VOC (as packaged- less exempts and water):	1.46 lbs/gal or 175g/L	VOC (as applied*- 2%by wt hardener- less exempts and water):	0.40 lbs/gal or 48 g/L
Percent Solids by weight – as packaged:	85.0%	Percent Solids by weight – as applied* - 2 % by wt hardener:	96.0 %
VHAP Content by weight – as packaged:	15.0 %	VHAP Content by weight – as applied* - 2 % by weight hardener:	4.0 %

*NOTE: The applied VOC and VHAP Content is lower than the packaged VOC and VHAP Content due to a reactive diluent (styrene) that reacts and becomes non-volatile (bonded in the solid material) when the hardener is added.

SECTION 10. STABILITY AND REACTIVITY

Hazardous Polymerization: Product may undergo hazardous polymerization if exposed to extreme heat.

Hazardous Decomposition: May form: carbon dioxide, carbon monoxide, styrene oxide and various hydrocarbons.

Chemical Stability: Stable under normal handling conditions.

Incompatibility: Avoid contact in uncontrolled conditions with: peroxides, strong acids, strong oxidizing agents and polymerization catalysts.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity Data:

Ingredient	CAS #	LD₅₀ Oral-Rat	LC₅₀ Inhalation-Rat
Styrene	100-42-5	5,000 mg/kg	24 g/m ³ /4H
Calcium Carbonate	1317-65-3	6,450 mg/kg	N/E

N/E-Not Established

Carcinogenicity: See Cancer Information, Section 3.

Mutagenicity: No significant evidence found.

Teratogenicity: No significant risk of birth defects or reproductive toxicity of styrene to humans.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: Styrene is toxic to aquatic organisms and should not be released to sewage, draining systems or any body of water exceeding concentrations of approved limits under applicable regulations and permits.

MATERIAL SAFETY DATA SHEET

Date Prepared: 06/06/06

Revision Date: 09/4/07

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MSDS Number: 120002

SECTION 13. DISPOSAL CONSIDERATION

RCRA Hazardous Waste: This material as supplied, if discarded, would be regulated as a hazardous waste under RCRA (40 CFR 261). Dispose of in accordance with applicable federal, state, and local regulations.

RCRA Hazard Class: This material would be regulated as EPA Hazardous Waste Number D001 based on the characteristic of ignitability.

SECTION 14. TRANSPORT INFORMATION

DOT Description: The DOT Classification for shipping is dependant on quantity, type of packaging (a kit may include other components), or method of shipment.

SECTION 15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status

TSCA (USA) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4(a)

<u>Component</u>	<u>RQ (lbs.)</u>
Styrene	1000

SARA Title III: Section 302- Extremely Hazardous Substances
None

SARA Title III: Section 313- Toxic Chemical List

<u>Component</u>	<u>CAS Number</u>	<u>Percentage</u>
Styrene	100-42-5	15 %

EPA Hazardous Air Pollutants (HAPS) 40 CFR 63

<u>Component</u>	<u>CAS Number</u>	<u>Percentage</u>
Styrene	100-42-5	15 %

International Regulations

EINECS (Europe) The intentional ingredients of this product are listed.

DSL (Canada) The intentional ingredients of this product are listed.

WHMIS Classification

Health Hazard: D2A, D2B (Other Toxic Effects)

Physical Hazard: B2 (Flammable)

State and Local Regulations

California Proposition 65:

This product contains the following chemical(s) known to the state of California to cause cancer. STYRENE OXIDE, 1,3-BUTADIENE, ANILINE, CRYSTALLINE SILICA

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Date Prepared: 06/06/06

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Styrene, in the presence of air and high temperature or prolonged exposure of styrene/air mixture to sunlight, can react to form styrene oxide.

This product contains the following chemical(s) known to the state of California to cause birth defects or reproductive harm. 1,3-BUTADIENE,

SECTION 16. OTHER INFORMATION

HMIS Rating: Health – 1*, Flammability - 3, Reactivity - 2
Key- 0=Least, 1=Slight, 2=Moderate, 3=Serious, 4=Extreme, *=Chronic Effects

Other Precautions for Use: This product must be mixed with Cream Hardener prior to use. Please refer to the Material Safety Data Sheet (#100340) for catalyst before using. If product is to be sanded, the OSHA PEL/TLV of 10 mg/m³ for nuisance dust should be observed.

Additional Information may be obtained by calling the Evercoat MSDS Hotline at 1-800-729-7600.

NOTICE: The information accumulated herein is believed to be correct as of the date issued from sources, which are believed to be accurate and reliable. Since it is not possible to anticipate all circumstances of use, recipients are advised to confirm, in advance of need, that the information is current, applicable and suitable to their circumstances.

MATERIAL SAFETY DATA SHEET

Date Revised: 4/26/07
Polyester Glazing Putty

Page: 1
MSDS Number: 120014

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: Polyester Glazing Putty
Product Numbers: 100400 and 100407
Product Use: Finishing Putty

Company

Fibre Glass-Evercoat
a Division of Illinois Tool Works Inc.
6600 Cornell Road
Cincinnati, Ohio USA
Phone: 513-489-7600

Emergency Telephone Numbers:

CHEMTREC: 1-800-424-9300
CANUTEC: 1-613-996-6666

Prepared By: Safety Department

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredient(s)</u>	<u>CAS Number</u>	<u>EINECS Number</u>	<u>% (by weight)</u>
Talc	14807-96-6	238-877-9	40 – 45
Polyester Resin (Non-Hazardous)	Proprietary	Proprietary	20 – 25
Styrene	100-42-5	202-851-5	15 – 20
Magnesite	546-93-0	208-915-9	10 – 15
Titanium Dioxide	13463-67-7	236-675-5	5 – 10

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING! FLAMMABLE LIQUID AND VAPOR.
CAUSES EYE, SKIN, NOSE AND THROAT IRRITATION.

Potential Health Effects

Acute Effects (Short Term):

- Eye:** Contact with liquid or vapor may result in irritation, redness, tearing, and blurred vision.
- Skin:** May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns.
- Swallowing:** Ingestion of this material may cause gastrointestinal irritation, nausea, diarrhea, and vomiting. Aspiration of this material into the lungs due to vomiting may produce chemical pneumonitis which can be fatal.

MATERIAL SAFETY DATA SHEET

Date Revised: 4/26/07
Polyester Glazing Putty

Page: 2
MSDS Number: 120014

Inhalation: Excessive inhalation of vapors may cause nasal and respiratory irritation, acute nervous system depression, fatigue, weakness, nausea, headache, and dizziness. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

Chronic Effects of Overexposure (Long Term):

Styrene: Excessive overexposure to styrene has been found to cause the following effects in humans and may aggravate pre-existing disorders of these organs; central nervous system effects, effects on hearing, mild effects on color vision and respiratory tract damage.

Cancer Information: The International Agency for Research on Cancer (IARC) has classified styrene as a group 2B carcinogen (possibly carcinogenic to humans). This classification is not based on evidence that styrene may be carcinogenic, but rather on a revised definition for Group 2B, and consideration of new data on styrene oxide (Group 2A). Titanium Dioxide is listed by IARC as possibly carcinogenic to humans (Group 2B). This listing is based on inadequate evidence of carcinogenicity in humans and sufficient evidence in experimental animals. This material may contain trace amounts of a chemical considered to be carcinogenic by OSHA, (1,3- Butadiene-IARC Group 2A).

Other Health Effects: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Primary Route(s) of Entry: Inhalation, Skin contact, Eye contact, Ingestion, Skin absorption.

SECTION 4. FIRST AID MEASURES

Eyes: Flush eyes gently with water for at least 15 minutes. Seek immediate medical attention.

Skin: Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Swallowing: Consult a physician or poison control center immediately. DO NOT INDUCE VOMITING. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. If possible, do not leave individual unattended.

Inhalation: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, oxygen may be beneficial if administered by trained personnel.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point: 93.2 °F (34 °C)



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Adhesive Remover 6040 / 6041 (Aerosol)
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes

ADDRESS: 3M Center
 St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 09/13/2005
Supersedes Date: 12/14/2004

Document Group: 08-6485-0

Product Use:
Specific Use: adhesive remover

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
CITRUS EXTRACT	8028-48-6	80 - 90
PROPANE	74-98-6	10 - 20

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: clear, pale yellow, sweet odor

General Physical Form: Gas

Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Aerosol container contains flammable material under pressure. May cause allergic skin reaction.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Prolonged or repeated exposure may cause:

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Intentional concentration and inhalation may be harmful or fatal.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

3.3 POTENTIAL ENVIRONMENTAL EFFECTS

Chemical analysis of 3M Citrus Base Adhesive Remover yielded the following data: Chloride <10ppm, Fluoride <1ppm, Sulfur <4ppm, Total Halogen <10ppm.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature

No Data Available

Flash Point	-50.00 °F
Flammable Limits - LEL	2.1 % volume [Details: CONDITIONS: PROPANE]
Flammable Limits - UEL	9.5 % volume [Details: CONDITIONS: PROPANE]

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Aerosol container contains flammable material under pressure.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available. Close cylinder. If the cylinder can't be closed, place in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Vapors may ignite explosively. May cause flash fire. Prevent build-up of vapors - open all windows and doors. Maintain vapor concentrations below recommended exposure limits. Use only with cross-ventilation. Without adequate ventilation, vapors may settle in low-lying areas. Keep away from heat, sparks, and open flame. Do not smoke or ignite matches, lighters, etc.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Provide appropriate local exhaust ventilation on open containers. Use with functioning spray booth or local exhaust. Do not use in a confined area or areas with little or no air movement. Use general dilution

ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment. Do not use in a confined area or areas with little or no air movement. If exhaust ventilation is not adequate, use appropriate respiratory protection. Provide ventilation adequate to control vapor concentrations below recommended exposure limits and/or control spray or mist.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Safety Glasses with side shields.

8.2.2 Skin Protection

Avoid skin contact. Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece air-purifying respirator with organic vapor cartridges. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
PROPANE	ACGIH	TWA	1000 ppm	
PROPANE	OSHA	TWA	1000 ppm	Table Z-1

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color, Grade:	clear, pale yellow, sweet odor
General Physical Form:	Gas
Autoignition temperature	<i>No Data Available</i>
Flash Point	-50.00 °F
Flammable Limits - LEL	2.1 % volume [<i>Details: CONDITIONS: PROPANE</i>]
Flammable Limits - UEL	9.5 % volume [<i>Details: CONDITIONS: PROPANE</i>]
Vapor Density	<i>Not Applicable</i>
Vapor Pressure	28 mmHg [<i>@ 20 °C</i>] [<i>Details: Composite Vapor Pressure (Calculated)</i>]

Specific Gravity	0.793 [Ref Std: WATER=1]
pH	Not Applicable
Melting point	No Data Available
Solubility in Water	Nil
Evaporation rate	No Data Available
Volatile Organic Compounds	Approximately 100 % [Test Method: calculated SCAQMD rule 443.1]
Percent volatile	Approximately 100 % weight
VOC Less H2O & Exempt Solvents	Approximately 100 % [Test Method: calculated SCAQMD rule 443.1]
Viscosity	Not Applicable

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Heat

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Ketones	Not Specified

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

The facility should be equipped to handle gaseous waste.

RECYCLE EMPTY AEROSOL CONTAINERS WHERE AVAILABLE.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

62-4667-2925-8, 62-4667-2928-2, 62-4667-2930-8, 62-4667-2935-7, 62-4667-4930-6, 62-4667-4932-2, 62-4667-4935-5

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 4 Reactivity: 1 Special Hazards: None
Aerosol Storage Code: 2

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Copyright was modified.

Section 3: Immediate physical hazard(s) was modified.

Section 3: Potential effects from skin contact information was modified.

Section 3: Potential effects from inhalation information was modified.

Section 3: Potential effects from ingestion information was modified.

Section 5: Unusual fire and explosion hazard information was modified.

Section 6: Release measures information was modified.

Section 7: Handling information was modified.

Section 7: Storage information was modified.

Section 8: Engineering controls information was modified.

Section 8: Eye/face protection phrase was modified.

Section 13: Waste disposal method information was modified.

Section 4: First aid for ingestion (swallowing) - decontamination - was modified.

Section 4: First aid for ingestion (swallowing) - medical assistance - was modified.

Section 15: 311/312 Delayed Hazard score was modified.

Section 3: Immediate skin hazard(s) was added.

Section 9: Vapor pressure value was added.

Section 3: Other potential health effects heading was deleted.

Section 3: Immediate other hazard(s) was deleted.

Section 3: Other health effects information was deleted.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Marine Adhesive Sealant Fast Cure 5200 - White; PN 06520 , 05220, 06534, 06535
MANUFACTURER: 3M
DIVISION: Marine & Specialty Vehicle
ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 08/08/2007
Supercedes Date: 07/18/2007

Document Group: 16-5850-9

Product Use:

Specific Use: Adhesive Sealant for fiberglass and wood.
Intended Use: Sealant

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
URETHANE PREPOLYMER	51447-37-1	40 - 70
TITANIUM DIOXIDE	13463-67-7	10 - 30
DIETHYLENE GLYCOL MONOETHYL ETHER ACETATE	112-15-2	1 - 5
SILICA	7631-86-9	< 2.5
1,1'-METHYLENEBIS(ISOCYANATOBENZENE)	26447-40-5	< 2.5
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	101-68-8	< 2.5
ZINC OXIDE	1314-13-2	< 2.3
ALKYL ISOCYANATE SILANE	85702-90-5	< 2
TOLUENE	108-88-3	< 0.05
ETHYLBENZENE	100-41-4	< 0.02
HEXAMETHYLENE DIISOCYANATE	822-06-0	< 0.02

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste

Odor, Color, Grade: White thixotropic paste, slight odor

General Physical Form: Solid

Immediate health, physical, and environmental hazards: May cause allergic skin reaction. May cause allergic respiratory reaction. Contains a chemical or chemicals which can cause cancer.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Vapors released during curing may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Dust created by cutting, grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Prolonged or repeated exposure may cause:

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Prolonged or repeated exposure may cause:

Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Target Organ Effects:

Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Class Description</u>	<u>Regulation</u>
ETHYLBENZENE	100-41-4	Group 2B	International Agency for Research on Cancer

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	<i>No Data Available</i>
Flash Point	<i>Not Applicable</i>
Flammable Limits - LEL	<i>Not Applicable</i>
Flammable Limits - UEL	<i>Not Applicable</i>

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Not applicable.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. Avoid contact with water. Pour isocyanate decontaminant solution (90%

water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Collect as much of the spilled material as possible. Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Avoid breathing of dust created by cutting, sanding, grinding or machining. Do not breathe vapors. Avoid eye contact with dust or airborne particles.

7.2 STORAGE

Store in a cool place. Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area. Keep container tightly closed.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Provide appropriate local exhaust for cutting, grinding, sanding or machining. Do not use in a confined area or areas with little or no air movement. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control dust, fume, or airborne particles. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Safety Glasses with side shields.

8.2.2 Skin Protection

Avoid prolonged or repeated skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Butyl Rubber, Nitrile Rubber.

8.2.3 Respiratory Protection

Avoid breathing of dust created by cutting, sanding, grinding or machining. Do not breathe vapors.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Not applicable.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
1,1'	ACGIH	TWA	0.005 ppm	

METHYLENEBIS(ISOCYANATOBENZENE) 1,1'- METHYLENEBIS(ISOCYANATOBENZENE)	OSHA	CEIL	0.02 ppm	Table Z-1
ETHYL BENZENE	ACGIH	TWA	100 ppm	Table A3
ETHYL BENZENE	ACGIH	STEL	125 ppm	Table A3
ETHYL BENZENE	OSHA	TWA	100 ppm	Table Z-1A
ETHYL BENZENE	OSHA	STEL	125 ppm	Table Z-1A
FREE ISOCYANATES	3M	TWA	0.005 ppm	
FREE ISOCYANATES	3M	STEL	0.02 ppm	
HEXAMETHYLENE DIISOCYANATE	ACGIH	TWA	0.005 ppm	
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	ACGIH	TWA	0.005 ppm	
P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	OSHA	CEIL	0.02 ppm	Table Z-1
SILICA	CMRG	TWA, as respirable dust	3 mg/m3	
TIN, ORGANIC COMPOUNDS	ACGIH	TWA, as Sn	0.1 mg/m3	Skin Notation*; Table A4
TIN, ORGANIC COMPOUNDS	ACGIH	STEL, as Sn	0.2 mg/m3	Skin Notation*
TIN, ORGANIC COMPOUNDS	OSHA	TWA, as Sn	0.1 mg/m3	Skin Notation*; Table Z-1A
TITANIUM DIOXIDE	ACGIH	TWA	10 mg/m3	Table A4
TITANIUM DIOXIDE	CMRG	TWA, as respirable dust	5 mg/m3	
TITANIUM DIOXIDE	OSHA	TWA, Vacated, as dust	10 mg/m3	
TITANIUM DIOXIDE	OSHA	TWA, as total dust	15 mg/m3	Table Z-1
TOLUENE	ACGIH	TWA	20 ppm	Table A4
TOLUENE	CMRG	STEL	75 ppm	Skin Notation*
TOLUENE	OSHA	TWA, Vacated	100 ppm	
TOLUENE	OSHA	STEL, Vacated	150 ppm	
TOLUENE	OSHA	TWA	200 ppm	Table Z-2
TOLUENE	OSHA	CEIL	300 ppm	Table Z-2
ZINC OXIDE	ACGIH	TWA, respirable	2 mg/m3	
ZINC OXIDE	ACGIH	STEL	10 mg/m3	
ZINC OXIDE	OSHA	TWA, as fume	5 mg/m3	Table Z-1
ZINC OXIDE	OSHA	TWA, respirable	5 mg/m3	Table Z-1
ZINC OXIDE	OSHA	STEL, Vacated, as fume	10 mg/m3	
ZINC OXIDE	OSHA	TWA, Vacated, as dust	10 mg/m3	
ZINC OXIDE	OSHA	TWA, as total dust	15 mg/m3	Table Z-1

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Paste
Odor, Color, Grade:	White thixotropic paste, slight odor
General Physical Form:	Solid
Autoignition temperature	No Data Available
Flash Point	Not Applicable
Flammable Limits - LEL	Not Applicable
Flammable Limits - UEL	Not Applicable
Boiling point	Not Applicable
Vapor Density	No Data Available
Vapor Pressure	No Data Available
Specific Gravity	1.3 [Ref Std: WATER=1]
pH	Not Applicable
Melting point	Not Applicable
Solubility in Water	Nil
Evaporation rate	No Data Available
Hazardous Air Pollutants	0.024 lb HAPS/lb solids
Volatile Organic Compounds	40 g/l [Test Method: tested per EPA method 24]
Percent volatile	2.94 % weight
VOC Less H2O & Exempt Solvents	40 g/l [Test Method: tested per EPA method 24]
Viscosity	100000 - 500000 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Amines; Alcohols; Water

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Isocyanates	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Cyanide	During Combustion
Oxides of Nitrogen	During Combustion
Toxic Vapor, Gas, Particulate	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Cure (harden, set, or react) the product according to product instructions. Dispose of waste product in a sanitary landfill. Dispose of completely cured (or polymerized) wastes in a sanitary landfill. Incinerate in a permitted hazardous waste incinerator in the presence of a combustible material. As a disposal alternative, incinerate in an industrial or commercial facility in the presence of a combustible material. As a disposal alternative, incinerate uncured product in an industrial or commercial incinerator. As a disposal alternative, incinerate uncured product in an industrial or commercial incinerator in the presence of a combustible material.

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

60-9800-4557-3, 60-9800-4558-1, 60-9800-4562-3, 60-9801-0557-5, 62-5239-0330-0, 62-5239-0334-2, FS-9100-3615-1, FS-9100-3648-2, LB-T000-0007-0

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - Yes Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
P,P'-METHYLENEBIS(PHENYL ISOCYANATE) (Diisocyanates (EPCRA 313))	101-68-8	< 2.5

ZINC OXIDE (ZINC COMPOUNDS)	1314-13-2	< 2.3
DIETHYLENE GLYCOL MONOETHYL ETHER ACETATE (GLYCOL ETHERS)	112-15-2	1 - 5
HEXAMETHYLENE DIISOCYANATE (Diisocyanates (EPCRA 313))	822-06-0	< 0.02

STATE REGULATIONS

Contact 3M for more information.

CALIFORNIA PROPOSITION 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
ETHYLBENZENE	100-41-4	**Carcinogen
TOLUENE	108-88-3	*Developmental Toxin

* WARNING: contains a chemical or chemicals which can cause birth defects or other reproductive harm.

** WARNING: contains a chemical which can cause cancer.

CHEMICAL INVENTORIES

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

WHMIS: Hazardous

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 0 Reactivity: 1 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Section 1: Product name was modified.

Page Heading: Product name was modified.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Marine Adhesive Sealant 5200 - White
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division

ADDRESS: 3M Center
 St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 06/28/2007
Supersedes Date: 05/09/2007

Document Group: 16-3092-0

Product Use:
 Intended Use: Sealant

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
ETHYLBENZENE	100-41-4	< 0.02
URETHANE PREPOLYMER	68611-34-7	40 - 70
TALC	14807-96-6	15 - 40
TITANIUM DIOXIDE	13463-67-7	5 - 10
ZINC OXIDE	1314-13-2	< 2.3
DIETHYLENE GLYCOL MONOETHYL ETHER ACETATE	112-15-2	< 2
ALKYL ISOCYANATE SILANE	85702-90-5	< 2
TOLUENE DIISOCYANATE	26471-62-5	< 1
TOLUENE	108-88-3	< 0.05
HEXAMETHYLENE DIISOCYANATE	822-06-0	< 0.05

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste

Odor, Color, Grade: White color

General Physical Form: Solid

Immediate health, physical, and environmental hazards: May cause allergic skin reaction. May cause allergic

respiratory reaction. Contains a chemical or chemicals which can cause cancer.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Mild Eye Irritation: Signs/symptoms may include redness, pain, and tearing.

Vapors released during curing may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, and itching.

Prolonged or repeated exposure may cause:

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Inhalation:

Vapors released during curing may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Prolonged or repeated exposure may cause:

Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Target Organ Effects:

Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Class Description</u>	<u>Regulation</u>
ETHYLBENZENE	100-41-4	Group 2B	International Agency for Research on Cancer
TALC CONTAINING ASBESTIFORM FIBERS	NONE	Group 1	International Agency for Research on Cancer
TOLUENE DIISOCYANATE	26471-62-5	Group 2B	International Agency for Research on Cancer
TOLUENE DIISOCYANATE	26471-62-5	Anticipated human carcinogen	National Toxicology Program Carcinogens

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	<i>Not Applicable</i>
Flash Point	<i>Not Applicable</i>
Flammable Limits - LEL	<i>No Data Available</i>
Flammable Limits - UEL	<i>No Data Available</i>

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide). DO NOT USE WATER

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: No unusual fire or explosion hazards are anticipated.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Ventilate the area with fresh air. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Collect as much of the spilled material as possible. Clean up residue. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep out of the reach of children. Do not breathe vapors. Avoid eye contact with dust or airborne particles. Do not use heat to aid in the removal of 5200 Marine Adhesive Sealant. The application of heat may generate levels of Toluene Diisocyanate (TDD) in excess of the TLV.

7.2 STORAGE

Store in a cool place. Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area. Keep container tightly closed.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Use in a well-ventilated area. If exhaust ventilation is not available, use appropriate respiratory protection. Do not use in a confined area or areas with little or no air movement. Provide ventilation adequate to control dust concentrations below recommended exposure limits and/or control dust. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control dust, fume, or airborne particles. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.

The following eye protection(s) are recommended: Safety Glasses with side shields, Indirect Vented Goggles.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Butyl Rubber, Nitrile Rubber.

8.2.3 Respiratory Protection

Do not breathe vapors.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece air-purifying respirator with organic vapor/acid gas cartridges and P95 particulate prefilters, Half facepiece air-purifying respirator with organic vapor/acid gas cartridges and N95 particulate prefilters, Half facepiece air-purifying respirator with organic vapor/acid gas cartridges and P100 particulate prefilters, Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P95 particulate prefilters, Half facepiece or fullface air-purifying respirator with organic vapor cartridges and N95 particulate prefilters, Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P100 particulate prefilters. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
ETHYLBENZENE	ACGIH	TWA	100 ppm	Table A3
ETHYLBENZENE	ACGIH	STEL	125 ppm	Table A3
ETHYLBENZENE	OSHA	TWA	100 ppm	Table Z-1A

ETHYLBENZENE	OSHA	STEL	125 ppm	Table Z-1A
FREE ISOCYANATES	3M	TWA	0.005 ppm	
FREE ISOCYANATES	3M	STEL	0.02 ppm	
HEXAMETHYLENE DIISOCYANATE	ACGIH	TWA	0.005 ppm	
SILICATES (LESS THAN 1% CRYSTALLINE SILICA) TALC CONTAINING ASBESTOS	OSHA	TWA, as total dust	0.1 fiber/cc	Standard Appendix
SILICATES (LESS THAN 1% CRYSTALLINE SILICA) TALC CONTAINING ASBESTOS	OSHA	STEL, as total dust	1 fiber/cc	Standard Appendix
TALC	ACGIH	TWA, respirable	2 mg/m3	Table A4
TALC	CMRG	TWA, as respirable dust	0.5 mg/m3	
TALC	OSHA	TWA, respirable	2 mg/m3	Table Z-1A
TIN, ORGANIC COMPOUNDS	ACGIH	TWA, as Sn	0.1 mg/m3	Skin Notation*; Table A4
TIN, ORGANIC COMPOUNDS	ACGIH	STEL, as Sn	0.2 mg/m3	Skin Notation*
TIN, ORGANIC COMPOUNDS	OSHA	TWA, as Sn	0.1 mg/m3	Skin Notation*; Table Z-1A
TITANIUM DIOXIDE	ACGIH	TWA	10 mg/m3	Table A4
TITANIUM DIOXIDE	CMRG	TWA, as respirable dust	5 mg/m3	
TITANIUM DIOXIDE	OSHA	TWA, Vacated, as dust	10 mg/m3	
TITANIUM DIOXIDE	OSHA	TWA, as total dust	15 mg/m3	Table Z-1
TOLUENE	ACGIH	TWA	20 ppm	Table A4
TOLUENE	CMRG	STEL	75 ppm	Skin Notation*
TOLUENE	OSHA	TWA, Vacated	100 ppm	
TOLUENE	OSHA	STEL, Vacated	150 ppm	
TOLUENE	OSHA	TWA	200 ppm	Table Z-2
TOLUENE	OSHA	CEIL	300 ppm	Table Z-2
ZINC OXIDE	ACGIH	TWA, respirable	2 mg/m3	
ZINC OXIDE	ACGIH	STEL	10 mg/m3	
ZINC OXIDE	OSHA	TWA, as fume	5 mg/m3	Table Z-1
ZINC OXIDE	OSHA	TWA, respirable	5 mg/m3	Table Z-1
ZINC OXIDE	OSHA	STEL, Vacated, as fume	10 mg/m3	
ZINC OXIDE	OSHA	TWA, Vacated, as dust	10 mg/m3	
ZINC OXIDE	OSHA	TWA, as total dust	15 mg/m3	Table Z-1

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Paste
Odor, Color, Grade:	White color
General Physical Form:	Solid
Autoignition temperature	Not Applicable
Flash Point	Not Applicable

Flammable Limits - LEL	No Data Available
Flammable Limits - UEL	No Data Available
Boiling point	No Data Available
Vapor Density	No Data Available
Vapor Pressure	No Data Available
Specific Gravity	1.36 [Ref Std: WATER=1]
pH	No Data Available
Melting point	No Data Available
Solubility In Water	No Data Available
Evaporation rate	No Data Available
Hazardous Air Pollutants	0.008 lb HAPS/lb solids
Volatile Organic Compounds	0.4 lb/gal
Percent volatile	2.94 % weight
VOC Less H2O & Exempt Solvents	40 g/l [Test Method: tested per EPA method 24]
Viscosity	100000 - 500000 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Amines; Alcohols; Water

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Isocyanates	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Cyanide	During Combustion
Irritant Vapors or Gases	During Combustion
Oxides of Nitrogen	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Cure (harden, set, or react) the product according to product instructions.

Dispose of completely cured (or polymerized) wastes in a sanitary landfill.

As a disposal alternative, incinerate uncured product in an industrial or commercial incinerator in the presence of a combustible material.

Dispose of empty product containers in a sanitary landfill.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

60-4100-0946-2, 60-4100-0947-0, 60-4100-0949-6, 60-4100-0967-8, 60-4300-5026-4, 60-4300-5027-2, 60-4300-5028-0, 60-9800-3622-6, 60-9800-4298-4, 60-9800-4299-2, 60-9800-4300-8, 60-9800-4301-6, 60-9801-0556-7, 60-9801-0843-9, 70-0064-1000-8, FS-9100-3614-4, LB-T000-0006-0, LB-T100-0189-6

Not regulated per U.S. DOT, IATA or IMO.

These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling, or marking requirements. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - Yes Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
ZINC OXIDE (ZINC COMPOUNDS)	1314-13-2	< 2.3
DIETHYLENE GLYCOL MONOETHYL	112-15-2	< 2

ETHER ACETATE (GLYCOL ETHERS)
TOLUENE DIISOCYANATE 26471-62-5 <1

STATE REGULATIONS

Contact 3M for more information.

CALIFORNIA PROPOSITION 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
ETHYLBENZENE	100-41-4	**Carcinogen
TALC CONTAINING ASBESTIFORM FIBERS	NONE	**Carcinogen
TOLUENE	108-88-3	*Developmental Toxin
TOLUENE DIISOCYANATE	26471-62-5	**Carcinogen

* WARNING: contains a chemical or chemicals which can cause birth defects or other reproductive harm.

** WARNING: contains a chemical which can cause cancer.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

WHMIS: Hazardous

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 1 Reactivity: 1 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Section 5: Unusual fire and explosion hazard information was modified.

Section 14: Transportation legal text was modified.

Section 2: Ingredient table was modified.

Section 15: EPCRA 313 information was modified.
Section 15: California proposition 65 ingredient information was modified.
Section 3: Carcinogenicity table was modified.
Section 8: Exposure guidelines ingredient information was modified.
Section 14: Transportation phrase was added.
Section 15: TSCA section 12[b] text was deleted.
Section 15: TSCA section 12[b] information was deleted.

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Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Super 77(TM) Multipurpose Adhesive (Aerosol)
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division
ADDRESS: 3M Center
 St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 04/10/2007
Supersedes Date: 03/08/2007

Document Group: 16-3472-4

Product Use:

Intended Use: general purpose aerosol adhesive
Specific Use: General Purpose Aerosol adhesive

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
NON-VOLATILE COMPONENTS - N.J. TRADE SECRET REGISTRY NO. 04499600-6433P	Trade Secret	20 - 30
ACETONE	67-64-1	20 - 30
PROPANE	74-98-6	15 - 25
2-METHYLPENTANE	107-83-5	10 - 20
CYCLOHEXANE	110-82-7	3 - 7
3-METHYLPENTANE	96-14-0	3 - 7
2,2-DIMETHYLBUTANE	75-83-2	1 - 3
2,3-DIMETHYLBUTANE	79-29-8	1 - 3
HEXANE	110-54-3	< 0.8

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Aerosol
Odor, Color, Grade: clear, sweet fruity odor
General Physical Form: Gas aerosol

Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains flammable material under pressure. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Prolonged or repeated exposure may cause:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, and itching.

May be absorbed through skin and cause target organ effects.

Inhalation:

Upper Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May be absorbed following inhalation and cause target organ effects.

Intentional concentration and inhalation may be harmful or fatal.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, nausea, diarrhea and vomiting.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure, above recommended guidelines, may cause:

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Peripheral Neuropathy: Signs/symptoms may include tingling or numbness of the extremities, incoordination, weakness of the hands and feet, tremors and muscle atrophy.

Kidney Effects: Signs/symptoms may include reduced or absent urine production, increased serum creatinine, lower back pain, increased protein in urine, and increased blood urea nitrogen (BUN).

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Wash affected area with soap and water. If signs/symptoms develop, get medical attention.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	<i>No Data Available</i>
Flash Point	-42.00 °F [<i>Test Method:</i> Tagliabue Closed Cup]
Flammable Limits - LEL	<i>No Data Available</i>
Flammable Limits - UEL	<i>No Data Available</i>
OSHA Flammability Classification:	Class IA Flammable Liquid

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains flammable material under pressure.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with an appropriate organic solvent. Read and follow safety precautions on the solvent label and MSDS. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to

local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Do not pierce or burn container, even after use. No smoking while handling this material. Do not spray near flames or sources of ignition. Avoid breathing of vapors, mists or spray. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Vapors may ignite explosively. May cause flash fire. Prevent build-up of vapors - open all windows and doors. Maintain vapor concentrations below recommended exposure limits. Use only with cross-ventilation. Without adequate ventilation, vapors may settle in low-lying areas. Keep away from heat, sparks, and open flame. Do not smoke or ignite matches, lighters, etc.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Use with functioning spray booth or local exhaust. Use in a well-ventilated area. If exhaust ventilation is not available, use appropriate respiratory protection. Do not use in a confined area or areas with little or no air movement. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment. Do not use in a confined area or areas with little or no air movement. If exhaust ventilation is not adequate, use appropriate respiratory protection. Provide ventilation adequate to control vapor concentrations below recommended exposure limits and/or control spray or mist.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Safety Glasses with side shields.

8.2.2 Skin Protection

Avoid skin contact. Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Polyethylene/Ethylene Vinyl Alcohol.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
ACETONE	ACGIH	TWA	500 ppm	Table A4
ACETONE	ACGIH	STEL	750 ppm	Table A4
ACETONE	OSHA	TWA, Vacated	750 ppm	
ACETONE	OSHA	TWA	1000 ppm	Table Z-1
ACETONE	OSHA	STEL, Vacated	1000 ppm	
CYCLOHEXANE	ACGIH	TWA	100 ppm	
CYCLOHEXANE	OSHA	TWA	300 ppm	Table Z-1
HEXANE	ACGIH	TWA	50 ppm	Skin Notation*
HEXANE	OSHA	TWA, Vacated	50 ppm	Table Z-1A
HEXANE	OSHA	TWA	500 ppm	Table Z-1A
HEXANE (ISOMERS OTHER THAN N-HEXANE)	ACGIH	TWA	500 ppm	
HEXANE (ISOMERS OTHER THAN N-HEXANE)	ACGIH	STEL	1000 ppm	
PROPANE	ACGIH	TWA	1000 ppm	
PROPANE	OSHA	TWA	1000 ppm	Table Z-1

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- CMRG: Chemical Manufacturer Recommended Guideline
- OSHA: Occupational Safety and Health Administration
- AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Aerosol
Odor, Color, Grade:	clear, sweet fruity odor
General Physical Form:	Gas aerosol
Autoignition temperature	<i>No Data Available</i>
Flash Point	-42.00 °F [<i>Test Method:</i> Tagliabue Closed Cup]
Flammable Limits - LEL	<i>No Data Available</i>
Flammable Limits - UEL	<i>No Data Available</i>
Boiling point	<i>Not Applicable</i>
Vapor Density	2.97 [<i>Ref Std:</i> AIR=1]
Specific Gravity	0.726 [<i>Ref Std:</i> WATER=1]
pH	<i>No Data Available</i>
Melting point	<i>No Data Available</i>
Solubility in Water	Nil
Evaporation rate	1.90 [<i>Ref Std:</i> ETHER=1]
Hazardous Air Pollutants	0.4 % weight [<i>Test Method:</i> Calculated]
Hazardous Air Pollutants	0.016 lb HAPS/lb solids
Hazardous Air Pollutants	0.02 lb HAPS/gal [<i>Test Method:</i> Calculated]
Volatile Organic Compounds	Approximately 51 % [<i>Test Method:</i> calculated SCAQMD rule 443.1]

Percent volatile	≤75 % weight
VOC Less H ₂ O & Exempt Solvents	468 g/l
Viscosity	Not Applicable

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Heat

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate uncured product in a permitted hazardous waste incinerator. Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

The facility should be equipped to handle gaseous waste.

Facility must be capable of handling aerosol cans. Dispose of empty product containers in a sanitary landfill.

RECYCLE EMPTY AEROSOL CONTAINERS WHERE AVAILABLE.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

62-4977-0926-1, 62-4977-0927-9, 62-4977-0928-7, 62-4977-0929-5, 62-4977-0939-4, 62-4977-2924-4, 62-4977-2928-5, 62-4977-2929-3, 62-4977-4026-6, 62-4977-4030-8, 62-4977-4835-0, 62-4977-4840-0, 62-4977-4845-9, 62-4977-4925-9, 62-4977-4927-5, 62-4977-4928-3, 62-4977-4929-1, 62-4977-4930-9, 62-4977-4931-7, 62-4977-4932-5, 62-4977-4933-3, 62-4977-4935-8, 62-4977-4937-4, 62-4977-4938-2, 62-4977-4939-0, 62-4977-4950-7, 70-0713-6297-7

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
CYCLOHEXANE	110-82-7	3 - 7

This material contains a chemical which requires export notification under TSCA Section 12[b]:

<u>Ingredient (Category if applicable)</u>	<u>C.A.S. No</u>	<u>Regulation</u>	<u>Status</u>
HEXANE	110-54-3	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable
CYCLOHEXANE	110-82-7	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable
ACETONE	67-64-1	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Non hazardous according to WHMIS criteria.

This material contains one or more ingredients that may be regulated by the International Traffic in Arms Regulation (ITAR), an export control of US military technology and chemicals. Prior to export of this material or any product containing this material, determine whether a proper license from the Department of State must be obtained. See 22CFR 120-130 for any specific requirements.

Contact 3M for more information.

WHMIS: Non-hazardous

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 4 Reactivity: 0 Special Hazards: None
Aerosol Storage Code: 3

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification

Health: 2 Flammability: 4 Reactivity: 0 Protection: X - See PPE section.

Hazardous Material Identification System (HMIS(r)) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS(r) ratings are to be used with a fully implemented HMIS(r) program. HMIS(r) is a registered mark of the National Paint and Coatings Association (NPCA).

Reason for Reissue: Removed stock numbers.

Revision Changes:

Section 2: Ingredient table was modified.

Section 14: ID Number(s) was modified.

Section 16: Reason for reissue comment was added.

Section 16: Reason for reissue heading was added.

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY

OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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3M MSDSs are available at www.3M.com

U S Chemical & Plastics
 Alco Industries Companies
 600 Nova Drive SE
 Massillon, OH 44646
 PH 330-830-6000 - FAX 330-830-6005

For Chemical Emergency

CHEMTREC: 1-800-424-9300
 CANUTEC: 1-613-996-6666
 (For Canada call collect)

=====

SECTION I - IDENTIFICATION OF PRODUCT

=====

PRODUCT NAME: DURAGLAS
PRODUCT CODE: (24059), 24030, 24031, 24032, 24035, 24036, 24040
SYNONYM/CROSS REFERENCE: Polyester Paste Filler
SCHEDULE B NUMBER: 3214.10.0000-4

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=====

SECTION II - HAZARDOUS INGREDIENTS

=====

INGREDIENTS	WGT %	CAS #	TLV/PEL
Styrene	15-20%	100-42-5	ACGIH TLV 50 ppm STEL 100 ppm OSHA PEL 100 ppm CPEL 200 ppm (See Health Hazard Info)
Non-Fibrous Talc	40-50%	14807-96-6	ACGIH TWA 2 mg/m ³ OSHA TLV 20 mppcf
Castor Oil Derivative	1-5 %	8001-78-3	OSHA PEL 15 mg/m ³
Fiberglass (Milled)	0-5 %	65997-17-3	ACGIH PEL 15 mg/m ³
Calcium Metasilicate	5-15%	13983-17-0	ACGIH PEL 15 mg/m ³
Calcium Carbonate	5-15%	1317-65-3 471-34-1	ACGIH TWA 10 mg/m ³

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SECTION III - PHYSICAL DATA

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APPEARANCE: Green Paste, fibrous texture
SPECIFIC GRAVITY: 1.65
VAPOR PRESSURE (mmHG): N/Av
BOILING POINT: N/Av
VAPOR DENSITY: Heavier than air
EVAPORATION RATE (Ethyl Ether = 1): Slower than Ethyl Ether
VOLATILES BY WEIGHT: 13-20%
SOLUBILITY IN WATER: Not Soluble
VOC: Grams/Liter = less exempts 242
 loss upon curing approx 2.0 g/l

=====
SECTION IV - FIRE AND EXPLOSION DATA
=====

FLASH POINT: 89°F/ 31.7°C Seta Flash Closed cup

LOWER FLAMMABLE LIMIT %: N/E

UPPER FLAMMABLE LIMIT %: N/E

FIRE EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam

SPECIAL FIRE FIGHTING PROCEDURES: Fight like a fuel oil fire. Cool fire exposed containers with water spray. Firefighter should wear OSHA/NIOSH approved self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARD: Closed containers exposed to high temperatures, such as fire conditions may rupture.

=====
SECTION V - HEALTH HAZARD/TOXICOLOGICAL PROPERTIES
=====

OVEREXPOSURE EFFECTS:

ACUTE EFFECTS:

EYES: Contact with eyes can cause irritation, redness, tearing, blurred vision, and/or swelling.

SKIN: Contact with skin can cause irritation, (minor itching, burning and/or redness), Dermatitis, defatting may be readily absorbed thru the skin.

INHALATION: Inhalation of vapors can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, headache, possible unconsciousness and/or asphyxiation. Aspiration of material into lungs may result in chemical pneumonitis which can be fatal.

INGESTION: Ingestion can cause gastrointestinal irritation, nausea, vomiting, diarrhea.

CHRONIC EFFECTS:

Overexposure to this material has apparently been known to cause the following effects in lab animals: eye, skin, lung, and central nervous system damage.

CARCINOGEN: YES _____ NO X

TERATOGEN: YES _____ NO X

MUTAGEN: YES _____ NO X

STYRENE CARCINOGENICITY

Styrene is listed by IARC to be a possible carcinogen. Styrene studies have shown that Styrene causes cancer in certain laboratory animals. However, there is insufficient evidence to conclude that Styrene is a human carcinogen.

PRIMARY ROUTES OF EXPOSURE: skin, inhalation, eyes

FIRST AID:

INHALATION: If inhaled, remove victim from exposure to a well-ventilated area. Make them comfortably warm, but not hot. Use oxygen or artificial respiration as required. Consult a physician.

SKIN: For skin contact, wash promptly with soap and excess water.

EYES: For eye contact, flush promptly with excess water for at least fifteen minutes. Consult a physician.

INGESTION: If ingested, do not induce vomiting. Give victim a glass of water. Call a physician immediately.

SECTION VI - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Open flames, sparks, heat, electrical and static discharge.

INCOMPATIBILITY MATERIALS TO AVOID: Strong acids, alkalis, oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Dioxide, Carbon Monoxide and Carbon.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION VII - SPILL AND DISPOSAL PROCEDURE

SPILLS, LEAK OR RELEASE: Ventilate area. Remove all possible sources of ignition. Avoid prolonged breathing of vapor. Contain spill with inert absorbent.

WASTE DISPOSAL: Dispose of in accordance with local, state, and federal regulations.

MARINE POLLUTANT: Contains ten percent or more of a marine pollutant

SECTION VIII - PROTECTION INFORMATION

RESPIRATORY PROTECTION: If component TLV limits are exceeded, use NIOSH/MSHA approved respirator to remove vapors. Use an air-supplied respirator if necessary.

VENTILATION: Use adequate ventilation in volume and pattern to keep TLV/PEL below recommended levels. Explosion-proof ventilation may be necessary.

PROTECTIVE GLOVES: To prevent prolonged exposure use rubber gloves; solvents may be absorbed through the skin

EYE PROTECTION: Safety Glasses or goggles with splash guards or side shields.

OTHER PROTECTIVE EQUIPMENT: Wear protective clothing as required to prevent skin contact.

SECTION IX - HANDLING AND STORAGE PRECAUTIONS

STORAGE AND HANDLING: Use with adequate ventilation. Avoid contact with eyes and skin. Avoid breathing vapors. Do not store the product above 100F/38C. Do not flame, cut, braze weld or melt empty containers. Keep the product away from heat, open flame, and other sources of ignition. Avoid contact with strong acids, alkalis and oxidizers.

SECTION X - ADDITIONAL INFORMATION

SHIPPING INFORMATION: Please comply with DOT regulations in USA

HMIS RATING:

Health	2	4 = Extreme
Fire	3	3 = High
Reactivity	1	2 = Moderate
		1 = Slight
		0 = Insignificant

Personal Protection - See Section VIII

CALIFORNIA PROPOSITION 65:

Trace amounts of some chemicals known to the State of California to cause cancer, birth defects or other reproductive harm may be present in this product.

SECTION 313 SUPPLIER NOTIFICATION:

This product contains the following toxic chemicals subject to the reporting requirements of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR 372:

<u>CHEMICAL NAME</u>	<u>CAS</u>	<u>% BY WGT</u>
Styrene	100-42-5	15-20%

THIS INFORMATION MUST BE INCLUDED IN ALL MSDS's THAT ARE COPIED AND DISTRIBUTED FOR THIS CHEMICAL

ABBREVIATIONS

IARC = International Agency for Research on Cancer
ACGIH = American Conference of Governmental Industrial Hygienists
NIOSH = National Institute of Occupational Safety and Health
TLV = Threshold Limit Value
PEL = Permissible Emission Level
DOT = Department of Transportation
NTP = National Toxicology Program
N/AV = Not Available
N/AP = Not Applicable
N/E = Not Established
N/D = Not Determined

PREPARED BY:

U S CHEMICAL & PLASTICS
An Alco Industries Company
600 NOVA DRIVE SE
MASSILLON, OH 44646

TELEPHONE NBR 330-830-6000
FAX NBR 330-830-6005

DATE REVIEWED: August 24, 2006
DATE REVISED: August 24, 2006
REVISION: Section I

The information in the Material Safety Data Sheet has been compiled from our experience and from data presented in various technical publications. It is the user's responsibility to determine the suitability of this information for the adoption of the safety precautions as may be necessary. We reserve the right to revise Material Safety Data Sheets from time to time as new technical information becomes available. The user has the responsibility to contact the Company to make sure that the MSDS is the latest one issued.



WD-40 Company

Material Safety Data Sheet



1 - Chemical Product and Company Identification

Manufacturer: WD-40 Company	Chemical Name: Organic Mixture
Address: 1061 Cudahy Place (92110) P.O. Box 80607 San Diego, California, USA 92138 -0607	Trade Name: WD-40 Aerosol
Telephone: 1-800-448-9340	Product Use: Cleaner, Lubricant, Penetrant
Emergency only: 1-888-324-7596 (PROZAR)	MSDS Date Of Preparation: 5/16/07
Information: 1-888-324-7596	

2 - Hazards Identification

Emergency Overview:

DANGER! Harmful or fatal if swallowed. Flammable aerosol. Contents under pressure. Avoid eye contact. Use with adequate ventilation. Keep away from heat, sparks and all other sources of ignition.

Symptoms of Overexposure:

Inhalation: High concentrations may cause nasal and respiratory irritation and central nervous system effects such as headache, dizziness and nausea. Intentional abuse may be harmful or fatal.

Skin Contact: Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis.

Eye Contact: Contact may be mildly irritating to eyes. May cause redness and tearing.

Ingestion: This product has low oral toxicity. Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. The liquid contents are an aspiration hazard. If swallowed, can enter the lungs and may cause chemical pneumonitis.

Chronic Effects: None expected.

Medical Conditions Aggravated by Exposure: Preexisting eye, skin and respiratory conditions may be aggravated by exposure.

Suspected Cancer Agent:

Yes No X

3 - Composition/Information on Ingredients

Ingredient	CAS #	Weight Percent
Aliphatic Hydrocarbon	64742-47-8 64742-48-9 64742-88-7	45-50
Petroleum Base Oil	64742-65-0	15-25
LVP Aliphatic Hydrocarbon	64742-47-8	12-18
Carbon Dioxide	124-38-9	2-3
Non-Hazardous Ingredients	Mixture	<10

4 - First Aid Measures

Ingestion (Swallowed): Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately.

Eye Contact: Flush thoroughly with water. Get medical attention if irritation persists.

Skin Contact: Wash with soap and water. If irritation develops and persists, get medical attention.

Inhalation (Breathing): If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.

5 – Fire Fighting Measures

Extinguishing Media: Use water fog, dry chemical, carbon dioxide or foam. Do not use water jet or flooding amounts of water. Burning product will float on the surface and spread fire.

Special Fire Fighting Procedures: Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water. Use shielding to protect against bursting containers.

Unusual Fire and Explosion Hazards: Contents under pressure. Aerosol containers may burst under fire conditions. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

6 – Accidental Release Measures

Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area. Leaking cans should be placed in a plastic bag or open pail until the pressure has dissipated. Contain and collect liquid with an inert absorbent and place in a container for disposal. Clean spill area thoroughly. Report spills to authorities as required.

7 – Handling and Storage

Handling: Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use with adequate ventilation. Keep away from heat, sparks, hot surfaces and open flames. Wash thoroughly with soap and water after handling. Do not puncture or incinerate containers. Keep can away from electrical current or battery terminals. Electrical arcing can cause burn-through (puncture) which may result in flash fire, causing serious injury. Keep out of the reach of children.

Storage: Do not store above 120°F or in direct sunlight. U.F.C (NFPA 30B) Level 3 Aerosol.

8 – Exposure Controls/Personal Protection

Chemical	Occupational Exposure Limits
Aliphatic Hydrocarbon	100 ppm TWA (ACGIH) 1200 mg/m ³ TWA (manufacturer recommended)
Petroleum Base Oil	5 mg/m ³ TWA (OSHA/ACGIH)
LVP Aliphatic Hydrocarbon	1200 mg/m ³ TWA (manufacturer recommended)
Carbon Dioxide	5000 ppm TWA (OSHA/ACGIH), 30,000 ppm STEL (ACGIH)
Non-Hazardous Ingredients	None Established

The Following Controls are Recommended for Normal Consumer Use of this Product

Engineering Controls: Use in a well-ventilated area.

Personal Protection:

Eye Protection: Avoid eye contact. Safety glasses or goggles recommended.

Skin Protection: Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.

Respiratory Protection: None needed for normal use with adequate ventilation.

For Bulk Processing or Workplace Use the Following Controls are Recommended

Engineering Controls: Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.

Personal Protection:

Eye Protection: Safety goggles recommended where eye contact is possible.

Skin Protection: Wear chemical resistant gloves.

Respiratory Protection: None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be

based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.

Work/Hygiene Practices: Wash with soap and water after handling.

9 – Physical and Chemical Properties

Boiling Point:	323°F (minimum)	Specific Gravity:	0.817 @ 72°F
Solubility in Water:	Insoluble	pH:	Not Applicable
Vapor Pressure:	110 PSI @ 70°F	Vapor Density:	Greater than 1
Percent Volatile:	74%	VOC:	412 grams/liter (49.5%)
Coefficient of Water/Oil Distribution:	Not Determined	Appearance/Odor	Light amber liquid/mild odor
Flash Point:	131°F (concentrate) Tag Closed Cup	Flammable Limits: (Solvent Portion)	LEL: 1.1% UE:: 8.9%

10 – Stability and Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Avoid heat, sparks, flames and other sources of ignition. Do not puncture or incinerate containers.

Incompatibilities: Strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.

11 – Toxicological Information

The oral toxicity of this product is estimated to be greater than 5,000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard.

None of the components of this product is listed as a carcinogen or suspected carcinogen or is considered a reproductive hazard.

12 – Ecological Information

No data is currently available.

13 - Disposal Considerations

If this product becomes a waste, it would be expected to meet the criteria of a RCRA ignitable hazardous waste (D001). However, it is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Dispose in accordance with federal, state, and local regulations.

14 – Transportation Information

DOT Surface Shipping Description: Consumer Commodity, ORM-D

IMDG Shipping Description: Aerosols, 2, UN1950

15 – Regulatory Information

U.S. Federal Regulations:

CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA TITLE III:

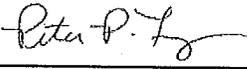
Hazard Category For Section 311/312: Acute Health, Fire Hazard, Sudden Release of Pressure

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None
Section 302 Extremely Hazardous Substances (TPQ): None
EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory
Canadian Environmental Protection Act: All of the ingredients are listed on the Canadian Domestic Substances List or exempt from notification
Canadian WHMIS Classification: Class B-5 (Flammable Aerosol)
This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

16 – Other Information:

HMIS Hazard Rating:

Health – 1 (slight hazard), Fire Hazard – 4 (severe hazard), Reactivity – 0 (minimal hazard)

SIGNATURE:  TITLE: Director of Global Quality Assurance

REVISION DATE: Revision Date: May 2007

SUPERSEDES: December 2004

WITCO MATERIAL SAFETY DATA SHEET

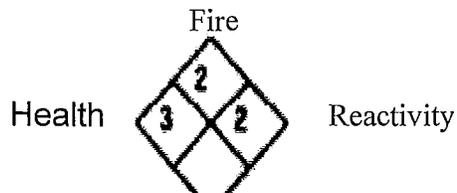
HI-POINT® 90

Product Code: 260 0104

CAS NO: 1338-23-4

NAPA HAZARD RATING

- 4 - Extreme
- 3 - High
- 2 - Moderate
- 1 - Slight
- 0 - Insignificant



DIVISION AND LOCATION --- SECTION I

Division: POLYMER ADDITIVES GROUP

Location: MARSHALL, TEXAS

P.O. BOX 1439, HWY 59 & BUSSEY RD, MARSHALL, TX 75671

Emergency Telephone Number: (903) 938-5141 or Chemtrec (800) 424-9300

Transportation Emergency: CHEMTREC 1-(800) 424-9300 (U.S. and Canada)

CHEMICAL AND PHYSICAL PROPERTIES-SECTION II

Chemical Name:

methyl ethyl ketone peroxide

Formula: not applicable

Hazardous Decomposition Products:

carbon monoxide and carbon dioxide from burning.

Incompatibility (Keep away from):

strong acids, bases, promoters, accelerators, readily oxidizables, and metal salts.

Toxic and Hazardous Ingredients:

	%	CAS #
methyl ethyl ketone peroxide (9% active oxygen max.)	38 +/-2	1338-23-4
dimethylphthalate	47 +/-2	131-11—3

Form: liquid

Odor: slightly pungent

Appearance: clear

Color: water-white

Specific Gravity (water = 1): 1.11

Boiling Point: no data available, decomposes over 68°C (155°F)

Melting Point: not applicable

Solubility in Water (by weight %): less than 1 at 25°C

Volatile (by weight %): less than 3

Evaporator Rate: not applicable

Vapor Pressure (mm Hg at 20° C): not applicable

Vapor Density (air = 1): not applicable

pH (as is): no data available

Stability: Product is stable when stored at recommended temperatures

Viscosity sus ar 100°F: 101 SUS; 15-16 centistokes at .25°C (77°F)

Other physical properties:

self accelerating decomposition temperature (SADT): 4 'gal: 71°C (160°F) 1 gal: 71°C (166°F)

WITCO MATERIAL SAFETY DATA SHEET

HI-POINT® 90HI-POINT 90

PAGE 2

Product Code: 260 0104

FIRE AND EXPLOSION DATA---SECTION III

Special Fire Fighting Procedures:

Fight fire with large amounts of water from a safe distance. Keep containers cool with water spray. After a fire, wait until material has cooled to room temperature before starting clean-up. Wear protective equipment to prevent smoke Inhalation.

Unusual Fire and Explosion Hazards:

Potential explosion hazards. Once ignited, product will burn vigorously.

Flashpoint: (Method Used) Setaflash closed tester 82°C (180°F)

Flammable limits %: not applicable

Extinguishing agents:

Waterspray or Waterfog or CO2 or Foam
Closed containers exposed to fire may be cooled with water.

HEALTH HAZARD DATA--SECTION IV

Permissible concentrations (air):

methyl ethyl ketone peroxide; 0.7 ppm, 5 mg/m³ ceiling (OSHA); 0.2 ppm, 1.5 mg/m³ ceiling (ACGIH)
dimethylphthalate: 5 mg/m³ (OSHA/ACGIH)

chronic effects of overexposure:

Specific symptoms and effects of over exposure not known, but will cause severe eye Irritation; may cause blindness. Harmful if Inhaled. Harmful or fatal If swallowed. Moderate skin Irritant.

acute toxicological properties:

for methyl ethyl ketone peroxide: acute oral LD50 =1017 mg/kg (rat); eye (rabbit) severe Irritant/corrosive

Emergency First Aid Procedures:

Eyes: Immediately flush with large quantities of water on site for 20 to 30 minutes. Hold eyes open while flushing. Call a physician. Continue water flush up to one hour during transport to a medical facility.

Skin Contact: Wash with soap and water. If irritation occurs, see a physician.

Inhalation: Remove to fresh air. Consult a physician if discomfort persists.

If Swallowed: Administer large quantities of water if person is conscious. Never give anything by mouth to an unconscious person. Immediately contact a physician.

Routes of Entry: Inhalation, skin/eye contact, ingestion

SPECIAL PROTECTION INFORMATION---SECTION V

Ventilation Type Required (Local, mechanical special):

Local if necessary to maintain allowable PEL (permissible exposure limit) or TIV (threshold limit value)

Respiratory Protection (Specify type):

Use NIOSH/MSHA certified respirator with organic vapor cartridge if vapor concentration exceeds permissible exposure limit

WITCO MATERIAL SAFETY DATA SHEET

HI-POINT® 90

PAGE 3

Product Code: 260 0104

(Section V continued)

Protective Gloves:

neoprene type

Eye Protection:

chemical safety goggles

Other Protective Equipment:

as required to protect against skin contact

HANDLING OF SPILLS OR LEAKS---SECTION VI

Procedures for Clean-Up:

Use appropriate protective clothing during clean-up.

Absorb spills with inert material such as perlite, vermiculite, or sand and then wet with water.

Sweep up using non-sparking equipment and place in double

polyethylene bags. Isolate leakers and contaminated containers to a safe place for disposal.

Waste Disposal:

Dispose of in accordance with all applicable federal, state and local regulations.

Dispose of waste at EPA-approved hazardous waste disposal facilities.

SPECIAL PRECAUTIONS---SECTION VII

Precautions to be taken in handling and storage:

Store in original containers away from promoters and combustible material. Keep away from acids, heat, sparks, flames and direct sunlight. Keep closed to avoid contamination. Isolated storage is desirable.

Maximum Storage Temperature: 38°C (100°F)

TRANSPORTATION DATA---SECTION VIII

DO.T.: Regulated

U.S. D.O.T. Proper Shipping Name: Organic peroxide Type D, liquid (methyl ethyl ketone peroxides, =<45%), 5.2, UN 3105, PG II,

RQ, ERG 48, Hi-Point 90

U.S. D.O.T. Hazard Class: Organic Peroxide

ID Number: UN 3105

Label(s) Required: Organic Peroxide

Reportable Quantity 10 LB/4.54 KG (for 2-butanone peroxide (or methyl ethyl ketone peroxide))

Freight Classification: Chemicals, N01, N.F.M.C. Item 43940 Sub 2

Special Transportation Notes: none

(Continued on next page)

WITCO MATERIAL SAFETY DATA SHEET

HI-POINT® 90

PAGE 4

Product Code: 260 0104

ENVIRONMENTAL/SAFETY REGULATIONS---SECTION IX

Section 313 (Title III Superfund Amendment and Reauthorization Act):

This product contains the following chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 (the corresponding CAS number and percent by weight are also provided):
dimethyl phthalate CAS# 13111-3 47%
methyl ethyl ketone CAS# 18-93-3 2%

COMMENTS

Never mix any promoter or accelerator with product as very rapid or explosive decomposition could occur. Do not store with food or drink.

Dust generated from the sanding or finishing of certain types of hardened resins can spontaneously combust if stored or disposed of improperly. Consult your resin manufacturer for proper dust storage and disposal.

*** STATE RIGHT-TO-KNOW SUBSTANCES ***

CAS NUMBER	CHEMICAL NAME
131-11-3	Dimethyl phthalate
7722-84-1	Hydrogen peroxide
78-93-3	Methyl ethyl ketone
1338-23-4	Methyl ethyl ketone peroxide

Trade Secret Registry Numbers:

NJ 136411-5146P
PA RTK Withheld

Prepared by: Roger N. Lewis _____
Title: R & O Director/Organic Peroxides
Original Date: _____ Sent to: _____
Revision Date: 04/19/96
Supersedes: 08/02/93
Date Sent: _____

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

Material Safety Data Sheet

Section 1 General Information

Manufacturer:

Zinsser Company, Inc.
173 Belmont Drive
Somerset, NJ 08875
(732) 469-8100

Emergency Telephone: Chemtrec (800) 424-9300**Date:** December 1, 2006**Product Name:** Bulls Eye 3 Lb. Clear Shellac**Product Codes:** 300, 301, 304, 308, 316,355

Section 2 Hazardous Ingredients

<u>Hazardous Component</u>	<u>CAS#</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Ethyl Alcohol	64-17-5	1000 ppm	1000 ppm
Isopropyl Alcohol	67-63-0	400 ppm	200 ppm
Methyl Isobutyl Ketone	108-10-1	100 ppm	50 ppm

Section 3 Hazard Identification

Emergency Overview: This material is cloudy beige colored liquid coating used to finish wood and other surfaces. It has an alcohol type odor and a flashpoint of 60° F.

Primary Routes of Exposure:

Inhalation

Potential Acute Health Effects:

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: May be harmful if swallowed.

Inhalation: Vapors may be irritating to eyes and respiratory tract. May cause CNS depression.

Potential Chronic Health Effects:

N/A: Not Applicable N/D: Not Determined N/E: Not Established N/R: Not Required Est.: Estimated

Signs and Symptoms: Chronic exposures may result in irritation to mucous membranes, headache, drowsiness, CNS depression, and/or liver damage.

(See also Sections 4, 8, and 11 for related information)

Section 4 First Aid Measures

Eye contact: Flush eyes with water for at least 15 minutes.

Skin contact: Wash with soap and water.

Ingestion: If the person is conscious and able to swallow have them drink water to dilute. Call a poison control center, physician, or emergency room.

Inhalation: If exposed to excessive levels of vapor or mist, remove to fresh air. Seek medical attention if cough or other symptoms develop.

Section 5 Fire Fighting Measures

Flash Point (method): 60° F

Extinguishing Media: Use dry chemical, "alcohol resistant" foam, or carbon dioxide. Water may be ineffective but water applied as a spray can absorb some of the fire's heat and should be used to keep fire-exposed containers cool.

Protection of Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH and full protective gear. Evacuate area and fight fire from safe distance.

Fire and Explosion Hazards: Vapors may form explosive mixture with air.

Section 6 Accidental Release Measures

Personal Precautions: Avoid skin contact. Avoid breathing vapors. Wash hands before eating.

Clean Up Methods: Keep unnecessary people away. Remove all sources of ignition. Dike and contain spill with inert material (sand, earth, etc.) and transfer liquid to containers for recovery or disposal. Keep spill out of sewer and open bodies of water. Floors may be slippery; care should be exercised to avoid falls. Avoid runoff into storm sewers and ditches that lead to waterways.

(See also Section 8 for information on Exposure Controls and Personal Protective Equipment)

Section 7 Handling and Storage

N/A: Not Applicable N/D: Not Determined N/E: Not Established N/R: Not Required Est.: Estimated

Handling: Keep away from heat, spark, and flame. Keep operating temperatures below ignition temperatures at all times. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing.

Storage: Store away from heat. Keep away from heat, sparks and flame. Keep containers tightly closed and upright when not in use. Protect against physical damage.

Section 8 Exposure Controls / Personal Protection

Engineering Controls: Use general room dilution ventilation, process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Personal Protective Equipment (PPE):

Eye Protection: Where contact is likely, wear chemical splash goggles and/or full-face shield.

Skin Protection: Where contact is likely, wear chemical resistant gloves and other protective clothing to prevent skin contact.

Respiratory Protection: Wear vapor levels exceed allowable exposure limits, wear a NIOSH approved air purifying respirator with an organic vapor cartridge.

General Hygiene Practices: Avoid eye and skin contact. Avoid breathing vapors. Wash hands before eating and drinking. Do not smoke while using this material.

Section 9 Physical Data

Appearance:	Cloudy beige liquid	Odor:	Alcohol type odor
Physical State:	Liquid	pH:	4.5 – 5.5
Boiling Point:	173° F*	Melting/Freezing Point:	N/A
Vapor Pressure:	40 mm/Hg*	Vapor Density:	1.59
Odor Threshold:	N/D	Viscosity:	25 – 300 cps
Specific Gravity (water = 1):	0.89	Autoignition Temp:	685° F*
VOC Content:	≤ 730 g/l	* based on pure ethyl alcohol.	

Water Solubility: The alcohol portion is soluble in water, the shellac portion is not soluble and will form a gelatinous layer on top of water.

N/A: Not Applicable N/D: Not Determined N/E: Not Established N/R: Not Required Est.: Estimated

Section 10 Stability and Reactivity

Stability: Stable, non-reactive.

Hazardous Polymerization: Will not occur.

Hazardous Decomposition Products: Carbon monoxide during incomplete combustion.

Conditions to Avoid: Heat, sparks, flames.

Incompatibility: Oxidizing agents

Section 11 Toxicological Information

Carcinogenicity: This material is not considered a carcinogen by IARC or NTP and is not regulated as a carcinogen by OSHA.

(See also Section 15 for related information)

Section 12 Ecological Information

Chemical Fate and Effects: No data available.

Section 13 Disposal Considerations

RCRA Hazardous Waste: This material, when discarded or disposed of, could be a hazardous waste according to federal regulations (40 CFR 261) due to the characteristic of ignitability (D001). The transportation, storage, treatment, and disposal of this waste must be conducted in compliance with 40 CFR 262, 263, 264, 268, and 270. Disposal can only occur in properly permitted facilities. Check state and local regulations for any additional requirements as these may be more restrictive than federal laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate, or otherwise inappropriate.

Section 14 Transportation Information

Regulated by the DOT: Yes

DOT Proper Shipping Name: Paint

UN / NA Number: UN 1263

Class: 3, Flammable Liquid

Packing Group: II

N/A: Not Applicable N/D: Not Determined N/E: Not Established N/R: Not Required Est.: Estimated

Section 15 Regulatory Information

CERCLA:

The Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) requires notification to the National Response Center for releases of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in 40 CFR 302.4 (for CERCLA 102).

Components present in this product at a level which could require reporting under the statute are:

<u>Chemical Name</u>	<u>CAS#</u>	<u>Maximum Concentration (Wt. %)</u>
None	N/A	N/A

SARA Title III, section 311/312:

The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312).

Components present in this product at a level which could require reporting under the statute are:

<u>Chemical Name</u>	<u>CAS#</u>	<u>Maximum Concentration (Wt. %)</u>
None	N/A	N/A

SARA Title III, section 313:

The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313).

Components present in this product at a level which could require reporting under the statute are:

<u>Chemical Name</u>	<u>CAS#</u>	<u>Maximum Concentration (Wt. %)</u>
Methyl Isobutyl Ketone	108-10-1	1%

TSCA:

The components of this mixture are listed in the Toxic Substance Control Act Inventory of Chemical Substances.

This product contains the following chemicals which require export notification under section 12(b) of the TSCA regulation:

<u>Chemical Name</u>	<u>CAS#</u>	<u>TSCA Section</u>
None		

Section 16 Other Information

Legend: N/A: Not Applicable
N/E: Not Established

N/D: Not Determined
N/R: Not Required

N/A: Not Applicable N/D: Not Determined N/E: Not Established N/R: Not Required Est.: Estimated

STEL: Short Term Exposure Limit
cps: Centipoise
mppcf: million particles per cubic foot of air.
PPB: Parts Per Billion
TLV: Threshold Limit Value
ACGIH: American Conference of Governmental Industrial Hygienists
CPSC: Consumer Product Safety Commission
DOT: US Dept. of Transportation
FHSA: Federal Hazardous Substance Act
OSHA: Occupational Safety and Health Administration (US Dept. of Labor)
RCRA: Resource Conservation and Recovery Act
SARA: Superfund Amendment and Reauthorization Act
Skin: This substance has the potential to be absorbed systemically through the skin.
TSCA: Toxic Substance Control Act

C: OSHA Ceiling Value
mg/m³: milligrams per cubic meter
PPM: Parts Per Million
PEL: Permissible Exposure Limit
TWA: Time Weighted Average

Prepared By: Zinsser Health and Safety Manager, Regulatory Compliance Dept.
173 Belmont Drive Somerset, NJ 08875 (732) 469-8100

Disclaimer: Zinsser Company, Inc. believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials and make no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and data and to comply with all applicable international, federal, state, and local laws and regulations.

N/A: Not Applicable N/D: Not Determined N/E: Not Established N/R: Not Required Est.: Estimated

Material Safety Data Sheet

Section 1 General Information

Manufacturer:

Zehring Brands
Division of Zinsser Company, Inc.
173 Belmont Drive
Somerset, NJ 08875
(732) 469-8100

Emergency Telephone: Chemtrec (800) 424-9300**Date: April 5, 2005****Product Name: Z-Prime Plus****Product Codes: 12800, 12801, 12802, 12803, 12804**

Section 2 Hazardous Ingredients

<u>Hazardous Component</u>	<u>CAS#</u>	<u>OSHA</u> <u>PEL</u>	<u>ACGIH</u> <u>TLV</u>
Aliphatic Petroleum Distillates	64742-89-8	500 ppm	N/E
Barium Compound	Proprietary	15 mg/m ³ * (5 mg/m ³ **)	2 mg/m ³ *
Limestone	1317-65-3	15 mg/m ³ * (5 mg/m ³ **)	10 mg/m ³
Talc	14807-96-6	20 mppcf	2 mg/m ³ *
Titanium dioxide	13463-67-7	15 Mg/m ³ *	10 Mg/m ³
Xylene	1330-20-7	100 ppm.	100 ppm.

* Total Dust

** Respirable Dust Fraction

† Inhalable fraction

Section 3 Hazard Identification

Emergency Overview: This material is a solvent-based interior primer-sealer used to coat wood and other surfaces before painting. This material is a white flowable liquid with a flash point of 54 F.

Primary Potential Routes of Exposure:

Inhalation
Skin Contact
Eye Contact

Potential Acute Health Effects:**Eye:** May cause eye irritation.**Skin:** Frequent or prolonged contact may cause skin irritation.

N/A: Not Applicable N/D: Not Determined N/E: Not Established N/R: Not Required Est.: Estimated

Ingestion: Although not considered a significant route of exposure, ingestion may cause gastrointestinal irritation if ingested.

Inhalation: Inhalation of vapors may cause respiratory tract irritation.

Potential Chronic Health Effects: None known.

(See also Sections 4, 8, and 11 for related information)

Section 4 First Aid Measures

Eye contact: Flush eyes with water for 15 minutes. Get medical attention.

Skin contact: Wash with soap and water. If irritation persists, get medical attention.

Ingestion: If swallowed, DO NOT induce vomiting. Call a physician or poison control center immediately.

Inhalation: If exposed to excessive levels of vapor, remove person to fresh air. Seek medical attention if cough or other symptoms develop.

Section 5 Fire Fighting Measures

Flash Point [method]: 54° F [T.C.C.]

Flammable Limits in Air: Lower (LEL): N/D
Upper (UEL): N/D

Extinguishing Media: Water, All purpose dry chemical (ABC), CO₂, or foam.

Protection of Firefighters: As in any fire, wear self-contained breathing apparatus in pressure demand mode and full protective gear.

Section 6 Accidental Release Measures

Clean Up Methods: Eliminate all ignition sources. Keep unnecessary people away. Dike and contain spill with inert material (sand, earth, etc.). Transfer liquid to containers for recovery or disposal, or absorb with absorbent materials and place into containers for disposal. Keep spill out of sewer and open bodies of water. Floors may be slippery; care should be exercised to avoid falls during clean up operations.

(See also Section 8 for information on Exposure Controls and Personal Protective Equipment)

N/A: Not Applicable N/D: Not Determined N/E: Not Established N/R: Not Required Est.: Estimated

Section 7 Handling and Storage

Handling: Prevent eye contact. Avoid contact with skin and clothing.

Storage: Store in a cool dry place away from excessive heat or open flame. Do not store near oxidizers.

Section 8 Exposure Controls / Personal Protection

Engineering Controls: Use in well-ventilated areas. If necessary, use mechanical local exhaust ventilation or general room dilution ventilation to reduce vapor concentrations.

Personal Protective Equipment (PPE):

Eye Protection: Prevent eye contact. Wear chemical splash goggles or similar eye protection if the potential exists for eye contact.

Skin Protection: Avoid unnecessary skin contact. It is recommended that rubber gloves be worn to prevent skin contact. Depending on conditions of use additional protective equipment may be necessary such as face-shield, apron or coveralls.

Respiratory Protection: None required for normally expected use conditions. If workplace exposure limits are exceeded or if irritation is experienced wear NIOSH approved respiratory protection, with organic vapor cartridges or a supplied air respirator, appropriate for the exposure conditions.

General Hygiene Practices: Wash after handling material. Prevent Eye contact. Avoid prolonged skin and inhalation contact. Wash thoroughly before handling food and cosmetics or before smoking.

Section 9 Physical Data

Appearance:	White, flowable liquid	Odor:	Petroleum solvent type odor
Physical State:	Liquid	pH:	N/A (solvent based system)
Boiling Point:	~325° F *	Melting Point:	N/A
Vapor Pressure:	N/D	Vapor Density:	Heavier than air.
Odor Threshold:	N/D	Viscosity:	N/D
Solubility in Water:	Not soluble in water.	Density:	12.3 lbs./gal.
VOC Content:	≤ 350 g/l		* Based on solvent

N/A: Not Applicable N/D: Not Determined N/E: Not Established N/R: Not Required Est.: Estimated

Section 10 Stability and Reactivity

Stability: This material is stable.

Hazardous Polymerization: Not expected or known to occur.

Hazardous Decomposition Products: None known.

Conditions to Avoid: Keep away from heat and open flames.

Incompatibility: Strong oxidizing agents.

Section 11 Toxicological Information

Carcinogenicity: This material is not considered a carcinogen by IARC or NTP and is not regulated as a carcinogen by OSHA.

(See also Section 15 for related information)

Section 12 Ecological Information

Chemical Fate and Effects: No data available.

Section 13 Disposal Considerations

RCRA Hazardous Waste: This material, when discarded or disposed of, could be a hazardous waste according to federal regulations (40 CFR 261) due to the characteristic of ignitability (D001). The transportation, storage, treatment, and disposal of this waste must be conducted in compliance with 40 CFR 262, 263, 264, 268, and 270. Disposal can only occur in properly permitted facilities. Check state and local regulations for any additional requirements as these may be more restrictive than federal laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate, or otherwise inappropriate.

Section 14 Transportation Information

Regulated by the DOT: Yes

DOT Proper Shipping Name: Paint

UN / NA Number: UN 1263

N/A: Not Applicable N/D: Not Determined N/E: Not Established N/R: Not Required Est.: Estimated

Section 15 Regulatory Information

CERCLA:

The Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) requires notification to the National Response Center for releases of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in 40 CFR 302.4 (for CERCLA 102).

Components present in this product at a level which could require reporting under the statute are:

<u>Chemical Name</u>	<u>CAS#</u>	<u>Maximum Concentration (Wt. %)</u>
None	N/A	N/A

SARA Title III, section 311/312:

The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312).

Components present in this product at a level which could require reporting under the statute are:

<u>Chemical Name</u>	<u>CAS#</u>	<u>Maximum Concentration (Wt. %)</u>
None	N/A	N/A

SARA Title III, section 313:

The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313).

Components present in this product at a level which could require reporting under the statute are:

<u>Chemical Name</u>	<u>CAS#</u>	<u>Maximum Concentration (Wt. %)</u>
Xylene	1330-20-7	0.55 %

TSCA:

The components of this mixture are listed in the Toxic Substance Control Act Inventory of Chemical Substances.

This product does not contain any chemicals that require export notification under Section 12(b) of the TSCA regulation.

N/A: Not Applicable N/D: Not Determined N/E: Not Established N/R: Not Required Est.: Estimated

Section 16 Other Information

Legend: N/A: Not Applicable
N/E: Not Established
STEL: Short Term Exposure Limit
PPM: Parts Per Million
PEL: Permissible Exposure Limit
TWA: Time Weighted Average
mppcf: Million particles per cubic foot of air.
ACGIH: American Conference of Governmental Industrial Hygienists
DOT: United States Department of Transportation
OSHA: Occupational Safety and Health Administration (US Dept. of Labor)
RCRA: Resource Conservation and recovery Act
SARA: Superfund Amendment and Reauthorization Act
TSCA: Toxic Substance Control Act
FHSA: Federal Hazardous Substance Act

N/D: Not Determined
N/R: Not Required
C: OSHA Ceiling Value
PPB: Parts Per Billion
TLV: Threshold Limit Value
mg/m³: Milligrams per cubic Meter

Prepared By: Zinsser Health and Safety Manager, Regulatory Compliance Dept.
173 Belmont Drive Somerset, NJ 08875 (732) 469-8100

Disclaimer: Zinsser Company, Inc. believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials and make no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and data and to comply with all applicable international, federal, state, and local laws and regulations.

N/A: Not Applicable N/D: Not Determined N/E: Not Established N/R: Not Required Est.: Estimated

Material Safety Data Sheet

Section 1 General Information

Manufacturer:

Zinsser Company, Inc.
173 Belmont Drive
Somerset, NJ 08875
(732) 469-8100

Emergency Telephone: Chemtrec (800) 424-9300**Date:** 5/16/05**Product Name:** Shieldz Plus**Product Codes:** 3200, 3201, 3204

Section 2 Hazardous Ingredients

<u>Hazardous Component</u>	<u>CAS#</u>	<u>OSHA</u>		<u>ACGIH</u>
		<u>PEL</u>		<u>TLV</u>
Calcium carbonate	1317-65-3	15 Mg/m ³ *	5 Mg/m ³ **	10 Mg/m ³
Ethylene glycol	107-21-1		N/E	100 Mg/m ³ (C)
Limestone	131-65-3	15 Mg/m ³ *	5 Mg/m ³ **	10 Mg/m ³
Talc	14807-96-6		20 mppcf	2 Mg/m ³
Titanium Dioxide	13463-67-7		15 Mg/m ³ *	10 Mg/m ³
Zinc Oxide	1314-13-2	15 Mg/m ³ *	5 Mg/m ³ **	10 Mg/m ³

* Total Dust

** Respirable Dust Fraction

Section 3 Hazard Identification

Emergency Overview: This material is a stable, non-flammable, white flowable liquid with a flashpoint above 200° Fahrenheit. It is primarily used as a wallcovering primer.

Primary Routes of Exposure:

Eye Contact

Potential Acute Health Effects:**Eye:** May cause eye irritation.**Skin:** Absorption through skin contact not considered a significant route of exposure during intended use.**Ingestion:** Ingestion is not considered a significant route of exposure during intended use.**Inhalation:** May cause respiratory irritation in sensitive individuals.

N/A: Not Applicable N/D: Not Determined N/E: Not Established N/R: Not Required Est.: Estimated

Potential Chronic Health Effects:

Signs and Symptoms: None known.

(See also Sections 4, 8, and 11 for related information)

Section 4 First Aid Measures

Eye contact: Flush eye with water for 15 minutes. Get medical attention.

Skin contact: Wash with soap and water. Get medical attention if symptoms occur.

Ingestion: If swallowed, call a physician or poison control center.

Inhalation: No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to excessive levels of vapor, remove victim to fresh air and seek medical attention if cough or other symptoms develop.

Note to Physician: This material is basically non-toxic. Ingestion of a small quantity (approximately one-tablespoon) is unlikely to cause harm.

Section 5 Fire Fighting Measures

The liquid material will not burn. However, the dried paint film may burn in a fire.

Flash Point (method): Not Determined (expected to be above 200° F based on ingredients).

Flammable Limits in Air (by volume) Lower (LEL): 1.1%
Upper (UEL): 15.3%

Extinguishing Media: Use water spray, foam, or carbon dioxide when fighting fires involving this material.

Protection of Firefighters: As in any fire, wear self-contained breathing apparatus in pressure demand mode and full protective gear.

Fire and Explosion Hazards: The liquid material will not burn. However, the dried paint film may burn in a fire.

Section 6 Accidental Release Measures

Clean Up Methods: Keep unnecessary people away. Dike and contain spill with inert material (sand, earth, etc.). Transfer liquid to containers for recovery or disposal, or absorb with absorbent materials and place into containers for disposal. Keep spill out of sewer and open

N/A: Not Applicable N/D: Not Determined N/E: Not Established N/R: Not Required Est.: Estimated

bodies of water. Floors may be slippery; care should be exercised to avoid falls during clean up operations.

(See also Section 8 for information on Exposure Controls and Personal Protective Equipment)

Section 7 Handling and Storage

Handling: Avoid contact with eyes, skin, and clothing.

Storage: Keep from freezing. Keep container closed when not in use.

Section 8 Exposure Controls / Personal Protection

Engineering Controls: If exposure conditions warrant, use mechanical local exhaust ventilation or general dilution ventilation to reduce vapor concentrations.

Personal Protective Equipment (PPE):

Eye Protection: Wear safety glasses, goggles or face shield to prevent eye and face contact.

Skin Protection: Wear gloves to prevent prolonged skin contact.

Respiratory Protection: None required under normal, intended use conditions. If vapor exposure causes discomfort and in areas of poor ventilation wear NIOSH approved respirator.

Protective Clothing: For brief contact, no special precautions other than clean body-covering clothing should be needed. When prolonged or frequent repeated contact with the material could occur, use protective clothing that is impervious to this material (such as tyvek).

General Hygiene Practices: Wash thoroughly after handling. Prevent Eye contact. Avoid prolonged skin or inhalation contact.

Section 9 Physical Data

Appearance:	White flowable liquid.	Odor:	Slight ammonia like odor.
Physical State:	Liquid	pH:	9.0
Boiling Point:	N/D (est. >200 ° F)	Freezing Point:	N/D (est. 32 ° F)
Vapor Pressure:	Not determined.	Vapor Density:	Not determined.
Odor Threshold:	Not determined.	Viscosity:	100 KU (@ 74° F)
Solubility in Water:	Dilutable in water	Density:	10.1 pounds/gallon

N/A: Not Applicable N/D: Not Determined N/E: Not Established N/R: Not Required Est.: Estimated

Section 10 Stability and Reactivity

Stability: This material is stable. Not reactive.

Hazardous Polymerization: Will not occur.

Hazardous Decomposition Products: None known.

Conditions to Avoid: None known.

Incompatibility: None known.

Section 11 Toxicological Information

Carcinogenicity: This material is not considered a carcinogen by IARC or NTP and is not regulated as a carcinogen by OSHA.

Chronic Health Effects: None known.

(See also Section 15 for related information)

Section 12 Ecological Information

Chemical Fate and Effects: No data available.

Section 13 Disposal Considerations

RCRA Hazardous Waste: No

Recommended Waste Disposal Method: This material is not considered hazardous waste under federal hazardous waste regulations (40 CFR 261). However, state and local requirements for waste disposal may be more restrictive or otherwise differ from federal regulations. Chemical additions, processing or otherwise altering this material may render the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Consult all applicable federal, state, and local regulations regarding the proper disposal of this material.

Section 14 Transportation Information

Regulated by the US DOT: Not Regulated

DOT Proper Shipping Name: Paint Products

UN / NA Number: N/A

N/A: Not Applicable N/D: Not Determined N/E: Not Established N/R: Not Required Est.: Estimated

Section 15 Regulatory Information

CERCLA:

The Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) requires notification to the National Response Center for releases of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in 40 CFR 302.4 (for CERCLA 102).

Components present in this product at a level which could require reporting under the statute are:

<u>Chemical Name</u>	<u>CAS#</u>	<u>Maximum Concentration (Wt. %)</u>
Ethylene Glycol	107-21-1	<3%

SARA Title III, section 311/312:

The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312).

Components present in this product at a level which could require reporting under the statute are:

<u>Chemical Name</u>	<u>CAS#</u>	<u>Maximum Concentration (Wt. %)</u>
None	N/A	N/A

SARA Title III, section 313:

The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313).

Components present in this product at a level which could require reporting under the statute are:

<u>Chemical Name</u>	<u>CAS#</u>	<u>Maximum Concentration (Wt. %)</u>
None	N/A	N/A

TSCA:

The components of this mixture are listed in the Toxic Substance Control Act Inventory of Chemical Substances.

This product does not contain any chemicals that require export notification under Section 12(b) of the TSCA regulation.

N/A: Not Applicable N/D: Not Determined N/E: Not Established N/R: Not Required Est.: Estimated

Section 16 Other Information

Legend: N/A: Not Applicable
N/E: Not Established
STEL: Short Term Exposure Limit
PPM: Parts Per Million
PEL: Permissible Exposure Limit
TWA: Time Weighted Average
> Greater Than
Mppcf: Million particles per cubic foot of air
ACGIH: American Conference of Governmental Industrial Hygienists
CERCLA: Comprehensive Environmental Response Compensation and Liability Act
DOT: US Department of Transportation
OSHA: Occupational Safety and Health Administration (US Dept. of Labor)
RCRA: Resource Conservation and Recovery Act
SARA: Superfund Amendment and Reauthorization Act
TSCA: Toxic Substance Control Act

N/D: Not Determined
N/R: Not Required
C: Ceiling Limit
PPB: Parts Per Billion
TLV: Threshold Limit Value
Mg/M³: Milligrams per cubic Meter
< Less Than

Prepared By: Zinsser Health and Safety Manager, Regulatory Compliance Dept.
173 Belmont Drive Somerset, NJ 08875 (732) 469-8100

Disclaimer: Zinsser Company, Inc. believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials and make no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and data and to comply with all applicable international, federal, state, and local laws and regulations.

N/A: Not Applicable N/D: Not Determined N/E: Not Established N/R: Not Required Est.: Estimated

Material Safety Data Sheet

SECTION I - Material Identity
SECTION II - Manufacturer's Information
SECTION III - Physical/Chemical Characteristics
SECTION IV - Fire and Explosion Hazard Data
SECTION V - Reactivity Data
SECTION VI - Health Hazard Data
SECTION VII - Precautions for Safe Handling and Use
SECTION VIII - Control Measures
SECTION IX - Label Data
SECTION X - Transportation Data
SECTION XI - Site Specific/Reporting Information
SECTION XII - Ingredients/Identity Information

SECTION I - Material Identity

Item Name	
Part Number/Trade Name	XYLENE
National Stock Number	6810005986600
CAGE Code	8W415
Part Number Indicator	A
MSDS Number	186676
HAZ Code	B

SECTION II - Manufacturer's Information

Manufacturer Name	STARTEX CHEMICAL, INC (DIST BY CSD)
P.O. Box	3087
City	CONROE
State	TX
Country	US
Zip Code	77305
Emergency Phone	800-424-9300 CHEMTREC
Information Phone	409-539-6244

MSDS Preparer's Information

Date MSDS Prepared/Revised	01NOV99
Date of Technical Review	26JAN90
Active Indicator	Y

Alternate Vendors

Vendor #1 Name	CSD, INC
Vendor #1 CAGE	4N760

SECTION III - Physical/Chemical Characteristics

Hazard Storage Compatibility Code	NR
NRC License Number	NR
Net Propellant Weight (Ammo)	NR
Appearance/Odor	NR
Boiling Point	282 TO 286
Melting Point	NR
Vapor Pressure	14 @ 100
Vapor Density	NR
Specific Gravity	0.87
Decomposition Temperature	NR
Evaporation Rate	0.8 APPROXIMATE
Solubility in Water	0.02 AT 77 F
Chemical pH	NR
Corrosion Rate	NR
Container Pressure Code	1
Temperature Code	4
Product State Code	L

SECTION IV - Fire and Explosion Hazard Data

Flash Point	81
Flash Point Method	TCC
Lower Explosion Limit	1.9
Upper Explosion Limit	12.3
Extinguishing Media	USE WATER SPRAY TO COOL FIRE EXPOSED CONTAINERS AND TO PROTECT PERSONNEL. FOAM OR DRY CHEMICAL TO EXTINGUISH FIRE
Special Fire Fighting Procedures	RESPIRATORY AND EYE PROTECTION. AVOID SPRAYING WATER DIRECTLY INTO STORAGE CONTAINERS DUE TO DANGER OR BOILOVER. VOLATILE AND GIVES OFF INVISIBLE VAPORS
Unusual Fire/Explosion Hazards	EITHER THE LIQUID OR VAPORS MAY SETTLE IN LOW AREAS OR TRAVEL SOME DISTANCE ALONG THE GROUND OR SURFACE TO IGNITION SOURCES WHERE THEY MAY IGNITE OR EXPLODE

SECTION V - Reactivity Data

Stability	YES
Stability Conditions to Avoid	STRONG OXIDIZING AGENTS. CONCENTRATED NITRIC AND SULPHURIC ACIDS. HALOGEN, AND MOLTEN SULFUR,

Materials to Avoid	TEMPERATURES ABOVE AMBIEN
Hazardous Decomposition Products	NR
Hazardous Polymerization	THERMAL - SMOKE, FUMES, AND CARBON MONOXIDE
Polymerization Conditions to Avoid	NO
LD50 - LD50 Mixture	WILL NOT OCCUR
	N/K

SECTION VI - Health Hazard Data

Route of Entry: Skin	YES
Route of Entry: Ingestion	YES
Route of Entry: Inhalation	YES
Health Hazards - Acute and Chronic	ACUTE:IRRITATION OF EYES,SKIN,RESPIRATORY OR G.I.TRACTS;CNS EFFECTS LIKE HEADACHE,DIZZINESS,NAUSEA,VOMITING AND POSSIBLE UNCONSCIOUSNESS;REDNESS OR BURNS OF EYES/SKIN POSSIBLE.CHRONIC:DRYING OF SKIN,DEFATTING OR DERMATITIS
Carcinogenity: NTP	NO
Carcinogenity: IARC	NO
Carcinogenity: OSHA	NO
Explanation of Carcinogenity	NONE
Symptoms of Overexposure	SEE HEALTH HAZARDS DATA
Medical Cond. Aggravated by Exposure	PERSONS WITH A HISTORY OF AILMENTS OR WITH A PRE-EXISTING DISEASE INVOLVING THE EYES, SKIN, OR RESPIRATORY TRACT MAY BE AT INCREASED RISK FROM EXPOSURE
Emergency/First Aid Procedures	INHALATION:REMOVE TO FRESH AIR. RESUSCITATE IF NOT BREATHING. GET MEDICAL ATTENTION. EYES:IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR 15 MINUTES HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION. SKIN:REMOVE CONTAMINATED CLOTHING. WASH WITH SOAP AND WATER. IF IRRITATION PERSISTS, GET MEDICAL ADVICE. INGESTION:DO NOT INDUCE VOMITING. GIVE NOTHING BY MOUTH IF UNCONSCIOUS. GET IMMEDIATE MEDICAL ATTENTION

SECTION VII - Precautions for Safe Handling and Use

Steps if Material Released/Spilled	USE PROPER PERSONAL PROTECTION;REMOVE ALL IGNITION SOURCES;CONTAIN FREE MATERIAL IF POSSIBLE;USE SUITABLE INERT ABSORBENT MATERIAL AND RECOVER FOR
------------------------------------	--

Neutralizing Agent	PROPER DISPOSAL IN AN APPROVED CONTAINER
Waste Disposal Method	NOT APPLICABLE
Handling and Storage Precautions	CONSULT LOCAL AUTHORITIES. DISPOSAL MUST BE MADE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS
	RE IN COOL, DRY AND WELL VENTILATED AREA; KEEP AWAY FROM HEAT, OPEN FLAMES AND STRONG OXIDIZERS. KEEP CONTAINER CLOSED WHEN NOT IN USE

SECTION VIII - Control Measures

Respiratory Protection	USE NIOSH/MSHA APPROVED RESPIRATOR FOR ORGANIC VAPORS/MIST AS REQUIRED IF ABOVE PEL/TLV OR SCBA IN AN ENCLOSED AREA
Ventilation	LOCAL/GENERAL TO MAINTAIN PEL/TLV; USE EXPLOSION PROOF EQUIPMENT AND FACE VELOCITY >60 FPM
Protective Gloves	NEOPRENE, NITRILE, OR NATURAL RUBBER
Eye Protection	SAFETY GOGGLES WITH OPTIONAL FACE SHIELD
Other Protective Equipment	EYE WASH STATION, WORK CLOTHING AND APRON AS REQUIRED
Work Hygienic Practices	OBSERVE GOOD PERSONAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES. DO NOT WEAR CONTAMINATED CLOTHING OR FOOTWEAR
Supplemental Health/Safety Data	AVOID PROLONGED OR REPEATED EXPOSURE. DO NOT GET ON SKIN OR IN EYES. DO NOT BREATHE VAPORS OR MISTS

SECTION IX - Label Data

Protect Eye	YES
Protect Skin	YES
Protect Respiratory	YES
Chronic Indicator	NO
Contact Code	SLIGHT
Fire Code	UNKNOWN
Health Code	UNKNOWN
React Code	UNKNOWN
Specific Hazard and Precaution	NO TARGET ORGANS LISTED FOR CHRONIC EXPOSURES

SECTION X - Transportation Data

Container Quantity	1
Unit of Measure	GL

SECTION XI - Site Specific/Reporting Information

Volatile Organic Compounds (P/G)	7.26
Volatile Organic Compounds (G/L)	870.03

SECTION XII - Ingredients/Identity Information

Ingredient #	01
Ingredient Name	XYLENES
CAS Number	1330207
Proprietary	NO
Percent	85
OSHA PEL	100 PPM
ACGIH TLV	100 PPM
Recommended Limit	NR
Ingredient #	02
Ingredient Name	ETHYL BENZENE
CAS Number	100414
Proprietary	NO
Percent	15
OSHA PEL	100 PPM
ACGIH TLV	100 PPM
Recommended Limit	NR

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: ENAMEL CATALYST
PRODUCT CODE: U-1001C

HMS CODES: H F R P
2 3 1 J

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: STERLING LACQUER MFG. CO. INC.
ADDRESS: 3150 BRANNON AVE., ST. LOUIS, MO 63139
EMERGENCY PHONE: 800-424-9300
DATE REVISED : 08-14-03
INFORMATION PHONE: 314-776-4450
NAME OF PREPARER : L. MITCHELL

SECTION II - HAZARDOUS INGREDIENTS/BSA III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OCCUPATIONAL EXPOSURE LIMITS			VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
		OSHA PEL	ACGIH TLV	OTHER		
HOMOPOLYMER OF HDI	28182-81-2	NOT ESTAB.	NOT ESTAB.	1 MG/M3	N/A	40
ETHYL ACETATE 99% GRADE	141-78-6		400 PPM		86.0 64F	25
NORMAL BUTYL ACETATE	123-86-4	150 PPM	150 PPM		18.0 68F	(5.0%
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	108-65-6	NOT ESTAB.	NOT ESTAB.		3.7 68F	20
XYLENE	1330-20-7	100 PPM	100 PPM		9.5 66F	10

* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372. US Toxic Substances Control Act (TSCA): The component chemicals in this product are listed on the TSCA inventory.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE: 167 to 302 Deg F
VAPOR DENSITY: HEAVIER THAN AIR
COATING V.D.C. : 4.91 LB/GL (588 G/L)
MATERIAL V.D.C. : 4.91 LB/GL (588 G/L)
SOLUBILITY IN WATER: NEGLIGIBLE
APPEARANCE AND ODOR: CLEAR LIQUID, SOLVENT ODOR
SPECIFIC GRAVITY (H2O=1): 1.0
EVAPORATION RATE: SLOWER THAN ETHER

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 24 Deg F
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1.1% UPPER: 13.1%
METHOD USED: T.C.C.

EXTINGUISHING MEDIA: FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL

SPECIAL FIREFIGHTING PROCEDURES

USE SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND WHEN FIGHTING FIRES. USE WATER OR NOZZLES TO COOL CLOSED CONTAINER.

UNUSUAL FIRE AND EXPLOSION HAZARDS

DO NOT USE WATER. FLAMMABLE LIQUID, CAN RELEASE VAPORS THAT FORM FLAMMABLE MIXTURES AT TEMPERATURE AT OR ABOVE THE FLASHPOINT. ELIMINATE AND ISOLATE FROM ALL SOURCES OF IGNITION. COMBUSTION WILL PRODUCE CO2, CO, AND TOXIC GASES.

U-1001C

MATERIAL SAFETY DATA SHEET

PAGE 3 OF 3

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
WEAR RESPIRATOR, APRON WITH VERMICULITE OR OTHER ABSORBENT MATERIAL. ELIMINATE ALL IGNITION SOURCES. STOP SPILL AT SOURCE AND PREVENT SPREADING.

WASTE DISPOSAL METHOD
DESTROY BY LIQUID INCINERATION. CONTAMINATED ABSORBENT MAY BE DEPOSITED IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
STORE IN DRY AREA. KEEP CONTAINERS TIGHTLY CLOSED. PROTECT FROM PHYSICAL DAMAGE. EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOUR, LIQUID, AND / OR SOLID). ALL HAZARD PRECAUTIONS GIVEN IN THE DATA SHEET MUST BE OBSERVED. STORE BELOW 120 DEG. F.

OTHER PRECAUTIONS
STORE LARGE QUANTITIES IN BUILDINGS DESIGNED TO COMPLY WITH OSHA 1910.106. KEEP CLOSURE TIGHT AND CONTAINER UPRIGHT TO PREVENT LEAKAGE. DO NOT STORE NEAR HEAT, SPARKS OR FLAMES. DO NOT GET IN EYES. KEEP AWAY FROM CHILDREN. AVOID SKIN CONTACT. DO NOT TAKE INTERNALLY. FOR INDUSTRIAL USE.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION
IF PEL OF THE PRODUCT OR ANY COMPONENT IS EXCEEDED, A NIOSH/MSHA JOINTLY APPROVED AIR SUPPLY RESPIRATOR IS ADVISED IN LACK OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS UNDER SPECIFIED CONDITIONS. (SEE YOUR SAFETY EQUIPMENT SUPPLIER.) ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED.

VENTILATION
PROVIDE SUFFICIENT MECHANICAL (GENERAL AND / OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES
WEAR SOLVENT RESISTANT GLOVES (SEE YOUR SAFETY EQUIPMENT SUPPLIER OR SAFETY ENGINEER).

EYE PROTECTION
CHEMICAL SPLASH GOGGLES SUGGESTED, OTHER SAFETY GLASSES PERMITTED.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT
TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR SOLVENT IMPERVIOUS CLOTHING AND BOOTS.

WORK/HYGIENIC PRACTICES
WASH WITH SOAP AND WATER AFTER USE, BEFORE EATING OR SMOKING.

SECTION IX - DISCLAIMER

DISCLAIMER
THIS INFORMATION IS FURNISHED WITHOUT WARRANTY, EXPRESSED OR IMPLIED, EXCEPT THAT IT IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. THE DATA ON THIS SHEET RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED HEREIN. STALLING LACQUER MANUFACTURING COMPANY ASSUMES NO LEGAL RESPONSIBILITY FOR USE OR RELIANCE UPON THIS DATA.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: MIDNIGHT BLUE
PRODUCT CODE: U-1015

HMS CODES: H F R P
3 3 1 J

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: STERLING LACQUER MFG. CO. INC.
ADDRESS: 3150 BRANNON AVE., ST. LOUIS, MO 63139
EMERGENCY PHONE: 800-424-9300 INFORMATION PHONE: 314-776-4450
DATE REVISED : 08-14-03 NAME OF PREPARER : L. MITCHELL

SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OCCUPATIONAL EXPOSURE LIMITS			VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
		OSHA PEL	ACGIH TLV	OTHER		
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	108-65-6	NOT ESTAB.	NOT ESTAB.		3.7 68F	< 5.0%
ETHYL ACETATE 99% GRADE	141-78-6		400 PPM		86.0 68F	10
METHYL ETHYL KETONE	78-93-3	200 PPM	200 PPM		82.5 75F	10
XYLENE	1330-20-7	100 PPM	100 PPM		9.5 68F	1
TITANIUM DIOXIDE	13463-67-7	5 MG/M3	10 MG/M3	5 MG/M3	N/A	< 5.0%
IRON OXIDE FUME (FE2 O3) AS FE	1309-37-1			5MG/M3 TWA	N/A	< 5.0%

Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372. S Toxic Substances Control Act (TSCA): The component chemicals in this product are listed on the TSCA inventory. CONTAINS CRYSTALLINE SILICA - SEE SECTION VI.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE: 167 to 302 Deg F SPECIFIC GRAVITY (H2O=1): 1.1
VAPOR DENSITY: HEAVIER THAN AIR EVAPORATION RATE: SLOWER THAN ETHER
WEIGHTING V.O.C. : 4.38 LB/GL (525 G/L)
MATERIAL V.O.C. : 4.38 LB/GL (525 G/L)
SOLUBILITY IN WATER: NEGLIGIBLE
APPEARANCE AND ODOR: BLUE LIQUID, SOLVENT ODOR

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 21 Deg F METHOD USED: T.C.C.
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1.1% UPPER: 13.1%

EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL

SPECIAL FIREFIGHTING PROCEDURES

USE SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND WHEN FIGHTING FIRES. USE WATER OR FOAM TO COOL CLOSED CONTAINER.

USUAL FIRE AND EXPLOSION HAZARDS

DO NOT USE WATER. FLAMMABLE LIQUID, CAN RELEASE VAPORS THAT FORM FLAMMABLE MIXTURES AT TEMPERATURE AT OR ABOVE THE FLASHPOINT. ELIMINATE AND ISOLATE FROM ALL SOURCES OF IGNITION. COMBUSTION WILL PRODUCE CO2, CO, AND TOXIC GASES.

SECTION V - REACTIVITY DATA

STABILITY: STABLE
CONDITIONS TO AVOID
VOID EXCESSIVE HEAT.

INCOMPATIBILITY (MATERIALS TO AVOID)
VOID STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS
HEATING CAN PRODUCE CARBON DIOXIDE AND / OR CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION VI - HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
IRRITATION TO THE RESPIRATORY TRACT (NOSE, THROAT, LUNGS) AND / OR NARCOSIS.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE
IRRITATING, MAY INJURE EYE TISSUE IF NOT PROPERLY REMOVED.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
SLIGHT IRRITATION DUE TO SOLVENTS.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
MODERATELY TOXIC. MAY CAUSE NAUSEA, VOMITING, AND DIARRHEA. DO NOT TAKE INTERNALLY. CONSULT PHYSICIAN.

HEALTH HAZARDS (ACUTE AND CHRONIC)
CRYSTALLINE SILICA HAS BEEN CLASSIFIED AS PROBABLY CARCINOGENIC FOR HUMANS (2A) BY IARC. CRYSTALLINE SILICA IS ALSO A
KNOWN CAUSE OF SILICOSIS, A NON CANCEROUS LONG DISEASE CAUSED BY EXCESSIVE EXPOSURE TO CRYSTALLINE SILICA.

MUTAGENICITY: NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
RESPIRATORY PROBLEMS CAN BE INCREASED BY INHALATION OF VAPORS.

EMERGENCY AND FIRST AID PROCEDURES
EYES - FLUSH WITH WATER FOR 15 MINUTES. GET IMMEDIATE MEDICAL ATTENTION.
SKIN - REMOVE CONTAMINATED CLOTHING. WASH AFFECTED AREA WITH SOAP AND WATER.
INHALATION - MOVE TO FRESH AIR. OBTAIN MEDICAL ATTENTION IF NEEDED.
INGESTION - DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION.
INDUSTRIAL USE. KEEP AWAY FROM CHILDREN.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
WEAR RESPIRATOR, ABSORB WITH VERMICULITE OR OTHER ABSORBENT MATERIAL. ELIMINATE ALL IGNITION SOURCES. STOP SPILL AT
SOURCE AND PREVENT SPREADING.

WASTE DISPOSAL METHOD
DESTROY BY LIQUID INCINERATION. CONTAMINATED ABSORBENT MAY BE DEPOSITED IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE
AND FEDERAL REGULATIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
STORE IN DRY AREA. KEEP CONTAINERS TIGHTLY CLOSED. PROTECT FROM PHYSICAL DAMAGE. EMPTIED CONTAINERS RETAIN PRODUCT
RESIDUES (VAPOR, LIQUID, AND / OR SOLID). ALL HAZARD PRECAUTIONS GIVEN IN THE DATA SHEET MUST BE OBSERVED. STORE BELOW
20 DEG. F.

OTHER PRECAUTIONS
STORE LARGE QUANTITIES IN BUILDINGS DESIGNED TO COMPLY WITH OSHA 1910.106. KEEP CLOSURE TIGHT AND CONTAINER UPRIGHT TO
PREVENT LEAKAGE. DO NOT STORE NEAR HEAT, SPARKS OR FLAME. DO NOT GET IN EYES. KEEP AWAY FROM CHILDREN. AVOID SKIN
CONTACT. DO NOT TAKE INTERNALLY. FOR INDUSTRIAL USE.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION
IF TLV OF THE PRODUCT OR ANY COMPONENT IS EXCEEDED, A NIOSH/MSHA JOINTLY APPROVED AIR SUPPLY RESPIRATOR IS ADVISED IN
PLACE OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS UNDER SPECIFIED
CONDITIONS. (SEE YOUR SAFETY EQUIPMENT SUPPLIER.) ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED.

VENTILATION
PROVIDE SUFFICIENT MECHANICAL (GENERAL AND / OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES
WEAR SOLVENT RESISTANT GLOVES (SEE YOUR SAFETY EQUIPMENT SUPPLIER OR SAFETY ENGINEER).

EYE PROTECTION
CHEMICAL SPLASH GOGGLES SUGGESTED, OTHER SAFETY GLASSES PERMITTED.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT
PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR SOLVENT IMPERVIOUS CLOTHING AND BOOTS.

WORK/HYGIENIC PRACTICES
WASH WITH SOAP AND WATER AFTER USE, BEFORE EATING OR SMOKING.

SECTION IX - DISCLAIMER

DISCLAIMER
THIS INFORMATION IS FURNISHED WITHOUT WARRANTY, EXPRESSED OR IMPLIED, EXCEPT THAT IT IS ACCURATE TO THE BEST OF OUR
KNOWLEDGE. THE DATA ON THIS SHEET RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED HEREIN. STERLING LACQUER
MANUFACTURING COMPANY ASSUMES NO LEGAL RESPONSIBILITY FOR USE OR RELIANCE UPON THIS DATA.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: WINTER URETHANE REDUCER
 PRODUCT CODE: U-1385 U-1385

HMS CODES: H F R P
 1 3 2 1

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: STERLING LACQUER MFG. CO. INC.
 ADDRESS: 3150 BRANNON AVE., ST. LOUIS, MO 63139
 EMERGENCY PHONE: 800-424-5300 INFORMATION PHONE: 314-776-4450
 DATE REVISED: 08-14-83 NAME OF PREPARER: L. MITCHELL

SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OCCUPATIONAL EXPOSURE LIMITS			VAPOR PRESSURE @ 20 °C	WEIGHT PERCENT
		OSHA PEL	ACGIH TLV	OTHER		
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	108-65-6	NOT ESTAB.	NOT ESTAB.	3.7	68F	48
NORMAL BUTYL ACETATE	123-86-4	150 PPM	150 PPM	10.9	68F	29
METHYL ETHYL KETONE	78-93-3	200 PPM	200 PPM	82.5	75F	32
ETHYL ACETATE 99% GRADE	141-78-6		400 PPM	85.8	68F	18

* Indicates toxic chemicals subject to the reporting requirements of section 313 of Title III and of 40 CFR 372, US Toxic Substances Control Act (TSCA). The component chemicals in this product are listed on the TSCA inventory.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE: 167 to 302 Deg F
 VAPOR DENSITY: HEAVIER THAN AIR
 COATING V.O.C.: 7.39 LB/GL (886 G/L)
 MATERIAL V.O.C.: 7.39 LB/GL (886 G/L)
 SOLUBILITY IN WATER: NEGLIGIBLE
 APPEARANCE AND ODOR: CLEAR LIQUID, SOLVENT ODOR

SPECIFIC GRAVITY (H2O=1): 0.9
 EVAPORATION RATE: SLOWER THAN ETHER

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 21 Deg F
 FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1.3% UPPER: 13.1%
 EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL

METHOD USED: T.C.C.

SPECIAL FIREFIGHTING PROCEDURES

WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND WHEN FIGHTING FIRES. USE WATER NOZZLES TO COOL CLOSED CONTAINER.

UNUSUAL FIRE AND EXPLOSION HAZARDS

DO NOT USE WATER. FLAMMABLE LIQUID, CAN RELEASE VAPORS THAT FORM FLAMMABLE MIXTURES AT TEMPERATURE AT OR ABOVE THE FLASHPOINT. ELIMINATE AND ISOLATE FROM ALL SOURCES OF IGNITION. COMBUSTION WILL PRODUCE CO2, CO, AND TOXIC GASES.

U-1385

MATERIAL SAFETY DATA SHEET

PAGE 2 OF 3

SECTION V - REACTIVITY DATA

STABILITY: STABLE
CONDITIONS TO AVOID
AVOID EXCESSIVE HEAT.

INCOMPATIBILITY (MATERIALS TO AVOID)
AVOID STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS
BURNING CAN PRODUCE CARBON DIOXIDE AND / OR CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION VI - HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
IRRITATION TO THE RESPIRATORY TRACT (NOSE, THROAT, LUNGS) AND / OR MARCOSES.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE
IRRITATING, MAY INJURE EYE TISSUE IF NOT PROPERLY REMOVED.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
SLIGHT IRRITATION DUE TO SOLVENTS.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
MODERATELY TOXIC. MAY CAUSE NAUSEA, VOMITING, AND DIARRHEA. DO NOT TAKE INTERNALLY. CONSULT PHYSICIAN.

HEALTH HAZARDS (ACUTE AND CHRONIC)

CARCINOGENICITY: NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
RESPIRATORY PROBLEMS CAN BE INCREASED BY INHALATION OF VAPORS.

EMERGENCY AND FIRST AID PROCEDURES

EYES - FLUSH WITH WATER FOR 15 MINUTRS. GET IMMEDIATE MEDICAL ATTENTION.
SKIN - REMOVE CONTAMINATED CLOTHING. WASH AFFECTED AREA WITH SOAP AND WATER.
INHALATION - MOVE TO FRESH AIR. OBTAIN MEDICAL ATTENTION IF NEEDED.
INGESTION - DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION.
FOR INDUSTRIAL USE. KEEP AWAY FROM CHILDREN.

U-1385

MATERIAL SAFETY DATA SHEET

PAGE 3 OF 3

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

SAFETY PRECAUTIONS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
WEAR RESPIRATOR. ABSORB WITH VERMICULITE OR OTHER ABSORBENT MATERIAL. ELIMINATE ALL IGNITION SOURCES. STOP SPILL AT SOURCE AND PREVENT SPREADING.

WASTE DISPOSAL METHOD

DESTROY BY LIQUID INCINERATION. CONTAMINATED ABSORBENT MAY BE DEPOSITED IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

STORE IN DRY AREA. KEEP CONTAINERS TIGHTLY CLOSED. PROTECT FROM PHYSICAL DAMAGE. EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND / OR SOLID). ALL HAZARD PRECAUTIONS GIVEN IN THE DATA SHEET MUST BE OBSERVED. STORE BELOW 120 DEG. F.

OTHER PRECAUTIONS

STORE LARGE QUANTITIES IN BUILDINGS DESIGNED TO COMPLY WITH OSHA 1910.106. KEEP CLOSURE TIGHT AND CONTAINER UPRIGHT TO PREVENT LEAKAGE. DO NOT STORE NEAR HEAT, SPARKS OR FLAME. DO NOT GET IN EYES. KEEP AWAY FROM CHILDREN. AVOID SKIN CONTACT. DO NOT TAKE INTERNALLY. FOR INDUSTRIAL USE.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION

IF PERCENTAGE OF THE PRODUCT OR ANY COMPONENT IS EXCEEDED, A NIOSH/MMSA JOINTLY APPROVED AIR SUPPLY RESPIRATOR IS ADVISED IN PLACE OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MMSA RESPIRATORS UNDER SPECIFIED CONDITIONS. (SEE YOUR SAFETY EQUIPMENT SUPPLIER.) ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED.

VENTILATION

PROVIDE SUFFICIENT MECHANICAL (GENERAL AND / OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES

WEAR SOLVENT RESISTANT GLOVES (SEE YOUR SAFETY EQUIPMENT SUPPLIER OR SAFETY ENGINEER).

EYE PROTECTION

CHEMICAL SPLASH GOGGLES SUGGESTED, OTHER SAFETY GLASSES PERMITTED.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR SOLVENT IMPERVIOUS CLOTHING AND BOOTS.

WORK/HYGIENIC PRACTICES

WASH WITH SOAP AND WATER AFTER USE, BEFORE EATING OR SMOKING.

SECTION IX - DISCLAIMER

DISCLAIMER

THIS INFORMATION IS FURNISHED WITHOUT WARRANTY, EXPRESSED OR IMPLIED, EXCEPT THAT IT IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. THE DATA ON THIS SHEET RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED HEREIN. SUELLING LACQUER MANUFACTURING COMPANY ASSUMES NO LEGAL RESPONSIBILITY FOR USE OR RELIANCE UPON THIS DATA.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: CATALYST
PRODUCT CODE: U-2964

HMS CODES: H F R P
2 2 1 J

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: STERLING LACQUER MFG. CO. INC.
ADDRESS: 3150 BRANNON AVE., ST. LOUIS, MO 63139
EMERGENCY PHONE: 800-424-9300 INFORMATIONAL PHONE: 314-776-4450
DATE REVISED: 08-14-03 NAME OF PREPARER: L. MITCHELL

SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OCCUPATIONAL EXPOSURE LIMITS			VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
		OSHA PEL	ACGIH TLV	OTHER		
DIMYL KETONE	927-49-1				N/A	10
5 ETHYL 2 NONANONE	5446-89-1				N/A	10
METHYL N-AMYL KETONE	591-78-6		50 PPM		N/A	(5.0%)
METHYL ISOBAMYL KETONE	110-12-3		50 PPM		4.5 68F	(5.0%)
HOMOPOLYMER OF HDI	28182-81-2	NOT ESTAB.	NOT ESTAB.	1 MG/M3	N/A	75

† Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.
‡ Toxic Substances Control Act (TSCA): The component chemicals in this product are listed on the TSCA inventory.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: 286 Deg F
VAPOR DENSITY: HEAVIER THAN AIR
COATING V.O.C.: 1.91 LB/BL (229 G/L)
WATER V.O.C.: 1.91 LB/BL (229 G/L)
SOLUBILITY IN WATER: NEGLIGIBLE
APPEARANCE AND ODOR: CLEAR LIQUID, SOLVENT ODOR
SPECIFIC GRAVITY (H2O=1): 1.0
EVAPORATION RATE: SLOWER THAN ETHER

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 184 DEG F
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1.0% UPPER: 8.2%
METHOD USED:

EXTINGUISHING MEDIA: FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL

SPECIAL FIREFIGHTING PROCEDURES

WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND WHEN FIGHTING FIRES. USE WATER
FOAM NOZZLES TO COOL CLOSED CONTAINER.

USUAL FIRE AND EXPLOSION HAZARDS

DO NOT USE WATER. FLAMMABLE LIQUID, CAN RELEASE VAPORS THAT FORM FLAMMABLE MIXTURES AT TEMPERATURE AT OR ABOVE THE
FLASHPOINT. ELIMINATE AND ISOLATE FROM ALL SOURCES OF IGNITION. COMBUSTION WILL PRODUCE CO2, CO, AND TOXIC GASES.

SECTION V - REACTIVITY DATA

STABILITY: STABLE
 CONDITIONS TO AVOID
 EXCESSIVE HEAT.

INCOMPATIBILITY (MATERIALS TO AVOID)

ACID ALKALI METAL HYDRIDES, SUCH AS SODIUM HYDROXIDE, AND STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS

IF FIRE: CO₂, CO, OXIDES OF NITROGEN, TRACES OF HCN, HDI.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION VI - HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
 IRRITATION TO THE RESPIRATORY TRACT (NOSE, THROAT, LUNGS).

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE
 SEVERELY IRRITATING, WILL INJURE EYE TISSUE IF NOT PROPERLY REMOVED.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
 SENSITIZER. ALLERGIC SKIN REACTION MAY OCCUR IN SOME INDIVIDUALS.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
 CONSULT PHYSICIAN. DO NOT TAKE INTERNALLY.

HEALTH HAZARDS (ACUTE AND CHRONIC)

DIISOCYANATE (HDI) (CAS 822-06-0) MONOMER CONTENT LESS THAN 0.1% BASED ON RESIN SOLIDS AT TIME OF MANUFACTURE. HOWEVER, AFTER 3-6 MONTHS STORAGE, THE FREE MONOMER CONTENT MAY RISE TO A MAXIMUM OF 0.2%.

ARCINOGENICITY: NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
 RESPIRATORY PROBLEMS CAN BE INCREASED BY INHALATION OF VAPORS.

EMERGENCY AND FIRST AID PROCEDURES

YES - FLUSH WITH WATER FOR 15 MINUTES. GET IMMEDIATE MEDICAL ATTENTION.
 YES - REMOVE CONTAMINATED CLOTHING. WASH AFFECTED AREA WITH SOAP AND WATER.

INHALATION - MOVE TO FRESH AIR. OBTAIN MEDICAL ATTENTION IF NEEDED.
 INGESTION - DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION.

IF SENSITIZED TO AN ISOCYANATE, NO FURTHER EXPOSURE CAN BE PERMITTED. FOR INDUSTRIAL USE. KEEP AWAY FROM CHILDREN.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
AND PREVENT SPREADING.

WASTE DISPOSAL METHOD
DESTROY BY LIQUID INCINERATION. CONTAMINATED ABSORBENT MAY BE DEPOSITED IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
STORE IN DRY AREA. KEEP CONTAINERS TIGHTLY CLOSED. PROTECT FROM PHYSICAL DAMAGE. EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND / OR SOLID). ALL HAZARD PRECAUTIONS GIVEN IN THE DATA SHEET MUST BE OBSERVED. STORE BELOW 20 DEG. F.

OTHER PRECAUTIONS
STORE LARGE QUANTITIES IN BUILDINGS DESIGNED TO COMPLY WITH OSHA 1910.106. KEEP CLOSURE TIGHT AND CONTAINER UPRIGHT TO PREVENT LEAKAGE. DO NOT STORE NEAR HEAT, SPARKS OR FLAME. DO NOT GET IN EYES. KEEP AWAY FROM CHILDREN. AVOID SKIN CONTACT. DO NOT TAKE INTERNALLY. FOR INDUSTRIAL USE.

===== SECTION VIII - CONTROL MEASURES =====

RESPIRATORY PROTECTION
IF TLV OF THE PRODUCT OR ANY COMPONENT IS EXCEEDED, A NIOSH/MSHA JOINTLY APPROVED AIR SUPPLY RESPIRATOR IS ADVISED IN THE ABSENCE OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS UNDER SPECIFIED CONDITIONS. (SEE YOUR SAFETY EQUIPMENT SUPPLIER.) ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED.

VENTILATION
PROVIDE SUFFICIENT MECHANICAL (GENERAL AND / OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES
WEAR SOLVENT RESISTANT GLOVES (SEE YOUR SAFETY EQUIPMENT SUPPLIER OR SAFETY ENGINEER).

EYE PROTECTION
CHEMICAL SPLASH GOGGLES SUGGESTED. OTHER SAFETY GLASSES PERMITTED.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT
PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR SOLVENT IMPERVIOUS CLOTHING AND BOOTS.

WORK/HYGIENIC PRACTICES
WASH WITH SOAP AND WATER AFTER USE, BEFORE EATING OR SMOKING.

===== SECTION IX - DISCLAIMER =====

DISCLAIMER
THIS INFORMATION IS FURNISHED WITHOUT WARRANTY, EXPRESSED OR IMPLIED, EXCEPT THAT IT IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. THE DATA ON THIS SHEET RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED HEREIN. STERLING LACQUER MANUFACTURING COMPANY ASSUMES NO LEGAL RESPONSIBILITY FOR USE OR RELIANCE UPON THIS DATA.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: WHISPER GRAY ENAMEL
PRODUCT CODE: U-2945

HMIS CODES: H 4 F 3 R 1 D 3

===== SECTION I - MANUFACTURER IDENTIFICATION =====

MANUFACTURER'S NAME: STERLING LACQUER MFG. CO. INC.
ADDRESS: 3150 BRANNON AVE., ST. LOUIS, MO 63139
EMERGENCY PHONE: 800-424-9300 **INFORMATION PHONE:** 314-775-4450
DATE REVISED : 08-14-03 **NAME OF PREPARER :** L. MITCHELL

===== SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION =====

HAZARDOUS COMPONENTS	CAS NUMBER	ADDITIONAL EXPOSURE LIMITS			VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
		OSHA PEL	ACGIH TLV	OTHER		
METHYL ETHYL KETONE	- 78-93-3	200 PPM	200 PPM		82.5 75F	7
ETHYL ACETATE SOLVENT	141-78-6		400 PPM		85.0 68F	5
TITANIUM DIOXIDE	13463-67-7	5 MG/M3	10 MG/M3	5 MG/M3	N/A	30
XYLENE	- 1330-20-7	100 PPM	100 PPM		9.5 68F	4
SOLVENT RESIN (POLYURETHANE), HEAVY ALKYLATE	64741-63-7		200 PPM		2.6 68F	0.11
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	100-65-6	NOT ESTAB.	NOT ESTAB.		3.7 68F	15.0x

f Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.
 x Toxic Substances Control Act (TSCA): The component chemicals in this product are listed on the TSCA inventory.

===== SECTION III - PHYSICAL AND CHEMICAL CHARACTERISTICS =====

BOILING RANGE: 167 to 302 Deg F **SPECIFIC GRAVITY (20/20):** 1.1
VAPOR DENSITY: HEAVIER THAN AIR **EVAPORATION RATE:** SLOWER THAN ETHER
COATING V.O.C.: 4.12 LB/BL (493 G/L)
MATERIAL V.O.C.: 4.12 LB/BL (493 G/L)
CONCENTRATION IN WATER: NOT SOLUBLE
APPEARANCE AND ODOR: GRAY LIQUID, SOLVENT ODOR

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: 21 Deg F **METHOD USED:** T.C.C.
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 0.7% UPPER: 13.1%

EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL

SPECIAL FIREFIGHTING PROCEDURES

WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND WHEN FIGHTING FIRES. USE WATER FOR NOZZLES TO COOL CLOSED CONTAINER.

USUAL FIRE AND EXPLOSION HAZARDS

DO NOT USE WATER. FLAMMABLE LIQUID, CAN RELEASE VAPORS THAT FORM FLAMMABLE MIXTURES AT TEMPERATURE AT OR ABOVE THE FLASHPOINT. ELIMINATE AND ISOLATE FROM ALL SOURCES OF IGNITION. COMBUSTION WILL PRODUCE CO2, CO, AND TOXIC GASSES.

SECTION V - REACTIVITY DATA

STABILITY: STABLE
CONDITIONS TO AVOID
0. EXCESSIVE HEAT.

INCOMPATIBILITY (MATERIALS TO AVOID)
A. STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS
HEATING CAN PRODUCE CARBON DIOXIDE AND / OR CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION VI - HEALTH HAZARD DATA

RESPIRATORY HEALTH RISKS AND SYMPTOMS OF EXPOSURE
Irritation to the respiratory tract (nose, throat, lungs) and / or narcotic.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE
Irritating, may injure eye tissue if not properly removed.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
MAY IRRITATE DUE TO SOLVENTS.

GASTROINTESTINAL HEALTH RISKS AND SYMPTOMS OF EXPOSURE
MODERATELY TOXIC. MAY CAUSE NAUSEA, VOMITING, AND DIARRHEA. DO NOT TAKE INTERNALLY. CONSULT PHYSICIAN.

HEALTH HAZARDS (ACUTE AND CHRONIC)

MUTAGENICITY: NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? YES

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
RESPIRATORY PROBLEMS CAN BE INCREASED BY INHALATION OF VAPORS.

EMERGENCY AND FIRST AID PROCEDURES

- INHALATION - FLUSH WITH WATER FOR 15 MINUTES. GET IMMEDIATE MEDICAL ATTENTION.
 - SKIN - REMOVE CONTAMINATED CLOTHING. WASH AFFECTED AREA WITH SOAP AND WATER.
 - IRRITATION - MOVE TO FRESH AIR. OBTAIN MEDICAL ATTENTION IF NEEDED.
 - INGESTION - DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION.
- INDUSTRIAL USE. KEEP AWAY FROM CHILDREN.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

PRECAUTIONS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: RESPIRATOR, ABSORB WITH VERMICULITE OR OTHER ABSORBENT MATERIAL. ELIMINATE ALL IGNITION SOURCES. STOP SPILL AT ONCE AND PREVENT SPREADING.

WASTE DISPOSAL METHOD

WASTE OF LIQUID EMULSIONS. CONTAMINATED ABSORBENT MAY BE DEPOSITED IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

PRECAUTIONS TO BE TAKEN BY THE USER TO PREVENT FIRE AND EXPLOSION

USE IN DRY AREA. KEEP CONTAINERS TIGHTLY CLOSED. PROTECT FROM PHYSICAL DAMAGE. EMPTY CONTAINERS ESTABLISHED PRODUCT HAZARDS (VAPOR, LIQUID, AND / OR SOLID). ALL HAZARD PRECAUTIONS GIVEN IN THE DATA SHEET MUST BE OBSERVED. KEEP AWAY FROM CHILDREN. AVOID SKIN CONTACT.

OTHER PRECAUTIONS

USE LARGE QUANTITIES IN OUTDOORS DESIGNED TO COMPLY WITH OSHA 1910.106. KEEP CLOSED FROM ALL CONTAINER OPENING TO PREVENT LEAKAGE. DO NOT STORE NEAR HEAT, SPARKS OR FLAME. DO NOT GET IN EYES. KEEP AWAY FROM CHILDREN. AVOID SKIN CONTACT. DO NOT USE IN ENCLOSURES. FOR INDUSTRIAL USE.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION

IF THE RISK OF INHALATION IS DETERMINED, A NIOSH/MSHA JOINTLY APPROVED AIR SUPPLY RESPIRATOR IS ADVISED IN ACCORDANCE WITH FEDERAL REGULATIONS. SOME REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS UNDER SPECIFIC CONDITIONS. (SEE YOUR SAFETY EQUIPMENT SUPPLIER.) ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED.

VENTILATION

USE APPROPRIATE VENTILATION (GENERAL AND / OR LOCAL EXHAUST) SYSTEMS TO MAINTAIN EXPOSURE BELOW PERMISSIBLE EXPOSURE LIMITS.

PROTECTIVE GLOVES

USE SOLVENT RESISTANT GLOVES (SEE YOUR SAFETY EQUIPMENT SUPPLIER OR SAFETY ENGINEER).

EYE PROTECTION

WEAR EYE PROTECTION. CHEMICAL SPLASH GOGGLES SUGGESTED, OTHER SAFETY GLASSES PERMITTED.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

PREVENT REPEATED OR PROLONGED SKIN CONTACT. WEAR SOLVENT IMPERVIOUS CLOTHING AND BOOTS.

HYGIENE PRACTICES

WASH WITH SOAP AND WATER AFTER USE, BEFORE EATING OR SMOKING.

SECTION IX - DISCLAIMER

DISCLAIMER

THIS INFORMATION IS FURNISHED WITHOUT WARRANTY, EXPRESSED OR IMPLIED, EXCEPT THAT IT IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. THE DATA ON THIS SHEET RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED HEREIN. STERLING LACQUER COMPANY ASSUMES NO LEGAL RESPONSIBILITY FOR USE OR RELIANCE UPON THIS DATA.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: FLATTENING SOLUTION
PRODUCT CODE: U-3218

HMS CODES: H F R D
 1 3 0 J

===== SECTION I - MANUFACTURER IDENTIFICATION =====

MANUFACTURER'S NAME: STERLING LACQUER MFG. CO. INC.
ADDRESS: 3150 BRANNON AVE., ST. LOUIS, MO 63139
EMERGENCY PHONE: 800-424-9300 **INFORMATION PHONE:** 314-775-4450
DATE REVISED: 08-14-03 **NAME OF PREPARER:** L. MITCHELL

===== SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION =====

HAZARDOUS COMPONENTS	CAS NUMBER	QUANTITATIVE EXPOSURE LIMITS			VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
		OSHA PEL	ACGIH TLV	OTHER		
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	108-65-6	NOT ESTAB.	NOT ESTAB.	3.7	68F	35
METHYL ETHYL KETONE	78-93-3	200 PPM	200 PPM	82.5	75F	33

* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372, IS Toxic Substances Control Act (TSCA): The component chemicals in this product are listed on the TSCA inventory.
 CONTAINS CRYSTALLINE SILICA - SEE SECTION VI.

===== SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS =====

BULLING RANGE: 172 to 302 Deg F **SPECIFIC GRAVITY (WATER=1):** 1.1
VAPOR DENSITY: HEAVIER THAN AIR **EVAPORATION RATE:** SLOWER THAN ETHER
BOILING V.O.C.: 6.24 LB/GL (748 G/L)
MATERIAL V.O.C.: 6.24 LB/GL (748 G/L)
SOLUBILITY IN WATER: NEGLIGIBLE
APPEARANCE AND ODOR: CLEAR LIQUID, SOLVENT ODOR

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: 21 Deg F **RELATIVE VAPOR DENSITY:** 1.1
FLAMMABLE LIMITS IN AIR BY VOLUME: LOWER: 1.3% UPPER: 13.1%
EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL

SPECIAL FIREFIGHTING PROCEDURES:
 USE SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND WHEN FIGHTING FIRES. USE WATER CAUTIONS TO COOL CLOSED CONTAINERS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
 DO NOT USE WATER. FLAMMABLE LIQUID, CAN RELEASE VAPORS THAT FORM FLAMMABLE MIXTURES AT TEMPERATURE AT OR ABOVE THE FLASHPOINT. ELIMINATE AND ISOLATE FROM ALL SOURCES OF IGNITION. COMBUSTION WILL PRODUCE CO2, CO, AND TOXIC GASES.

SECTION V - REACTIVITY DATA

STABILITY: STABLE
CONDITIONS TO AVOID
EXCESSIVE HEAT.

INCOMPATIBILITY (MATERIALS TO AVOID)
AVOID STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS
BURNING CAN PRODUCE CARBON DIOXIDE AND / OR CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION VI - HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
IRRITATION TO THE RESPIRATORY TRACT (NOSE, THROAT, LUNGS) AND / OR HARCOSIS.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE
IRRITATING, MAY INJURE EYE TISSUE IF NOT PROPERLY REMOVED.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
SLIGHT IRRITATION DUE TO SILVERSTE.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

MODERATELY TOXIC. MAY CAUSE NAUSEA, VOMITING, AND DIARRHEA. DO NOT TAKE INTERNALLY. CONSULT PHYSICIAN.

HEALTH HAZARDS (ACUTE AND CHRONIC)

CRYSTALLINE SILICA HAS BEEN CLASSIFIED AS PROBABLY CARCINOGENIC FOR HUMANS (2A) BY IARC. CRYSTALLINE SILICA IS ALSO A
KNOWN CAUSE OF SILICOSES, A PULMONARY DISEASE CAUSED BY REPETITIVE EXPOSURE TO CRYSTALLINE SILICA.

CARCINOGENICITY: NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
RESPIRATORY PROBLEMS CAN BE INCREASED BY INHALATION OF VAPORS.

EMERGENCY AND FIRST AID PROCEDURES

- EYES - FLUSH WITH WATER FOR 15 MINUTES. GET IMMEDIATE MEDICAL ATTENTION.
 - SKIN - REMOVE CONTAMINATED CLOTHING. WASH AFFECTED AREA WITH SOAP AND WATER.
 - INHALATION - MOVE TO FRESH AIR. OBTAIN MEDICAL ATTENTION IF NEEDED.
 - INGESTION - DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION.
- FOR INDUSTRIAL USE. KEEP AWAY FROM CHILDREN.

===== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE =====

PRECAUTIONS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
 RESPIRATOR, ABSORB WITH VERMICULITE OR OTHER ABSORBENT MATERIAL. ELIMINATE ALL IGNITION SOURCES. STOP SPILL AT ONCE AND PREVENT SPREADING.

WASTE DISPOSAL METHOD

PROXY BY LIQUID INCINERATION. CONTAMINATED ABSORBENT MAY BE DEPOSITED IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

STORE IN DRY AREA. KEEP CONTAINERS TIGHTLY CLOSED. PROTECT FROM PHYSICAL DAMAGE. EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND / OR SOLID). ALL HAZARD PRECAUTIONS GIVEN IN THE DATA SHEET MUST BE OBSERVED. STORE BELOW 100 DEG. F.

OTHER PRECAUTIONS

DO NOT STORE LARGE QUANTITIES IN BUILDINGS DESIGNED TO COMPLY WITH OSHA 1910.106. KEEP CLOSURE TIGHT AND CONTAINER UPRIGHT TO PREVENT LEAKAGE. DO NOT STORE NEAR HEAT, SPARKS OR FLAME. DO NOT GET IN EYES. KEEP AWAY FROM CHILDREN. AVOID SKIN CONTACT. DO NOT TAKE INTERNALLY. FOR INDUSTRIAL USE.

===== SECTION VIII - CONTROL MEASURES =====

RESPIRATORY PROTECTION

IF TLV OF THE PRODUCT OR ANY COMPONENT IS EXCEEDED, A NIOSH/MSHA JOINTLY APPROVED AIR SUPPLY RESPIRATOR IS ADVISED IN THE LACK OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS UNDER SPECIFIED CONDITIONS. (SEE YOUR SAFETY EQUIPMENT SUPPLIER.) ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED.

VENTILATION

PROVIDE SUFFICIENT MECHANICAL (GENERAL AND / OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES

WEAR SOLVENT RESISTANT GLOVES (SEE YOUR SAFETY EQUIPMENT SUPPLIER OR SAFETY ENGINEER).

EYE PROTECTION

WEAR CHEMICAL SPLASH GOGGLES SUGGESTED, OTHER SAFETY GLASSES PERMITTED.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR SOLVENT IMPERVIOUS CLOTHING AND BOOTS.

WORK/HYGIENIC PRACTICES

WASH WITH SOAP AND WATER AFTER USE, BEFORE EATING OR SMOKING.

===== SECTION IX - DISCLAIMER =====

DISCLAIMER

THIS INFORMATION IS FURNISHED WITHOUT WARRANTY, EXPRESSED OR IMPLIED, EXCEPT THAT IT IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. THE DATA ON THIS SHEET RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED HEREIN. STERLING LACQUER MANUFACTURING COMPANY ASSUMES NO LEGAL RESPONSIBILITY FOR USE OR RELIANCE UPON THIS DATA.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: PAIRING PT. A
PRODUCT CODE: U-4870

HMIS CODES: H 2 A 2
R 4 C
F 0 I

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: STERLING LACQUER MFG. CO. INC.
ADDRESS: 3150 BRANNON AVE., ST. LOUIS, MO 63139
EMERGENCY PHONE: 800-424-9300
DATE REVISED : 01-21-99
INFORMATION PHONE: 314-776-4450
NAME OF PREPARER : L. MITCHELL

SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OCCUPATIONAL EXPOSURE LIMITS			VAPOR PRESSURE		WEIGHT	
		OSHA PEL	ACGIH TLV	OTHER	At 20°C	TEMP PERCENT		
REACTION PRODUCTS OF EPICHLOROHYDRIN & BISPHENOL A	25045-99-8	UNKNOWN	UNKNOWN	UNKNOWN	N/A		54	
ALIPHATIC GLYCIDYL ETHER	68881-84-5	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	0.1	68F	10	

* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372. US Toxic Substances Control Act (TSCA): The component chemicals in this product are listed on the TSCA inventory.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE: N/A
VAPOR DENSITY: HEAVIER THAN AIR
COATING V.O.C.: N/A
MATERIAL V.O.C.: N/A
SOLUBILITY IN WATER: NEGLIGIBLE
APPEARANCE AND ODOR: WHITE LIQUID, SOLVENT ODOR
SPECIFIC GRAVITY (H2O=1): 0.8
EVAPORATION RATE: SLOWER THAN ETHER.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 200 Deg F
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: N/A UPPER: N/A
METHOD USED: SETA FLASH

EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL

SPECIAL FIREFIGHTING PROCEDURES

WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND WHEN FIGHTING FIRES. USE WATER FOG NOZZLES TO COOL CLOSED CONTAINERS.

UNUSUAL FIRE AND EXPLOSION HAZARDS

DO NOT USE WATER. FLAMMABLE LIQUID, CAN RELEASE VAPORS THAT FORM FLAMMABLE MIXTURES AT TEMPERATURE AT OR ABOVE THE BOILING POINT. ELIMINATE AND ISOLATE FROM ALL SOURCES OF IGNITION. COMBUSTION WILL PRODUCE CO2, CO, AND TOXIC GASES.

SECTION V - REACTIVITY DATA

STABILITY: STABLE
CONDITIONS TO AVOID
AVOID EXCESSIVE HEAT.

INCOMPATIBILITY (MATERIALS TO AVOID)
AVOID STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS
BURNING CAN PRODUCE CARBON DIOXIDE AND / OR CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION VI - HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
IRRITATION TO THE RESPIRATORY TRACT (NOSE, THROAT, LUNGS) AND / OR BARCOBIS.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE
IRRITATING, MAY INJURE EYE TISSUE IF NOT PROPERLY REMOVED.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
SLIGHT IRRITATION DUE TO SOLVENTS.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
IMMEDIATELY TOXIC. MAY CAUSE NAUSEA, VOMITING, AND DIARRHEA. DO NOT TAKE INTERNALLY. CONSULT PHYSICIAN.

HEALTH HAZARDS (ACUTE AND CHRONIC)

CARCINOGENICITY: NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
RESPIRATORY PROBLEMS CAN BE INCREASED BY INHALATION OF VAPORS.

EMERGENCY AND FIRST AID PROCEDURES

EYES - FLUSH WITH WATER FOR 15 MINUTES. GET IMMEDIATE MEDICAL ATTENTION.
SKIN - REMOVE CONTAMINATED CLOTHING. WASH AFFECTED AREA WITH SOAP AND WATER.
INHALATION - MOVE TO FRESH AIR. OBTAIN MEDICAL ATTENTION IF NEEDED.
INGESTION - DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION.
FOR INDUSTRIAL USE. KEEP AWAY FROM CHILDREN.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
USE RESPIRATOR, ABSORB WITH VERMICULITE OR OTHER ABSORBENT MATERIAL. ELIMINATE ALL IGNITION SOURCES. STOP SPILL AT SOURCE AND PREVENT SPREADING.

WASTE DISPOSAL METHOD

DESTROY BY LIQUID INCINERATION. CONTAMINATED ABSORBENT MAY BE DEPOSITED IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

STORE IN DRY AREA. KEEP CONTAINERS TIGHTLY CLOSED. PROTECT FROM PHYSICAL DAMAGE. EMPTY CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND / OR SOLID). ALL HAZARD PRECAUTIONS GIVEN IN THE DATA SHEET MUST BE OBSERVED. STORE BELOW 120 DEG. F.

OTHER PRECAUTIONS

STORE LARGE QUANTITIES IN BUILDINGS DESIGNED TO COMPLY WITH OSHA 1910.106. KEEP CLOSURE TIGHT AND CONTAINER DRY TO PREVENT LEAKAGE. DO NOT STORE NEAR HEAT, SPARKS OR FLAME. DO NOT GET IN EYES. KEEP AWAY FROM CHILDREN. AVOID SKIN CONTACT. DO NOT TAKE EXERCISE. FOR INDUSTRIAL USE.

SECTION VIII - REGULATORY INFORMATION

IF ALL OF THE REGULATIONS ON ANY COMPONENT IS REQUIRED, A CLASS/OSHA AGENCY APPROVED AIR SUPPLY RESPIRATOR IS REQUIRED IN LACK OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER CLASS/OSHA RESPIRATORS UNDER SPECIFIED CONDITIONS. (SEE YOUR SAFETY EQUIPMENT SUPPLIER.) ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED.

VENTILATION

PROVIDE SUFFICIENT MECHANICAL (GENERAL AND / OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(A).

PROTECTIVE GLOVES

WEAR SOLVENT RESISTANT GLOVES (SEE YOUR SAFETY EQUIPMENT SUPPLIER OR SAFETY ENGINEER).

EYE PROTECTION

CHEMICAL SPLASH GOGGLES SUGGESTED, OTHER SAFETY GLASSES PERMITTED.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR SOLVENT IMPERVIOUS CLOTHING AND BOOTS.

WORK/HYGIENIC PRACTICES

WASH WITH SOAP AND WATER AFTER USE, BEFORE EATING OR SMOKING.

SECTION IX - DISCLAIMER

DISCLAIMER

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NORAC®

NORAC, INC.
Azusa, CA

MATERIAL SAFETY DATA SHEET

SUPEROX® MEKP

SECTION 1 - IDENTIFICATION OF THE PRODUCT AND THE COMPANY

PRODUCT NAME	SUPEROX® TELEPHONE 626-334-2908		
MANUFACTURER	Norac, Inc.	CHEMTREC (24hr) (USA)	800-424-9300
ADDRESS	405 S. Motor Ave., Azusa, CA 91702	(Maritime/International)	703-527-3887
CHEMICAL NAME	Methyl Ethyl Ketone Peroxide (MEKP)	CAS NO.	See Section II
CHEMICAL FAMILY	Organic Peroxide - Ketone Peroxide	CHEMICAL FORMULA	Mixture of many

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENTS	CAS NO.	%
Methyl Ethyl Ketone Peroxide	1338-23-4	34
Dimethyl Phthalate	131-11-3	43
2,2,4-trimethyl-1,3-pentanediol diisobutyrate	6846-50-0	20
Methyl Ethyl Ketone	78-93-3	02
Hydrogen Peroxide	7722-84-1	01
Water	7732-18-5	01

SECTION 3 - HAZARD IDENTIFICATION OF THE PREPARATION

PHYSICAL HAZARDS	Organic Peroxide. Decomposition
HEALTH HAZARDS	Severe Irritant
EXPOSURE LIMITS	The ACGIH Ceiling STEL is 1.5 mg/m ³ (0.2 ppm) for Methyl Ethyl Ketone Peroxide.
ROUTES OF EXPOSURE	
Skin Contact	Severe skin irritant, causes redness, blistering, and edema.
Eye Contact	Eye contact causes severe corrosion and may cause blindness.
Ingestion	Human systemic effects by ingestion: changes in structure or function of esophagus, nausea, or vomiting, and other gastrointestinal effects.
Inhalation	Moderately toxic by inhalation.
EFFECTS OF OVER-EXPOSURE	Prolonged inhalation of vapors may cause mucous membrane irritation and vertigo. There are no known medical conditions, which are recognized as being aggravated by exposure.

SECTION 4 - FIRST-AID MEASURES

Skin	Immediately remove any contaminated clothing. Wash contaminated area thoroughly with soap and copious amounts of water for at least 15 minutes. If irritation or adverse symptoms develop seek medical attention.
Eyes	Remove any contact lenses at once. Flush eyes with water for at least 15 minutes. Ensure adequate flushing by separating the eyelids with fingers. If irritation or adverse symptoms develop seek medical attention.
Ingestion	Do Not induce vomiting. Drink plenty of water. Immediately call a physician. For aid to physician, suggest local Poison Control Center.
Inhalation	Remove to fresh air, if coughing, breathing becomes labored, irritation develops or other symptoms develop, seek medical attention at once, even if symptoms develop several hours after the exposure.

SECTION 5 - FIRE-FIGHTING MEASURES

FLASH POINT	>200°F (93°C) C.O.C
FLAMMABLE LIMITS	Unknown
AUTOIGNITION POINT	Unknown
EXTINGUISHING MEDIA	Water from a safe distance – preferably with a fog nozzle. In case of very small fires, other means such as carbon dioxide, foam or dry chemical extinguishers may be effective. Dry chemical combined with MEKP formulations may re-ignite. Light water additives may be particularly effective at extinguishing MEKP fires.

SUPEROX[®]**SPECIAL FIRE FIGHTING PROCEDURES**

Firemen should be equipped with protective clothing and SCBA's. In case of fire near storage area, cool the containers with water spray. If dry chemical is used to extinguish an MEKP fire, the extinguished area must be thoroughly wetted down with water to prevent re-ignition.

UNUSUAL FIRE AND EXPLOSION HAZARDS

The heat of decomposition of the peroxides adds to the heat of the fire. Dry chemical fire extinguishing agent may catalyze the decomposition.

SECTION 6 - ACCIDENTAL RELEASE MEASURES**STEPS TO BE TAKEN IN EVENT OF SPILL OR RELEASE**

Dike spill to prevent runoff from entering drains, sewers, streams, etc. Wet spilled material with water and absorb with an inert absorbent material such as perlite, vermiculite, or sand. Sweep up using non-sparking tools and place in a clean polyethylene drum or a polyethylene pail. **DO NOT place into a steel container, lined or unlined, as a decomposition may occur.** Treat any contaminated cardboard packaging as hazardous waste. **Wet container contents with additional water prior to sealing.**

SECTION 7 - HANDLING AND STORAGE**HANDLING**

Rotate stock using the oldest material first. Avoid contact with skin, eyes and clothing. Use PPE as specified in Section 8. Keep containers closed to prevent contamination. Keep away from sources of heat, sparks or flame. Do not add to hot solvents or monomers as a violent decomposition and/or reaction may result. When using spray equipment, never spray raw MEKP onto curing or into raw resin or flues. Keep MEKP in its original container. **DO NOT USE NEAR FOOD OR DRINK.** Wash thoroughly after handling.

STORAGE

The stability of MEKP formulations is directly related to the shipping and storage temperature history. Cool storage at 80°F or below is recommended for longer shelf life and stability. Prolonged storage at elevated temperatures of 100°F and higher will cause product degradation, gassing and potential container rupture which can result in a fire and/or explosion. Store out of direct sunlight in a well ventilated area away from combustible and incompatible materials. **DO NOT STORE WITH FOOD OR DRINK.** Refer to NFPA 432 Code for the Storage of Organic Peroxide Formulations from the National Fire Protection Association for additional storage information.

OTHER PRECAUTIONS

Unmixed, uncontaminated material, remaining at the end of the day, shall be returned to a proper organic peroxide storage area. Under no circumstances should material be returned to the original container.

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION**VENTILATION**

Mechanical, general.

RESPIRATORY PROTECTION

If airborne concentrations are expected to exceed acceptable levels wear a NIOSH/MSHA approved air-purifying respirator with an organic vapor cartridge or canister. When using respirators refer to OSHA's 29CFR 1910.134.

EYE PROTECTION

Safety goggles recommended. Permanent eyewash is highly recommended.

HAND PROTECTION

Protective gloves recommended, solvent resistant, such as butyl rubber, nitrile or neoprene.

OTHER

A safety shower and eyewash is recommended when the risk of a significant exposure exists.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**APPEARANCE AND ODOR:**

Water white liquid with a slight odor.

BOILING POINT:

Unknown

SPECIFIC GRAVITY: 1.1

VAPOR PRESSURE:

Unknown

FLASH POINT: >200°F (93°C) (C.O.C)

VAPOR DENSITY:

> 1

FLAMMABLE LIMITS: Unknown

EVAPORATION RATE:

Unknown

SADT: >60°C (140°F)

% VOLATILE BY VOLUME:

Unknown

pH: Not applicable

SOLUBILITY IN WATER:

Slightly soluble in water.

SUPEROX[®]**SECTION 10 - STABILITY AND REACTIVITY**

STABILITY	Stable when kept in original, closed container, out of direct sunlight at temperatures below 80°F (27°C).
CONDITIONS TO AVOID	Contamination. Direct sunlight. Open flames. Prolonged storage above 100°F (38°C). Storage above SADT. Storage near flammable or combustible materials.
MATERIALS TO AVOID	Dimethylaniline, cobalt naphenate and other promoters, promoted resins, accelerators, oxidizing and reducing agents, strong acids, bases, metals, metal alloys and salts, sulfur compounds, amines or any hot material.
HAZARDOUS DECOMPOSITION PRODUCTS	Decomposition products are flammable. Acrid smoke and irritating fumes.
HAZARDOUS POLYMERIZATION	Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION**Methyl Ethyl Ketone Peroxide****Hazard Data:**

Inhalation: Rat--LC₅₀: 200 ppm/4 hr, lung, thorax, respiration, or dyspnea; Mouse--LC₅₀: 170 ppm/4 hr, lung, thorax, respiration, or dyspnea.

Intraperitoneal: Rat--LD₅₀: 65 mg/kg, behavioral, muscle weakness behavioral, ataxia.

Oral: Rat--LD₅₀: 484 mg/kg; Mouse--LD₅₀: 470 mg/kg; Human--TD_{Lo}: 480 mg/kg, changes in structure or function of esophagus gastrointestinal, nausea or vomiting gastrointestinal.

Skin: Rabbit-- LD₅₀: 500 mg.

Dimethyl Phthalate**Hazard Data:**

Inhalation: Cat--LC_{Lo}: 9300 mg/m³/6.5 hr.

Intraperitoneal: Mouse--LD₅₀: 1380 mg/kg.

Oral: Rat & Mouse--LD₅₀: 6800 mg/kg, somnolence behavioral, withdrawal nutritional and gross metabolic, weight loss or decreased weight gain; Dog--LD: >1400 mg/kg; Rabbit--LD₅₀: 4400 uL/kg.

Subcutaneous: Mouse--LD_{Lo}: 6500 mg/kg, dyspnea lung, thorax, respiration, or cyanosis.

2,2,4-Trimethyl-1,3-pentanediol diisobutyrate**Hazard Data:**

Oral: Rat--LD₅₀: >3200 mg/kg

Hydrogen Peroxide**Hazard Data:**

Inhalation: Mouse--LC_{Lo}: 227 ppm; Rat--TC_{Lo}: 67 ppm/6hr/6W-1, dermatitis, irritative of the skin.

Intraperitoneal: Mouse--LD₅₀: 880 mg/kg.

Intravenous: Rabbit--LD₅₀: 15 gm/kg, behavioral, convulsions or effect on seizure threshold.

Oral: Rat--LD₅₀: 376 mg/kg, gastrointestinal, peritonitis blood, pigmented or nucleated red blood cells; Mouse--LD₅₀: 2 mg/kg.

Subcutaneous: Rat--LD₅₀: 620 mg/kg; Mouse--LD₅₀: 1072 mg/kg.

Skin: Rat--LD₅₀: 4060 mg/kg, lung, thorax, respiration, or pulmonary emboli; Rabbit--LD_{Lo}: 500 mg/kg, behavioral, convulsions or effect on seizure threshold.

Methyl Ethyl Ketone**Hazard Data:**

Eye: Human: 350 ppm.

Inhalation: Rat--LC₅₀: 23500 mg/m³/8hr.

Intraperitoneal: Rat--LD₅₀: 607 mg/kg; Mouse--LD₅₀: 616 mg/kg.

Oral: Rat--LD₅₀: 2737 mg/kg; Mouse--LD₅₀: 4050 mg/kg.

Skin: Rabbit--LD₅₀: 6480 mg/kg.

SECTION 12 - ECOLOGICAL INFORMATION

No data is available on the preparation itself. The product should be prevented from entering drains, sewers, streams, etc.

Ecotoxicity: Methyl ethyl ketone peroxide: EC₅₀ (Guppy), 44.2 mg/L/96 hr; EC₅₀ (alga), 42,700 ug/L/96 hr.

Environmental Fate: Methyl ethyl ketone peroxide (MEKP) was evaluated for biodegradability in a closed bottle system and was reported to be readily biodegradable. An EC₅₀ of 16mg MEKP/L activated sludge was reported in an activated sludge respiration inhibition test.

SUPEROX[®]**SECTION 13 - DISPOSAL CONSIDERATIONS**

Prevent material from entering drains, sewers, streams, etc.

Immediately dispose of waste material at a RCRA approved hazardous waste management facility in accordance with federal, state and local regulations.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: ORGANIC PEROXIDE TYPE D, LIQUID,
(METHYL ETHYL KETONE PEROXIDE, ≤45%)

DOT Hazard Class: 5.2

UN/NA ID No.: UN3105

DOT Packing Group: PG II

DOT RQ: RQ

Labels: 5.2 (Organic Peroxide)

2000 ERG GUIDE NO.: 145

SECTION 15 - REGULATORY INFORMATION

The following chemicals are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Percent</u>
Dimethyl Phthalate	131-11-3	43
Methyl Ethyl Ketone	78-93-3	02

Reportable Quantity

2-Butanone Peroxide (MEKP): 10 lbs (4.54 kg)

Australian Inventory of Chemical Substances (AICS)

The ingredients in this product are listed in the Australian AICS Inventory.

Canadian Domestic Substances List (DSL)

The ingredients in this product are listed in the Canadian DSL Inventory.

European Inventory of Existing Commercial Chemical Substances (EINECS)

The ingredients in this product are listed in the European EINECS Inventory.

TSCA Status

The ingredients in this product are listed in the US Toxic Substances Control Act (TSCA) Inventory.

Status of Carcinogenicity

Not recognized as a carcinogen by the IARC, NTP or OSHA.

SECTION 16 - OTHER INFORMATION**VOC Information**

Using ASTM Test Method D-2369-87, but at 40°C (since MEKP decomposes rapidly above 100°C and is not a VOC), Superox[®] 46-702 contains 3.7% VOC, by weight, or 41 grams per liter. For more information call Norac.

NFPA 432 Organic Peroxide Classification

Class III

NFPA 704 Rating

<u>Health</u>	<u>Flammability</u>	<u>Reactivity</u>
3	2	2

HMIS Rating

<u>Health</u>	<u>Flammability</u>	<u>Reactivity</u>
3	2	2

MSDS Reference: MSDS 0408.8

DISCLAIMER OF LIABILITY

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use, or disposal of the product.

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.



MATERIAL SAFETY DATA SHEET

System Three Resins, Inc.

3500 W. Valley Hwy N; Suite 105

Auburn, Washington 98001

SECTION I - PRODUCT IDENTIFICATION

Product Name: **Quikfair Epoxy Putty PART A**

MSDS Number: 1400A

Date of Prep: July 12, 2007

24-Hr. Emergency Phone:

CHEMTREC: 1-800-424-9300

Information: 253-333-8118

Product Type: Epoxy Resin Mixture

Prepared By: J. Bartlett

WHMIS Hazard Ratings: D2B

Health 2

Fire 1

Reactivity 0

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS	AMOUNT	CAS NUMBER	OSHA PEL	ACGIH TLV
Diglycidyl Ether of Bisphenol A (DGEBCA)	60-70%	25068-38-6	none established	none established
Alkylglycidyl Ether	20-30%	68081-84-5	none established	none established

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Range: not applicable

Vapor Density: Heavier than Air

Evaporation Rate: Slower than Ether

Appearance and Odor: Colored paste with little or no odor.

Specific Gravity: 0.8-0.9

Material V.O.C.: None

Water Solubility: Negligible

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: > 300°F

Flammable Limits in Air By Volume - Lower: N/A Upper: N/A

Extinguishing Media: Foam, Carbon Dioxide, Dry Chemical, Water Fog

Method: Pensky-Martens Closed Cup

Special Firefighting Procedures: When fighting chemical fires wear full protective equipment with self-contained breathing apparatus. Water spray may be used to cool fire-exposed containers. Toxic fumes may be evolved when this substance is burned.

SECTION V - REACTIVITY DATA

Stability: Stable.

Incompatibility: Strong oxidizing agents, Lewis and mineral acids.

Hazardous Polymerization: Will not occur.

Hazardous Decomposition Products: Oxides of carbon, aldehydes, acids

Conditions to Avoid: Epoxy resins and epoxy resin hardeners react with each other producing heat. They should not be mixed with each other under uncontrolled conditions or in large mass as the ensuing exotherm may result in heat and smoke resulting in hazardous decomposition products.

SECTION VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

Acute: Slightly irritating to skin, moderately irritating to eyes. Odor may irritate nose, throat and respiratory tract of some persons.

Chronic: May cause skin sensitization from prolonged and repeated contact.

Quikfair Epoxy Putty PART A (Cont.)

Carcinogenicity: Early studies with DGEBA have been negative. The IARC concluded in 1988 that DGEBA was not classifiable as a carcinogen.

EMERGENCY AND FIRST AID PROCEDURES:

Eyes: Flush with water for 15 minutes holding eyelids open. Seek medical attention.

Skin: Remove contaminated clothing and shoes and wipe excess off skin. Flush skin with water. Follow by washing in soap and water. If irritation occurs, seek medical attention. Do not reuse clothing until cleaned. Contaminated leather articles (shoes) cannot be decontaminated and should be destroyed.

Inhalation: Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

Ingestion: Do not give liquids if victim is unconscious or very drowsy. Otherwise, give no more than 2 glasses of water and induce vomiting by giving 2 tablespoons syrup of ipecac (1 tablespoon and 1 glass of water for child). If ipecac is unavailable, give 2 glasses of water and induce vomiting by touching finger to back of throat. Keep head below hips while vomiting. Get medical attention.

Medical Conditions Generally Aggravated by Exposure: Other than skin sensitization which appears to be permanent, epoxy resin does not appear to cause long term health effects. Nor, does it appear to aggravate other medical conditions.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

If Material is Spilled: Avoid contact with material. Persons not wearing appropriate protective equipment should leave the area of the spill until cleanup is complete. Stop spill at source, dike area to prevent spreading, pump liquid to salvage tank or drum. Remaining liquid may be taken up on clay, diatomaceous earth, sawdust, or other absorbent, and shoveled into disposal containers.

Waste Disposal Method: Waste is not hazardous by RCRA criteria (40 CFR 261). Place in an appropriate disposal facility in compliance with local regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

Respiratory Protection: Normally none is required when adequate ventilation is provided. In the absence of proper environmental control NIOSH approved respiratory is required. For emergencies, a self-contained breathing apparatus or full-faced respirator is recommended.

Ventilation: Provide adequate ventilation in work areas. Confine material in sealed containers when not in use.

Hand Protection: Always wear impervious gloves, neoprene, vinyl or rubber.

Eye Protection: Splash proof goggles or safety spectacles with side shields are recommended. Always wear eye protection when sanding cured epoxy resins to avoid dust in eyes.

Other Protective Equipment: Wear clean, body-covering clothing to avoid skin contact.

SECTION IX - TRANSPORTATION REQUIREMENTS

Transportation of Dangerous Goods Classification: Not regulated

Consumer warnings: Caution: Irritant, skin sensitizer.

Canada NSNR: All components in this product are on the Domestic Substances List.

Department of Transportation Classification: Not Hazardous

U.S. D.O.T. Proper Shipping Name: Not Regulated

Other Requirements:

This product contains no toxic chemicals subject to the report requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (and of 40 CFR 372).

The information contained herein is based on the data available to us and is believed to be correct. However, System Three Resins, Inc. makes no warranty, expressed or implied, regarding the accuracy of these data or the results to be obtained from the use thereof. System Three assumes no responsibility for injury from the use of the product described herein.



MATERIAL SAFETY DATA SHEET

System Three Resins, Inc.

3500 W. Valley Hwy N; Suite 105

Auburn, Washington 98001

SECTION I - PRODUCT IDENTIFICATION

Product Name: **Quikfair Putty Hardener PART B**

MSDS Number: 1400B

Date of Prep: July 12, 2007

24-Hr. Emergency Phone:

CHEMTREC: 1-800-424-9300

Information: 253-333-8118

Product Type: Amine/Pigment Mixture

Prepared By: J. Bartlett

WHMIS Hazard Ratings: D2B,E

Health 3

Fire 1

Reactivity 0

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS	AMOUNT	CAS NUMBER	OSHA PEL	ACGIH TLV
Aliphatic Amines	50-60%	(Mixture is a trade secret)	none established	
Alkyl Phenols	35-45%	(Mixture is a trade secret)	none established	

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Range: N/A

Vapor Density: Heavier than Air

Evaporation Rate: Slower than Ether

Appearance and Odor: Off-white paste with ammonia-like odor.

Specific Gravity: 0.7-0.8

Material V.O.C.: None

Water Solubility: Negligible

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: > 250F° Method: Pinsky-Martins Closed Cup

Flammable Limits in Air By Volume: Lower: N/A Upper: N/A

Extinguishing Media: Foam, Carbon Dioxide, Dry Chemical, Water Fog

Special Firefighting Procedures:

When fighting chemical fires wear full protective equipment with self-contained breathing apparatus. Water spray may be used to cool fire-exposed containers. Toxic fumes will be evolved when this substance is burned.

SECTION V - REACTIVITY DATA

Stability: Stable

Conditions to Avoid: Epoxy resins and epoxy resin hardeners react with each other producing heat. They should not be mixed with each other under uncontrolled conditions or in large mass as the ensuing exotherm may result in heat and smoke.

Incompatibility: Strong oxidizing agents, mineral acids.

Hazardous Decomposition Products: Oxides of carbon, nitrogen

Hazardous Polymerization: Will not occur.

SECTION VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

Acute: May cause burns to skin and eyes. High vapor concentration can cause severe irritation of eyes and respiratory tract. Liquid causes severe damage to mucous membranes if swallowed.

Quikfair Putty Hardener PART B (Cont.)

Chronic: Prolonged and repeated skin contact may cause skin sensitization, asthma or other allergic responses.

Carcinogenicity: Results of in vitro mutagenicity tests on ethylene amines have been negative. It is not expected that any of the ingredients are carcinogenic.

EMERGENCY AND FIRST AID PROCEDURES:

Eyes: Flush thoroughly with water for at least 15 minutes. Get immediate medical attention.

Skin: Remove contaminated clothing and flood area with water. Wash affected skin with soap and water. Wash clothing before reuse. Discard shoes. Get medical attention if redness, soreness, or blistering occur or persist.

Inhalation: Remove to fresh air. Administer oxygen if necessary. Get medical attention if breathing is difficult or cough develops.

Ingestion: DO NOT INDUCE VOMITING. Vomiting will cause further damage to throat or respiratory tract. Dilute by giving water or milk to drink if victim is conscious. GET IMMEDIATE MEDICAL ATTENTION.

Medical Conditions Generally Aggravated by Exposure: This material may be a strong skin sensitizer in certain susceptible persons. Once sensitized, most persons are unable to work around amine cured epoxy resins without an allergic reaction. Sensitized persons are not known to have other health problems as a result of sensitization.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

If Material is Spilled: Avoid contact with material. Persons not wearing appropriate protective equipment should leave the area of the spill until cleanup is complete. Stop spill at source, dike area to prevent spreading, pump liquid to salvage tank or drum. Remaining liquid may be taken up on clay, diatomaceous earth, sawdust, or other absorbent, and shoveled into disposal containers.

Waste Disposal Method: Waste is not hazardous by RCRA criteria (40 CFR 261). Place in an appropriate disposal facility in compliance with local regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

Respiratory Protection: Normally none is required when adequate ventilation is provided. In the absence of proper environmental control NIOSH approved respiratory is required. For emergencies, a self-contained breathing apparatus or full-faced respirator is recommended.

Ventilation: Provide adequate ventilation in work areas. Confine material in sealed containers when not in use.

Hand Protection: Always wear impervious gloves, neoprene, vinyl or rubber.

Eye Protection: Splash proof goggles or safety spectacles with side shields are recommended. Always wear eye protection when sanding cured epoxy resins to avoid dust in eyes.

Other Protective Equipment: Wear clean, body-covering clothing to avoid skin contact.

SECTION IX - OTHER REQUIREMENTS

T.D.G. Classification: AMINES, LIQUID, CORROSIVE, N.O.S., (ETHYLENE AMINE), 8, UN2735, PG III

Consumer Warnings: DANGER! Corrosive.

Canada NSNR: All substances in this product are on the Domestic Substances List.

U.S. Department of Transportation Classification: Not regulated

SARA Title III:

This product contains no toxic chemicals subject to the report requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

The information contained herein is based on the data available to us and is believed to be correct. However, System Three Resins, Inc. makes no warranty, expressed or implied, regarding the accuracy of these data or the results to be obtained from the use thereof. System Three assumes no responsibility for injury from the use of the product described herein.



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Imperial Compound and Finishing Material, PN 06044, 06045, 06046
MANUFACTURER: 3M
DIVISION: Marine & Specialty Vehicle
ADDRESS: 3M Center
 St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 06/01/2007
Supersedes Date: 04/06/2007

Document Group: 20-7570-3

Product Use:
Specific Use: Rubbing Compound
Intended Use: Marine

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
STODDARD SOLVENT	8052-41-3	15 - 40
WATER	7732-18-5	15 - 40
ALUMINUM OXIDE	1344-28-1	10 - 30
POLYETHYLENE GLYCOL SORBITAN MONOOLEATE	9005-65-6	3 - 7
WHITE MINERAL OIL (PETROLEUM)	8042-47-5	1 - 5
1,2,4-TRIMETHYLBENZENE	95-63-6	0.5 - 1.5
ETHYLBENZENE	100-41-4	0.1 - 0.2
NAPHTHALENE	91-20-3	<0.1
TOLUENE	108-88-3	<0.05

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste

Odor, Color, Grade: Cream color; kerosene odor

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Combustible liquid and vapor. Closed containers exposed to heat from

fire may build pressure and explode. Dust clouds of this material in combination with an ignition source may be explosive. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Contains a chemical or chemicals which can cause cancer. May cause target organ effects.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Mild Eye Irritation: Signs/symptoms may include redness, pain, and tearing.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

During grinding, scraping, sanding:

Pneumoconiosis: Signs/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Class Description</u>	<u>Regulation</u>
ETHYLBENZENE	100-41-4	Group 2B	International Agency for Research on Cancer
NAPHTHALENE	91-20-3	Group 2B	International Agency for Research on Cancer
NAPHTHALENE	91-20-3	Anticipated human carcinogen	National Toxicology Program Carcinogens

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are

followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	No Data Available
Flash Point	135 °F [Test Method: Tagliabue Closed Cup]
Flammable Limits - LEL	No Data Available
Flammable Limits - UEL	No Data Available

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Combustible liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Dust clouds of this material in combination with an ignition source may be explosive. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Cover spill area with a fire-extinguishing foam. An aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with water. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. No smoking while handling this material. Avoid static discharge. Avoid eye contact with vapors, mists, or spray. Avoid breathing of dust created by cutting, sanding, grinding or machining. For industrial or professional use only. Avoid contact with oxidizing agents. Avoid skin contact. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment. Do not ingest. Keep container closed when not in use.

7.2 STORAGE

Store away from acids. Store away from heat. Store away from oxidizing agents. Keep container tightly closed. Keep container in well-ventilated area.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Provide appropriate local exhaust for cutting, grinding, sanding or machining. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control dust, fume, or airborne particles. If ventilation is not adequate, use respiratory protection equipment. Provide appropriate local exhaust ventilation on open containers.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Safety Glasses with side shields, Indirect Vented Goggles.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Fluoroelastomer (Vitron), Nitrile Rubber.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray. Avoid breathing of dust created by cutting, sanding, grinding or machining.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P100 particulate prefilters.

Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Not applicable.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
ALUMINUM OXIDE	ACGIH	TWA, particulate matter, < 1% crystalline silica	10 mg/m ³	Table A4
ALUMINUM OXIDE	CMRG	TWA	1 fiber/cc	
ALUMINUM OXIDE	OSHA	TWA, respirable	5 mg/m ³	Table Z-1
ALUMINUM OXIDE	OSHA	TWA, Vacated, as dust	10 mg/m ³	
ALUMINUM OXIDE	OSHA	TWA, as total dust	15 mg/m ³	Table Z-1
ETHYLBENZENE	ACGIH	TWA	100 ppm	Table A3
ETHYLBENZENE	ACGIH	STEL	125 ppm	Table A3
ETHYLBENZENE	OSHA	TWA	100 ppm	Table Z-1A
ETHYLBENZENE	OSHA	STEL	125 ppm	Table Z-1A
NAPHTHALENE	ACGIH	TWA	10 ppm	Skin Notation*; Table A4
NAPHTHALENE	ACGIH	STEL	15 ppm	Skin Notation*; Table A4
NAPHTHALENE	OSHA	TWA	10 ppm	Table Z-1A
NAPHTHALENE	OSHA	STEL	15 ppm	Table Z-1A
OIL MIST, MINERAL	ACGIH	TWA, as mist	5 mg/m ³	
OIL MIST, MINERAL	ACGIH	STEL, as mist	10 mg/m ³	
OIL MIST, MINERAL	OSHA	TWA, as mist	5 mg/m ³	Table Z-1
STODDARD SOLVENT	ACGIH	TWA	100 ppm	
STODDARD SOLVENT	OSHA	TWA, Vacated	100 ppm	Table Z-1A
STODDARD SOLVENT	OSHA	TWA	500 ppm	Table Z-1
TOLUENE	ACGIH	TWA	50 ppm	Skin Notation*; Table A4
TOLUENE	CMRG	STEL	75 ppm	Skin Notation*
TOLUENE	OSHA	TWA, Vacated	100 ppm	
TOLUENE	OSHA	STEL, Vacated	150 ppm	
TOLUENE	OSHA	TWA	200 ppm	Table Z-2
TOLUENE	OSHA	CEIL	300 ppm	Table Z-2
WHITE MINERAL OIL (PETROLEUM)	CMRG	TWA	5 mg/m ³	
WHITE MINERAL OIL (PETROLEUM)	CMRG	STEL	10 mg/m ³	

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- CMRG: Chemical Manufacturer Recommended Guideline
- OSHA: Occupational Safety and Health Administration
- AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Paste
Odor, Color, Grade:	Cream color; kerosene odor
General Physical Form:	Liquid
Autoignition temperature	No Data Available
Flash Point	135 °F [Test Method: Tagliabue Closed Cup]
Flammable Limits - LEL	No Data Available
Flammable Limits - UEL	No Data Available
Boiling point	>= 195 °F
Density	1.16 g/ml
Vapor Density	>=1 [Ref Std: AIR=1]

Vapor Pressure	No Data Available
Specific Gravity	1.1 [Ref Std: WATER=1]
pH	7.5 - 8.5
Melting point	No Data Available
Solubility in Water	Appreciable
Evaporation rate	No Data Available
Hazardous Air Pollutants	0.049 lb HAPS/gal
Volatile Organic Compounds	3.0 lb/gal [Test Method: calculated SCAQMD rule 443.1]
Percent volatile	60 - 75 % weight
VOC Less H2O & Exempt Solvents	577.52 g/l [Test Method: calculated SCAQMD rule 443.1]
Viscosity	40000 - 60000 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product

in a permitted hazardous waste facility.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

60-4300-5053-8, 60-9800-3925-3, 60-9800-3960-0

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
1,2,4-TRIMETHYLBENZENE	95-63-6	0.5 - 1.5
ETHYLBENZENE	100-41-4	0.1 - 0.2

This material contains a chemical which requires export notification under TSCA Section 12(b):

<u>Ingredient (Category if applicable)</u>	<u>C.A.S. No</u>	<u>Regulation</u>	<u>Status</u>
NAPHTHALENE	91-20-3	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable

STATE REGULATIONS

Contact 3M for more information.

CALIFORNIA PROPOSITION 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
ETHYLBENZENE	100-41-4	**Carcinogen
NAPHTHALENE	91-20-3	**Carcinogen
TOLUENE	108-88-3	*Developmental Toxin

- * WARNING: contains a chemical or chemicals which can cause birth defects or other reproductive harm.
- ** WARNING: contains a chemical which can cause cancer.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 2 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

- Section 3: Immediate physical hazard(s) was modified.
- Section 3: Potential effects from skin contact information was modified.
- Section 5: Fire fighting procedures information was modified.
- Section 5: Unusual fire and explosion hazard information was modified.
- Section 7: Handling information was modified.
- Section 8: Engineering controls information was modified.
- Section 8: Prevention of swallowing information was modified.
- Section 8: Skin protection - recommended gloves information was modified.
- Section 8: Respiratory protection - recommended respirators information was modified.
- Section 4: First aid for skin contact - decontamination - was modified.
- Section 4: First aid for skin contact - medical assistance - was modified.
- Section 2: Ingredient table was modified.
- Section 15: EPCRA 313 information was modified.
- Section 15: California proposition 65 ingredient information was modified.
- Section 3: Carcinogenicity table was modified.
- Section 8: Exposure guidelines ingredient information was modified.
- Sections 3 and 9: Odor, color, grade information was modified.

Section 9: Property description for optional properties was modified.
Section 9: Specific gravity information was modified.
Section 4: First aid for skin contact - termination of exposure - was added.
Section 4: First aid for skin contact - handling - was added.
Section 15: TSCA section 12[b] text was added.
Section 15: California proposition 65 reproductive harm warning was added.
Section 8: Exposure guideline note was added.
Section 15: TSCA section 12[b] information was added.

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Sea Hawk
PREMIUM YACHT FINISHES



14805 49th Street North • Clearwater, FL 33762
1-800-528-0997 U.S.A. only • (727) 528-8053 International

CUKOTE

EMERGENCY TELEPHONE NUMBERS:

800-528-0997
813-528-8053

REVIEW/UPDATE: BY:

SECTION ONE - PRODUCT DESCRIPTION

NAME: SEA HAWK CUKOTE ANTI-FOULING COATING 3400 SERIES
CHEMICAL DESCRIPTION: Cuprous Oxide Paint

SECTION TWO - HAZARDOUS INGREDIENTS

CHEMICAL	%	CAS NO.	TLV	PEL	SARA 302	SARA 313	CERCLA RQ#	CARCINOGEN Y/N			NOTE
								NTP	IARC	OSHA	
Aromatic Hydrocarbon	18.2%	64742-95-6	100pp	100pp	N	N	N	N	N	N	(1)
Xylene	47.7%	1330-20-7	100pp	100pp	N	Y	Y	N	N	N	(1)
Propylene Oxide	.06%	115-07-1	N/E	N/E	N	Y	N	N	N	N	(1)
Zinc Oxid	2.24%	1314-13-2	N/E	N/E	N	N	Y	N	N	N	(1)
Cuprous Oxid	45.7%	1317-09-1	N/E	N/E	N	N	N	N	N	N	(1)

SECTION THREE - PHYSICAL DATA

APPEARANCE: Liquid, ODOR: Solvent, BOILING POINT: 308°F
VAPOR PRESSURE: (mm of Hg.): 3 @77°F, VAPOR DENSITY: Heavier than air
SPECIFIC GRAVITY (Water = 1): 2.14, VOLATILE BY WEIGHT: 22.5%
SOLUBILITY IN WATER: None, EVAPORATION RATE: Slower than ether

SECTION FOUR - FIRE AND EXPLOSION DATA

FLASH POINT [Closed Cup]: 100°F, FLAMMABLE LIMIT: LEL 0.7 - UEL 6.6
EXTINGUISHER MEDIA: Carbon Dioxide, Water Fog
SPECIAL FIRE FIGHTING PROCEDURES: Fire fighter must wear self contained breathing apparatus or air masks. Containers exposed to fire should be kept cool with water vapor.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Non

SECTION FIVE - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: See section two

EFFECTS OF OVEREXPOSURE:

Irritation: (ACUTE) Harmful if inhaled. May affect the brain, nervous or respiratory system, causing dizziness, headache, nausea or respiratory irritation. Overexposure can cause liver or kidney damage and CNS depression.
Skin Contact: Irritating upon repeated and prolonged contact.
Eye Contact: Eye irritation, redness, tearing

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.



MATERIAL SAFETY DATA SHEET

Page 1 of 4

Sikaflex® 295 UV

HMIS

Health	*2
Flammability	1
Reactivity	0
Personal Protection	C

1. Product And Company Identification

Supplier Sika Corporation 30800 Stephenson Highway Madison Heights, MI 48071 U.S.A. Company Contact: EHS Department Telephone Number: 201-933-8800 FAX Number: 201-933-9379 Web Site: www.sikaindustry.com	Manufacturer Sika Corporation 30800 Stephenson Highway Madison Heights, MI 48071 U.S.A. Company Contact: EHS Department Telephone Number: 201-933-8800 FAX Number: 201-933-9379 Web Site: www.sikaindustry.com
Supplier Emergency Contacts & Phone Number CHEMTREC: 800-424-9300 INTERNATIONAL: 703-527-3887	Manufacturer Emergency Contacts & Phone Number CHEMTREC: 800-424-9300 INTERNATIONAL: 703-527-3887

Issue Date: 04/07/2005

Product Name: Sikaflex® 295 UV
 Chemical Family: Polyurethane
 MSDS Number: 3556

2. Composition/Information On Ingredients

Ingredient Name	CAS Number	Percent Of Total Weight
POLYISOCYANATE PREPOLYMER	Trade Secret	

3. Hazards Identification

Eye Hazards

Causes eye irritation.

Skin Hazards

May cause skin irritation. Prolonged and/or repeated skin contact may cause an allergic reaction/sensitization.

Ingestion Hazards

May be harmful if swallowed.

Inhalation Hazards

May cause nose, throat, and lung irritation. May cause an allergic respiratory reaction / sensitization after prolonged or repeated contact.

4. First Aid Measures

Eye

In case of contact, hold eyelids apart and immediately flush eyes with plenty of tepid water for at least 15 minutes. Get medical attention immediately if irritation develops and persists.

MATERIAL SAFETY DATA SHEET

Page 2 of 4

Sikaflex® 295 UV

4. First Aid Measures - Continued

Skin

In case of contact, immediately flush skin with soap and plenty of tepid water for at least 15 minutes. Get medical attention immediately if irritation (redness, rash, blistering) develops and persists.

Ingestion

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Seek medical attention immediately.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. Seek medical attention immediately.

5. Fire Fighting Measures

Flash Point: 213 °F 101 °C

Autoignition Point: N/AV °F

Lower Explosive Limit: N/AV

Upper Explosive Limit: N/AV

Fire And Explosion Hazards

During a fire, irritating and/or toxic gases and aerosols from the decomposition/combustion products may be present.

Extinguishing Media

In case of fire, use water spray (fog) foam, dry chemical, or CO2.

Fire Fighting Instructions

In the event of a fire, firefighters should wear full protective clothing and NIOSH-approved self-contained breathing apparatus with a full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Avoid release to the environment. Use appropriate Personal Protective Equipment (PPE). Contain spill and collect with absorbent material and transfer into suitable containers. Do not flush to sewer or allow to enter waterways. Ventilate enclosed area.

7. Handling And Storage

Handling And Storage Precautions

Keep out of reach of children. Not for internal consumption.

Handling Precautions

Keep away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, and static electricity). Condition to 65 - 85F before using.

Storage Precautions

Store in tightly closed container and protected from moisture and foreign material. Storage temperature 40F minimum - 95F Maximum. If closed container of material is exposed to heat, pressure can build up. If moisture enters drum, pressure may build up due to reaction. At maximum storage temperature noted, material may polymerize without hazard. Ideal storage temperature is 50 - 81F.

Work/Hygienic Practices

Wash thoroughly with soap and water after handling.

8. Exposure Controls/Personal Protection

Engineering Controls

Use with adequate general and local exhaust ventilation. Refer to the current edition of "Industrial Ventilation: A Manual of Recommended Practice" published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

MATERIAL SAFETY DATA SHEET

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Sikaflex® 295 UV

8. Exposure Controls/Personal Protection - Continued

Eye/Face Protection

Safety glasses with side shields or goggles.

Skin Protection

Chemical-resistant gloves. Lab coat or other work clothing to prevent skin exposure (Long sleeve shirt and long pants). Launder before reuse.

Respiratory Protection

A respirator protection program that meets 29 CFR 1910.134 requirement must be followed whenever workplace conditions warrant a respirator's use. In areas where the Permissible Exposure Limits are exceeded, use a properly fitted NIOSH-approved respirator.

Other/General Protection

Wash thoroughly after handling.

9. Physical And Chemical Properties

Appearance

Black Paste

Odor

Aromatic

Chemical Type: Mixture

Physical State: Solid

Melting Point: N/AV °F

Boiling Point: N/AV °F

Specific Gravity: 1.2 g/cm³

Percent VOCs: 1.1

Packing Density: 10.3 lbs / gallon

Vapor Pressure: N/AV

Vapor Density: N/AV

Solubility: Insoluble

Evaporation Rate: Slower than ether

VOC content: 13.1 grams/liter

10. Stability And Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability)

Open flame

Incompatible Materials

Water, Alcohols, Amines

Hazardous Decomposition Products

CO, CO₂, Oxides of Nitrogen

Conditions To Avoid (Polymerization)

None Known

11. Toxicological Information

No Data Available...

MATERIAL SAFETY DATA SHEET

Page 4 of 4

Sikaflex® 295 UV

12. Ecological Information

No Data Available...

13. Disposal Considerations

Dispose in accordance with applicable federal, state and local government regulations. Waste generators must determine whether a discarded material is classified as a hazardous waste. USEPA guidelines for the classification determination are listed in 40 CFR, Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

14. Transport Information

Proper Shipping Name

Not regulated by the USDOT.

15. Regulatory Information

U.S. Regulatory Information

All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

SARA Hazard Classes

Acute Health Hazard

16. Other Information

HMIS Rating

Health: *2

Fire: 1

Reactivity: 0

PPE: C

Revision/Preparer Information

MSDS Preparer: EHS Department

MSDS Preparer Phone Number: (201) 933 - 8800

This MSDS Supersedes A Previous MSDS Dated: 03/30/2005

Disclaimer

The data in this Material Safety Data Sheet relates only to the specific material herein and does not relate to use in combination with any other material or in any process. The information set forth herein is based on technical data that Sika believes to be reliable as of the date hereof. Since conditions of use are outside our control, we make no warranties, express or implied and assume no liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under or a recommendation to infringe any patents.

Sika Corporation



MATERIAL SAFETY DATA SHEET

Sikaflex® 291

HMLS

HAZARD	#2
TOXICITY	1
REACTIVITY	0
PERSONAL PROTECTION	C

1. Product And Company Identification

Supplier Sika Corporation 30800 Stephenson Highway Madison Heights, MI 48071 U.S.A. Company Contact: EHS Department Telephone Number: 201-933-8800 FAX Number: 201-933-9379 Web Site: www.sikaindustry.com	Manufacturer Sika Corporation 30800 Stephenson Highway Madison Heights, MI 48071 U.S.A. Company Contact: EHS Department Telephone Number: 201-933-8800 FAX Number: 201-933-9379 Web Site: www.sikaindustry.com
Supplier Emergency Contacts & Phone Number CHEMTREC: 800-424-9300 INTERNATIONAL: 703-527-3887	Manufacturer Emergency Contacts & Phone Number CHEMTREC: 800-424-9300 INTERNATIONAL: 703-527-3887

Issue Date: 03/30/2005

Product Name: Sikaflex® 291
 CAS Number: Not Established
 Chemical Family: Polyurethane
 MSDS Number: 3544
 Product Code: 0291523

2. Composition/Information On Ingredients

Ingredient Name	CAS Number	Percent Of Total Weight
POLYISOCYANATE PREPOLYMER	Trade Secret	
XYLENE (MIXED ISOMERS)	1330-20-7	1 - 5

3. Hazards Identification

Eye Hazards

Causes eye irritation.

Skin Hazards

May cause skin irritation. Prolonged and/or repeated skin contact may cause an allergic reaction/sensitization.

Ingestion Hazards

May be harmful if swallowed.

Inhalation Hazards

May cause nose, throat, and lung irritation. May cause an allergic respiratory reaction / sensitization after prolonged or repeated contact. Reports have associated repeated and prolonged exposure to some of the

MATERIAL SAFETY DATA SHEET

Sikaflex® 291

3. Hazards Identification - Continued

Inhalation Hazards - Continued

chemicals in this product with permanent brain, liver, kidney, and Central Nervous System damage. Headaches and dizziness may result.

4. First Aid Measures

Eye

In case of contact, hold eyelids apart and immediately flush eyes with plenty of tepid water for at least 15 minutes. Get medical attention immediately if irritation develops and persists.

Skin

In case of contact, immediately flush skin with soap and plenty of tepid water for at least 15 minutes. Get medical attention immediately if irritation (redness, rash, blistering) develops and persists.

Ingestion

If swallowed, do not induce vomiting unless directed to do so by medical personnel. If victim is fully conscious, give one or two cups of water or milk to drink. Seek medical attention immediately.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration.

5. Fire Fighting Measures

Flash Point: 143 °F 79 °C

Autoignition Point: N/AV °F

Lower Explosive Limit: N/AV

Upper Explosive Limit: N/AV

Fire And Explosion Hazards

During a fire, irritating and/or toxic gases and aerosols from the decomposition/combustion products may be present.

Extinguishing Media

In case of fire, use water spray (fog) foam, dry chemical, or CO2.

Fire Fighting Instructions

Firefighters should wear self-contained breathing apparatus and full protective gear.

6. Accidental Release Measures

Avoid release to the environment. Use appropriate Personal Protective Equipment (PPE). Contain spill and collect with absorbent material and transfer into suitable containers. Do not flush to sewer or allow to enter waterways. Ventilate enclosed area.

7. Handling And Storage

Handling And Storage Precautions

Keep out of reach of children. Not for internal consumption.

Handling Precautions

Condition to 65 - 85F before using. If closed container is exposed to heat, pressure can build up. If moisture enters container, pressure may build up due to reaction.

Storage Precautions

Store at 40 - 95F. Store in cool dry area in tightly closed containers, away from sparks and open flames.

Work/Hygienic Practices

Wash thoroughly with soap and water after handling.

MATERIAL SAFETY DATA SHEET

Sikaflex® 291

8. Exposure Controls/Personal Protection

Engineering Controls

Use of a system of local and/or general exhaust is recommended to keep employee below applicable exposure limits. Refer to the current edition of "Industrial Ventilation: A Manual of Recommended Practice" published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Eye/Face Protection

Safety glasses with side shields or goggles.

Skin Protection

Chemical-resistant gloves. Lab coat or other work clothing to prevent skin exposure (Long sleeve shirt and long pants). Launder before reuse.

Respiratory Protection

A respirator protection program that meets 29 CFR 1910.134 requirement must be followed whenever workplace conditions warrant a respirator's use. In areas where the Permissible Exposure Limits are exceeded, use a properly fitted NIOSH-approved respirator.

Other/General Protection

Wash thoroughly after handling.

Ingredient(s) - Exposure Limits

POLYISOCYANATE PREPOLYMER

ACGIH TLV: NOT ESTABLISHED

OSHA PEL: NOT ESTABLISHED

IARC: NO

NTP: NO

XYLENE (MIXED ISOMERS)

ACGIH TLV-STEL 150 ppm

ACGIH TLV-TWA 100 ppm

OSHA PEL-TWA 100 ppm

9. Physical And Chemical Properties

Appearance

Paste (solid) - Various Colors

Odor

Aromatic Odor

Chemical Type: Mixture

Physical State: Solid

Melting Point: N/AV °F

Boiling Point: N/AV °F

Specific Gravity: 1.19

Percent Volatiles: 9

Packing Density: 10 pounds/gallon

Vapor Pressure: N/AV

Vapor Density: > Air

Solubility: N/AV

Evaporation Rate: Slower than ether

VOC Content: 97 grams / liter

MATERIAL SAFETY DATA SHEET

Sikaflex® 291

10. Stability And Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability)

Open Flame, Heat

Incompatible Materials

Water, Alcohols and Amines

Hazardous Decomposition Products

CO, CO₂, NO_x, Smoke, Fumes

11. Toxicological Information

Conditions Aggravated By Exposure

Eye disease, skin disorders and allergies, chronic respiratory conditions.

12. Ecological Information

No Data Available...

13. Disposal Considerations

Dispose in accordance with applicable federal, state and local government regulations. Waste generators must determine whether a discarded material is classified as a hazardous waste. USEPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

14. Transport Information

Proper Shipping Name

Not regulated by the USDOT.

15. Regulatory Information

U.S. Regulatory Information

All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

SARA Hazard Classes

Acute Health Hazard
Chronic Health Hazard

SARA Title III - Section 313 Supplier Notification

This product contains the following toxic chemicals that are subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372.

XYLENE (MIXED ISOMERS) (1330-20-7) 1 - 5 %

This information must be included on all MSDSs that are copied and distributed for this material.

Ingredient(s) - U.S. Regulatory Information

XYLENE (MIXED ISOMERS)

SARA Title III - Section 313 Form "R"/TRI Reportable Chemical
SARA - Acute Health Hazard
SARA - Chronic Health Hazard
SARA - Fire Hazard

MATERIAL SAFETY DATA SHEET

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15. Regulatory Information - Continued

Ingredient(s) - State Regulations

XYLENE (MIXED ISOMERS)
New Jersey - Workplace Hazard
New Jersey - Environmental Hazard
New Jersey - Special Hazard
Pennsylvania - Workplace Hazard
Pennsylvania - Environmental Hazard
Massachusetts - Hazardous Substance
New York City - Hazardous Substance

16. Other Information

HMIS Rating

Health: *2

Fire: 1

Reactivity: 0

PPE: C

Revision/Preparer Information

MSDS Preparer: EHS Department

MSDS Preparer Phone Number: 201 933 - 8800

This MSDS Supercedes A Previous MSDS Dated: 03/09/2005

Disclaimer

The data in this Material Safety Data Sheet relates only to the specific material herein and does not relate to use in combination with any other material or in any process. The information set forth herein is based on technical data that Sika believes to be reliable as of the date hereof. Since conditions of use are outside our control, we make no warranties, express or implied and assume no liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under or a recommendation to infringe any patents.

Sika Corporation

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MATERIAL SAFETY DATA SHEET

S00740
03 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	DATE OF PREPARATION	HMIS CODES	
S00740	10-FEB-08	Health	2
		Flammability	2
		Reactivity	1

PRODUCT NAME
SPRAYON® Zinc-Rich Cold Galvanizing Compound

MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
Consumer Group - Industrial
Cleveland, OH 44115

TELEPHONE NUMBERS and WEBSITES

Product Information
(800) 251-2486

Regulatory Information
(216) 566-2902

www.paintdocs.com

Medical Emergency
(216) 566-2917

Transportation Emergency
(800) 424-9300

for Chemical Emergency ONLY (spill, leak,
fire, exposure, or accident)

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
13	74-98-6	Propane		
		ACGIH TLV	2500 ppm	760 mm
		OSHA PEL	1000 ppm	
12	106-97-8	Butane		
		ACGIH TLV	800 ppm	760 mm
		OSHA PEL	800 ppm	
8	64742-89-8	V. M. & P. Naphtha		
		ACGIH TLV	300 ppm	12 mm
		OSHA PEL	300 ppm	
		OSHA PEL	400 ppm STEL	
4	108-88-3	Toluene		
		ACGIH TLV	20 ppm	22 mm
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
11	78-93-3	Methyl Ethyl Ketone		
		ACGIH TLV	200 ppm	70 mm
		ACGIH TLV	300 ppm STEL	
		OSHA PEL	200 ppm	
		OSHA PEL	300 ppm STEL	
48	7440-66-6	Zinc		
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	

Continued on page 2

 Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary, cardiovascular and reproductive systems.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

 Section 4 -- FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes.
Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.

INHALATION: If affected, remove from exposure. Restore breathing.
Keep warm and quiet.

INGESTION: Do not induce vomiting.
Get medical attention immediately.

 Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
Propellant < 0 F	0.9	10.0

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Continued on page 3

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits.

Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Continued on page 4

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	9.60 lb/gal	1150 g/l
SPECIFIC GRAVITY	1.16	
BOILING POINT	<0 - 325 F	<-18 - 162 C
MELTING POINT	Not Available	
VOLATILE VOLUME	88 %	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	7.0	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
Volatile Weight	48.52%	Less Water and Federally Exempt Solvents

Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Methyl Ethyl Ketone may increase the nervous system effects of other solvents.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

Continued on page 5

CAS No.	Ingredient Name					
74-98-6	Propane	LC50	RAT	4HR	Not Available	
		LD50	RAT		Not Available	
106-97-8	Butane	LC50	RAT	4HR	Not Available	
		LD50	RAT		Not Available	
64742-89-8	V. M. & P. Naphtha	LC50	RAT	4HR	Not Available	
		LD50	RAT		Not Available	
108-88-3	Toluene	LC50	RAT	4HR	4000	ppm
		LD50	RAT		5000	mg/kg
78-93-3	Methyl Ethyl Ketone	LC50	RAT	4HR	Not Available	
		LD50	RAT		2740	mg/kg
7440-66-6	Zinc	LC50	RAT	4HR	Not Available	
		LD50	RAT		Not Available	

Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)

May be classed as Consumer Commodity, ORM-D
 UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as Consumer Commodity, ORM-D
 UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity
 UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, Ems F-D, S-U

Continued on page 6

Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	4	
	Zinc		46

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

R00691

10 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	DATE OF PREPARATION	HMIS CODES	
R00691	28-FEB-08	Health	2*
		Flammability	2
		Reactivity	0

PRODUCT NAME

RUST TOUGH® Rust Preventive Enamel, Red Oxide Primer

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY

Diversified Brands

Cleveland, OH 44115

TELEPHONE NUMBERS and WEBSITES

Product Information

(800) 247-3266

Regulatory Information

(216) 566-2902

www.paintdocs.com

Medical Emergency

(216) 566-2917

Transportation Emergency

(800) 424-9300

for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
31	64742-88-7	Mineral Spirits		
		ACGIH TLV	100 ppm	2 mm
		OSHA PEL	100 ppm	
17	14808-60-7	Quartz		
		ACGIH TLV	0.025 mg/m3 as Resp. Dust	
		OSHA PEL	0.1 mg/m3 as Resp. Dust	
9	14807-96-6	Talc		
		ACGIH TLV	2 mg/m3 as Resp. Dust	
		OSHA PEL	2 mg/m3 as Resp. Dust	
5	12001-26-2	Mica		
		ACGIH TLV	3 mg/m3 as Resp. Dust	
		OSHA PEL	3 mg/m3 as Resp. Dust	

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

Continued on page 2

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver and urinary systems.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

Section 4 -- FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water. Remove contaminated clothing and laundry before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
100 F PMCC	1.0	6.0

FLAMMABILITY CLASSIFICATION

Combustible, Flash above 99 and below 200 F

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class II

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are COMBUSTIBLE. Keep away from heat and open flame.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Keep container closed when not in use. Transfer only to approved
containers with complete and appropriate labeling. Do not take internally.
Keep out of the reach of children.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.

This coating may contain materials classified as nuisance particulates
(listed "as Dust" in Section 2) which may be present at hazardous levels
only during sanding or abrading of the dried film. If no specific dusts
are listed in Section 2, the applicable limits for nuisance dusts are ACGIH
TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³
(total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to
materials in Section 2 is maintained below applicable exposure limits.
Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by
ventilation, wear a properly fitted organic vapor/particulate respirator
approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator
approved by NIOSH/MSHA for dust which may be generated from this product,
underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection
against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the
contents can be harmful or fatal.

Continued on page 4

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	10.73 lb/gal	1286 g/l
SPECIFIC GRAVITY	1.29	
BOILING POINT	300 - 395 F	148 - 201 C
MELTING POINT	Not Available	
VOLATILE VOLUME	54 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
3.45 lb/gal	414 g/l	Less Water and Federally Exempt Solvents
3.45 lb/gal	414 g/l	Emitted VOC

Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

TOXICOLOGY DATA

CAS No.	Ingredient Name				
64742-88-7	Mineral Spirits	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
14808-60-7	Quartz	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
14807-96-6	Talc	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
12001-26-2	Mica	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

Continued on page 5

 Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

 Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

 Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)

May be Classed as a Combustible Liquid for U.S. Ground.
UN1263, PAINT, 3, PG III, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities
Xylenes (isomers and mixture) 100 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):
UN1263, PAINT, COMBUSTIBLE LIQUID, PG III, (ERG#128)

Canada (TDG)

May be Classed as a Combustible Liquid for Canadian Ground.
UN1263, PAINT, CLASS 3, PG III, (ERG#128)

IMO

UN1263, PAINT, CLASS 3, PG III, (38 C c.c.), EmS F-E, S-E

 Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
---------	-------------------	---------	-----------

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Continued on page 6

Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

V84F83
21 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	DATE OF PREPARATION	HMIS CODES	
V84F83	31-MAR-08	Health	2*
		Flammability	3
		Reactivity	0

PRODUCT NAME

SHER-WOOD® Water White Conversion Varnish (UV Absorber Added), Dull Rubbed Effect

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

TELEPHONE NUMBERS and WEBSITES

Regulatory Information

(216) 566-2902

Medical Emergency

(216) 566-2917

Transportation Emergency

(800) 424-9300

for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
7	64742-89-8	V. M. & P. Naphtha		
		ACGIH TLV	300 ppm	12 mm
		OSHA PEL	300 ppm	
		OSHA PEL	400 ppm STEL	
4	100-41-4	Ethylbenzene		
		ACGIH TLV	100 ppm	7.1 mm
		ACGIH TLV	125 ppm STEL	
		OSHA PEL	100 ppm	
		OSHA PEL	125 ppm STEL	
21	1330-20-7	Xylene		
		ACGIH TLV	100 ppm	5.9 mm
		ACGIH TLV	150 ppm STEL	
		OSHA PEL	100 ppm	
		OSHA PEL	150 ppm STEL	
7	64-17-5	Ethanol		
		ACGIH TLV	1000 ppm	44 mm
		OSHA PEL	1000 ppm	
11	78-83-1	2-Methyl-1-propanol		
		ACGIH TLV	50 ppm	8.7 mm
		OSHA PEL	50 ppm	
0.2	50-00-0	Formaldehyde (max.)		
		ACGIH TLV	0.3 ppm CEILING	27.56 mm
		OSHA PEL	0.75 ppm	
		OSHA PEL	2 ppm STEL	

Continued on page 2

5	123-86-4	n-Butyl Acetate	ACGIH TLV	150	ppm	10 mm
			ACGIH TLV	200	ppm STEL	
			OSHA PEL	150	ppm	
			OSHA PEL	200	ppm STEL	
3	112926-00-8	Amorphous Precipitated Silica	ACGIH TLV	10	mg/m3 as Dust	
			OSHA PEL	6	mg/m3 as Dust	

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary, blood forming and reproductive systems.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

May cause allergic respiratory and/or skin reaction in susceptible persons.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

Section 4 -- FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water. Remove contaminated clothing and launder before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
40 F PMCC	0.9	19.0

FLAMMABILITY CLASSIFICATION

RED LABEL -- Flammable, Flash below 100 F (38. C)

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

Continued on page 3

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class IB

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are **FLAMMABLE**. Keep away from heat, sparks, and open flame.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Before initial use, consult OSHA's 'Standard for Occupational Exposure to Formaldehyde' (29 CFR 1910.1048).

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

Continued on page 4

RESPIRATORY PROTECTION

A properly fitted, full face respirator effective for particulates, organic solvents, and formaldehyde or an air supplied respirator must be worn, unless air monitoring demonstrates vapor/mist concentrations are below permissible limits. Follow respirator manufacturer's directions for respirator use.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

This product must be mixed with other components before use. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS.

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	7.95 lb/gal	952 g/l
SPECIFIC GRAVITY	0.96	
BOILING POINT	172 - 325 F	77 - 162 C
MELTING POINT	Not Available	
VOLATILE VOLUME	64 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
4.45 lb/gal	533 g/l	Less Water and Federally Exempt Solvents
4.45 lb/gal	533 g/l	Emitted VOC

Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

Continued on page 5

Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

Formaldehyde, listed by IARC, NTP and OSHA, has been shown to cause cancer of the nasal cavity in rats exposed to high levels. Available evidence in humans is inconclusive.

TOXICOLOGY DATA

CAS No.	Ingredient Name				
64742-89-8	V. M. & P. Naphtha	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
100-41-4	Ethylbenzene	LC50	RAT	4HR	Not Available
		LD50	RAT		3500 mg/kg
1330-20-7	Xylene	LC50	RAT	4HR	5000 ppm
		LD50	RAT		4300 mg/kg
64-17-5	Ethanol	LC50	RAT	4HR	Not Available
		LD50	RAT		7060 mg/kg
78-83-1	2-Methyl-1-propanol	LC50	RAT	4HR	Not Available
		LD50	RAT		2460 mg/kg
50-00-0	Formaldehyde (max.)	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
123-86-4	n-Butyl Acetate	LC50	RAT	4HR	2000 ppm
		LD50	RAT		13100 mg/kg
112926-00-8	Amorphous Precipitated Silica	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

Continued on page 6

 Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)

1 Gallon and Less may be Classed as CONSUMER COMMODITY, ORM-D

Larger Containers are Regulated as:

UN1263, PAINT, 3, PG II, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities

Ethyl benzene 1000 lb RQ

Xylenes (isomers and mixture) 100 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):

RQ, UN1263, PAINT, 3, PG II, (XYLENES (ISOMERS AND MIXTURE)), (ERG#128)

Canada (TDG)

UN1263, PAINT, CLASS 3, PG II, (ERG#128)

IMO

UN1263, PAINT, CLASS 3, PG II, (4 C c.c.), EmS F-E, S-E

Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
100-41-4	Ethylbenzene	4	
1330-20-7	Xylene	21	
50-00-0	Formaldehyde (max.)	0.1	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Continued on page 7

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Permatex, Inc.
 10 Columbus Blvd.
 Hartford, CT 06106 USA
 Telephone: 1-87-Permatex
 (877) 376-2838
 Emergency: 800-255-3924
 International Emergency: 813-248-0585

Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: 99GA HIGH TACK SPRAY-A-GASKET 4.75 OZ AE
Item No: 80064
Product Type: Aerosol sealant

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	Weight Percent	ACGIH TLV:	OSHA PEL:
BUTANE 106-97-8	>25	1000 ppm TWA	800 ppm TWA; 1900 mg/m ³ TWA
ACETONE 67-64-1	>20	500 ppm TWA; 750 ppm STEL	1000 ppm TWA; 2400 mg/m ³ TWA
PROPANE 74-88-6	<15	1000 ppm TWA	1000 ppm TWA; 1800 mg/m ³ TWA
DICHLOROMETHANE 75-09-2	<30	50 ppm TWA; 174 mg/m ³ TWA	25 ppm TWA; 125 ppm STEL (15 min. TWA)
ETHYL ACETATE 141-78-8	<5	400 ppm TWA	400 ppm TWA; 1400 mg/m ³ TWA
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPH. 64742-89-8	<5	Not Listed	Not Listed

3. HAZARDS IDENTIFICATION

Toxicity: May cause nose, throat and respiratory irritation. May cause eye and skin irritation. Intentional misuse by concentrating and inhaling the vapor may be harmful or fatal. Excessive inhalation causes headache, dizziness, nausea, and incoordination. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage (sometimes referred to as "solvent" or "painter's syndrome"). Symptoms include fatigue, concentration difficulties, anxiety, depression, rapid mood swings, and short-term memory loss. Ethyl acetate may cause anemia. Methylene chloride will have an effect on the cardiovascular system. Inhalation of high concentrations of Methylene chloride over long periods of time has caused cancer in laboratory animals. Long term exposure to high concentrations of vapor may cause lung, liver or kidney damage.

Primary Routes of Entry:

Signs and Symptoms of Exposure:

Eye and skin contact, ingestion, inhalation
 Excessive overexposure may cause giddiness, dizziness, headache, nausea and in extreme cases, unconsciousness and respiratory depression. Inhaling may cause mild irritation to the nose, throat and respiratory tract and may result in central nervous system (CNS) depression. May cause pain, redness or swelling of the eyes and excessive blinking and tear production. Skin: Exposure may cause mild skin irritation. Prolonged or repeated exposure may dry the skin. Symptoms may include redness, burning, drying, cracking and skin burns. Preexisting skin disorders may be aggravated by exposure. Skin absorption is possible, but harmful effects are not expected from this route under normal conditions of handling and use. Swallowing: This material can enter the lungs during swallowing or vomiting and cause lung inflammation and/or damage. Aspiration into the lungs can cause chemical pneumonia which can be fatal.

Ingredient	Weight Percent	NTP	ACGIH Carcinogens	IARC
ACETONE 67-64-1	>20	Not known	A4 - Not Classifiable as a Human Carcinogen	Not known
DICHLOROMETHANE 75-09-2	<30	Group 2: Suspect Carcinogen	A3 - Animal Carcinogen	Group 2B: Monograph 41, Supplement 7, Monograph 71, 1998

Medical Conditions Recognized as Being Aggravated by Exposure:

Cardiovascular problems may be aggravated by overexposure to methylene chloride. Persons with preexisting respiratory, liver, kidney, eye or skin diseases may be adversely affected.

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation: Move to fresh air in case of accidental inhalation of vapors. Oxygen or artificial respiration if needed. Obtain medical attention.

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point (°F/C): Extremely Flammable based on flame projection test

Recommended Extinguishing Media: Water fog, carbon dioxide, foam, dry chemical.

Special Fire-Fighting Procedures: Firefighters should wear self-contained breathing apparatus. Keep containers cool. Use equipment or shielding required to protect against bursting or venting of containers. Water spray may be ineffective on flames but should be used to keep fire-exposed containers cool.

Hazardous Products of Combustion: Carbon dioxide, Carbon monoxide, Chlorine, Hydrogen chloride, Phosgene

Unusual Fire/Explosion Hazards: Contents under pressure. Exposure to temperatures over 120 degrees F. may cause bursting or venting. Use equipment or shielding to protect personnel from bursting containers.

Lower Explosive Limit: 1.8

Upper Explosive Limit: 9.5

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal.

7. HANDLING AND STORAGE

Storage: Store away from heat, sparks or open flame. Do not store at temperatures above 120 degrees F. Exposure to high temperatures may cause container to burst.

Handling: Avoid breathing vapors, if exposed to high vapor concentration, leave area at once. Avoid contact with skin and eyes. Do not puncture or incinerate container. Do not use near heat, sparks or open flame. Intentionally concentrating and inhaling the vapor may be harmful or fatal. Use in a well ventilated area to prevent irritation by vapors. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses

Skin: Rubber or plastic gloves.

Ventilation: General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits (or to the lowest feasible levels when limits have not been established) during the use of this product.

Respiratory Protection: An approved respirator (i.e. NIOSH, etc.) should be worn when exposures are expected to exceed the applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Red liquid

Odor: Solvent

Boiling Point: Not determined

pH: Does not apply

Solubility in Water: Nil

Specific Gravity: 0.83-1.00 (concentrate)

VOC Content(Wt.%): 59.5% by weight

Vapor Pressure: 41-51 psig

Vapor Density (Air=1): >1 (air = 1)

Evaporation Rate: >1 (butyl acetate = 1)

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal conditions

Hazardous Polymerization: WILL NOT OCCUR.

Incompatibilities: Strong oxidizers, strong alkalis, reactive metals

Conditions to Avoid: Keep away from heat, sparks and open flame

Product Name: 99GA HIGH TACK SPRAY-A-GASKET
4.75 OZ AE

Item No: 80064

10. STABILITY AND REACTIVITY

Hazardous Products of Combustion:

Carbon dioxide, Carbon monoxide, Chlorine, Hydrogen chloride, Phosgene

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Dispose of in accordance with local, state and federal regulations. This container may be recycled in aerosol recycling centers. Before offering for recycling, empty the can by using the product according to the label. If recycling is not available, wrap the container and discard in the trash.

US EPA Waste Number:

D001/F002 - Hazardous waste per 40CFR 261.21 and 261.31 (Methylene Chloride)

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

Domestic Ground Transport

DOT Shipping Name:	CONSUMER COMMODITY
Hazard Class:	ORM-D
UN/ID Number:	None
Marine Pollutant:	None

IATA

Proper Shipping Name:	Aerosols, flammable, containing substances in Division 6.1, Packing Group III
Class or Division:	Division 2.1, Subsidiary Risk 6.1
UN/NA Number:	UN 1950

IMDG

Proper Shipping:	Aerosols
Hazard Class:	Class 2, 6.1
UN Number:	UN 1950

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

DICHLOROMETHANE

CALIFORNIA PROP 65:

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA Inventory Status:

Listed on inventory: YES All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 3, FLAMMABILITY 4, REACTIVITY 0

Estimated HMIS Classification: HEALTH 3, FLAMMABILITY 4, PHYSICAL HAZARD 0

NFPA is a registered trademark of the National Fire Protection Assn.

HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared By: Denise Boyd, Health and Safety Manager
Company: Permatax, Inc. 10 Columbus Blvd. Hartford, CT USA 06106

Revision Date: January/09/2007
Revision Number: 5

Permatex, Inc.
 10 Columbus Blvd.
 Hartford, CT 06108 USA
 Telephone: 1-87-Permatex
 (877) 376-2839
 Emergency: 800-255-3924

Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: PERMANENT STRENGTH THREADLOCKER RED 50ML
 Item No: 26250
 Product Type: Anaerobic

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Percent	ACGIH 8 Hr. TWA:	OSHA 8 Hr. TWA:
METHACRYLATE MONOMER 25852-47-5	60-70	Not Listed	Not Listed
POLYESTER RESIN 38982-25-7	20-30	Not Listed	Not Listed
SACCHARIN 81-07-2	1-10	10mg/m ³ nuisance dust	Not Listed
-DIMETHYLBENZYL HYDROPEROXIDE 80-15-9	1-10	Not Listed	Not Listed

3. HAZARDS IDENTIFICATION

Toxicity: May cause eye and skin irritation. At elevated temperatures may cause irritation of the respiratory tract. Irritates mucous membranes. Ingestion may irritate digestive tract and cause nausea, vomiting and diarrhea. High concentrations may cause central nervous system (CNS) depression. May cause skin sensitization.

Primary Routes of Entry: Eye and skin contact, ingestion, inhalation.

Signs and Symptoms of Exposure: Repeated skin contact may cause allergic skin reactions. Skin redness. Ingestion may cause nausea and vomiting. Inhalation overexposure may cause irritation, coughing and flu-like symptoms. May cause pain, redness or swelling of the eyes and excessive blinking and tear production.

Ingredients	Percent	NTP:	ACGIH Carcinogens	IARC:
SACCHARIN 81-07-2	1-10	Delisted April 2000		Group 3: Vol 73, Page 517: 1989

Medical Conditions Recognized as Being Aggravated by Exposure: Preexisting skin disorders.

4. FIRST AID MEASURES

Ingestion: If swallowed, DO NOT induce vomiting. Keep individual calm. Obtain medical attention.

Inhalation: Move to fresh air. In case of accidental inhalation of vapors, Oxygen or artificial respiration if needed. Obtain medical attention.

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes if skin irritation persists, call a physician.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point (°F/C): More than 160 degrees C. Method: PMCC

Recommended Extinguishing Media: Water fog, carbon dioxide, foam, dry chemical.

Special Fire-Fighting Procedures: Firefighters should wear self-contained breathing apparatus.

Hazardous Products Formed by Fire or Thermal Decomposition: Irritating vapors.

Unusual Fire/Explosion Hazards: Closed containers may rupture or explode when exposed to extreme heat.

Lower Explosive Limit: Not determined

Upper Explosive Limit: Not determined

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal.

7. HANDLING AND STORAGE

Storage: Store below 100 degrees F.
Handling: Avoid prolonged skin contact. Keep away from eyes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses.
Skin: Rubber or plastic gloves
Ventilation: General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits during the use of this product.
Respiratory Protection: An approved respirator (i.e. NIOSH, etc.) should be worn when exposures are expected to exceed the applicable limits..

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Red liquid
Odor: MILD
Boiling Point (°F): More than 200 degrees C.
pH: Does not apply
Solubility in Water: Insoluble
Specific Gravity: >1.0
VOC Content(Wt.%): Not determined
Vapor Pressure: Not determined
Vapor Density (Air=1): Not determined
Evaporation Rate: Not determined

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal conditions
Hazardous Polymerization: Will not occur
Incompatibilities: Strong oxidizers.
Conditions to Avoid: Heat
Hazardous Products Formed by Fire or Thermal Decomposition: Irritating vapors.

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations.
US EPA Waste Number: NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

Domestic Ground Transport

DOT Shipping Name: Unrestricted
Hazard Class: NONE
UNID Number: None
Marine Pollutant: None

IATA

Proper Shipping Name: not regulated
Class or Division: None
UN/NA Number: None

IMDG

Product name: PERMANENT STRENGTH
THREADLOCKER RED 50ML

Item 20250

Proper Shipping: Unrestricted
Hazard Class: None
UN Number: None

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

SARA 313 Information
DIMETHYLBENZYL HYDROPEROXIDE

CALIFORNIA PROP 66:
No California Prop 65 chemicals are known to be present.

TSCA Inventory Status:
Listed on Inventory: YES All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 2, FLAMMABILITY 1, REACTIVITY 1
Estimated HMIS Classification: HEALTH 2, FLAMMABILITY 1, PHYSICAL HAZARD 0
NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared By: Denise Boyd, Health and Safety Manager
Company: Permatex, Inc. 10 Columbus Blvd. Hartford, CT USA
06108
Telephone Number: 1-87-Permatex (877) 378-2838

Revision Date: 12/09/2004
Revision Number: 2

Permatex, Inc.
 10 Columbus Blvd.
 Hartford, CT 06106 USA
 Telephone: 1-87-Permatex
 (877) 376-2839
 Emergency: 800-255-3924
 International Emergency: 813-248-0585

Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: PENETRATING GRADE THREADLOCKER GREEN 60ML
Item No: 29050
Product Type: Anaerobic

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	Weight Percent	ACGIH TLV:	OSHA PEL:
METHACRYLATE MONOMER 26852-47-5	80-90	Not Listed	Not Listed
DIMETHYLBENZYL HYDROPEROXIDE 80-15-9	<10	Not Listed	Not Listed
ALKYL TOLUIDINE 613-48-9	<5	Not Listed	Not Listed
SACCHARIN 81-07-2	<5	10mg/m ³ nuisance dust	Not Listed
AROMATIC AMINE 609-72-3	<3	Not Listed	Not Listed

3. HAZARDS IDENTIFICATION

Toxicity: May cause eye and skin irritation. At elevated temperatures may cause irritation of the respiratory tract. Ingestion may irritate digestive tract and cause nausea, vomiting and diarrhea. May cause skin sensitization.

Primary Routes of Entry: Eye and skin contact, ingestion, inhalation

Signs and Symptoms of Exposure: Repeated skin contact may cause allergic skin reactions. Ingestion may cause nausea and vomiting. Inhalation overexposure may cause irritation, coughing and flu-like symptoms. May cause pain, redness or swelling of the eyes and excessive blinking and tear production.

Ingredient	Weight Percent	NTP	ACGIH Carcinogens	IARC
SACCHARIN 81-07-2	<5	Delisted April 2000		Group 3: Vol 73, Page 517: 1990

Medical Conditions Recognized as Being Aggravated by Exposure: Preexisting skin disorders.

4. FIRST AID MEASURES

Ingestion: If swallowed, DO NOT induce vomiting. Keep individual calm. Obtain medical attention.

Inhalation: Move to fresh air in case of accidental inhalation of vapours. Obtain medical attention.

Skin Contact: Wash off with soap and water. If skin irritation persists, call a physician.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point (°F/C): More than 200 degrees F. Method: PMCC

Recommended Extinguishing Media: Water fog, carbon dioxide, foam, dry chemical.

Special Fire-Fighting Procedures: Firefighters should wear self-contained breathing apparatus.

Hazardous Products of Combustion: Irritating vapors

Unusual Fire/Explosion Hazards: None.

Lower Explosive Limit: Not determined

Upper Explosive Limit: Not determined

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal.

7. HANDLING AND STORAGE

Storage: Store below 100 degrees F.
Handling: Avoid prolonged skin contact. Keep away from eyes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses
Skin: Rubber or plastic gloves.
Ventilation: General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits (or to the lowest feasible levels when limits have not been established) during the use of this product.
Respiratory Protection: An approved respirator (i.e. NIOSH, etc.) should be worn when exposures are expected to exceed the applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Green liquid
Odor: MILD
Boiling Point: More than 200 degrees C.
pH: Does not apply
Solubility in Water: Insoluble
Specific Gravity: 0.8
VOC Content(Wt.%): Not determined
Vapor Pressure: Not determined
Vapor Density (Air=1): Heavier than air
Evaporation Rate: Not Determined

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal conditions
Hazardous Polymerization: Will not occur.
Incompatibilities: Strong oxidizers
Conditions to Avoid: Heat.
Hazardous Products of Combustion: Irritating vapors

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations.
US EPA Waste Number: NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

Domestic Ground Transport

DOT Shipping Name: Unrestricted
Hazard Class: None
UNID Number: None
Marine Pollutant: None

IATA

Proper Shipping Name: Not regulated
Class or Division: None
UN/NA Number: None

IMDG

Product name: PENETRATING GRADE THREADLOCKER
GREEN 50ML

Item No: 29050

Proper Shipping: Unrestricted
Hazard Class: None
UN Number: None

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

DIMETHYLBENZYL HYDROPEROXIDE

CALIFORNIA PROP 65:

No California Prop 65 chemicals are known to be present.

TSCA Inventory Status:

Listed on Inventory: YES All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 2, FLAMMABILITY 1, REACTIVITY 1

Estimated HMIS Classification: HEALTH 2, FLAMMABILITY 1, PHYSICAL HAZARD 0

NFPA is a registered trademark of the National Fire Protection Assn.

HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared By: Denise Boyd, Health and Safety Manager
Company: Permatex, Inc. 10 Columbus Blvd. Hartford, CT USA 06106

Revision Date: 08/16/2006

Revision Number: 2

Number:

MATERIAL SAFETY DATA SHEET

RICHLITE® Natural Fiber Composites – WHALELITE®/WHALEBOARD® Composite – SKATELITE® Composite

Section 1: Ingredients

Chemical Family: Cured Phenol-formaldehyde

Product Use: Various within modeling and pattern making industries.

Hazard Statement: This material safety data sheet (MSDS) has been prepared in compliance with the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is not considered to be a hazardous chemical under that standard.

Section 2: Physical Data

Appearance: Tan, odorless flat sheets

Percent Volatile: 0 (zero)

Insoluble in water

Specific Gravity: 1.24

Section 3: Fire and Explosion Data

Extinguishing media: Self extinguishing; remove source of heat.

Special fire fighting procedures: Use self-contained breathing apparatus.

Unusual fire and explosion data: Combustion products may be toxic.

Section 4: Reactivity Data

Stability: Stable

Conditions to Avoid: Excessive Heat for prolonged periods.

Incompatibility: Very strong alkali

Hazardous Decomposition Products: Combustion may form toxic materials. Oxides of carbon and nitrogen, benzene, toluene, methane, phenol, formaldehyde.

Hazardous Polymerization: Will not occur.

Section 5: Health Hazard Data

Primary Routes of Exposure: Eye, dermal, ingestion or inhalation of dust from abraded material.

Threshold Limit Value: Not hazardous

Overexposure effects: Completely crosslinked phenol-formaldehyde resin is inert and non-toxic.

Eye Contact: Dust that contacts the eye may be irritating or cause mechanical injury.

Skin Contact: May cause slight skin irritation.

Ingestion: It is reasonable to anticipate ingestion of the dust would be irritating to the GI tract.

Inhalation: Dust may be irritating to the respiratory tract and cause coughing or sneezing.

Section 6: First Aid Measures

Eyes: Immediately flush eyes with water for at least 15 minutes. See a physician if irritation persists.

Skin: Wash with soap and water. See a physician if irritation persists.

Ingestion: No harmful effects anticipated. See a physician if irritation persists.

Inhalation: No harmful effects are anticipated. If a problem develops, remove the person to fresh air and supply of oxygen if necessary.

Section 7: Special Protection Information

Ventilation: General mechanical and local exhaust in accordance with ACGIH recommendations.

Protective Gloves: Wear gloves as a standard handling procedure.

Eye Protection: Dust-tight goggles are recommended during material abrading operations.

Respiratory Protection: Use NIOSH approved dust mask if required.

Section 8: Special Precautions

Handling precautions: Nuisance dust may be generated during some material machining processes.

Section 9: Regulatory Information

DOT Proper shipping name: Plastic Laminate Sheets

DOT Hazard Class: N/A

RCRA Status: Not a hazardous waste under RCRA (40 CFR 261)

SARA/TITLE III - Toxic chemicals list: This product does not contain a toxic chemical for routine annual toxic chemical release reporting under

Sec. 313 (40 CFR 372)

Issued 7/1/02 by R. Snyder, Product Safety Director

RAINIER RICHLITE COMPANY
624 East 15th Street – Tacoma, WA 98421
253 383 5533
TF 888 383 5533



Get the most comprehensive
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Material Safety Data Sheet

SECTION I - Material Identity
SECTION II - Manufacturer's Information
SECTION III - Physical/Chemical Characteristics
SECTION IV - Fire and Explosion Hazard Data
SECTION V - Reactivity Data
SECTION VI - Health Hazard Data
SECTION VII - Precautions for Safe Handling and Use
SECTION VIII - Control Measures
SECTION IX - Label Data
SECTION X - Transportation Data
SECTION XI - Site Specific/Reporting Information
SECTION XII - Ingredients/Identity Information

SECTION I - Material Identity

Item Name	
Part Number/Trade Name	RECTORSEAL NO. 5 (R) PIPE THREAD SEALANT
National Stock Number	8030002010996
CAGE Code	60150
Part Number Indicator	A
MSDS Number	191980
HAZ Code	B

SECTION II - Manufacturer's Information

Manufacturer Name	RECTORSEAL CORP
Street	2801 SPENWICK
City	HOUSTON
State	TX
Country	US
Zip Code	77055
Emergency Phone	800 424-9300 CHEMTREC
Information Phone	713 263-8001

MSDS Preparer's Information

Street	2601 SPENWICK
City	HOUSTON
State	TX
Zip Code	77055
Date MSDS Prepared/Revised	25MAR02
Active Indicator	Y

Alternate Vendors

SECTION III - Physical/Chemical Characteristics

Hazard Storage Compatibility Code	NR
NRC License Number	NR
Net Propellant Weight (Ammo)	NR
Appearance/Odor	YELLOW PASTE / MILD ODOR
Boiling Point	322 F
Melting Point	NA
Vapor Pressure	0.3
Vapor Density	1.1 (AIR=1)
Specific Gravity	1.38
Decomposition Temperature	NR
Evaporation Rate	0.14 (ETHYL ACETATE)
Solubility in Water	23%
Percent Volatiles by Volume	NR
Chemical pH	NR
Corrosion Rate	NR
Container Type	F
Container Pressure Code	1
Temperature Code	4
Product State Code	S

SECTION IV - Fire and Explosion Hazard Data

Flash Point	150
Flash Point Method	SCC
Lower Explosion Limit	ND
Upper Explosion Limit	ND
Extinguishing Media	FOAM, DRY CHEMICAL, CARBON DIOXIDE, WATER FOG
Special Fire Fighting Procedures	WEAR SCBA AND FULL PROTECTIVE CLOTHING
Unusual Fire/Explosion Hazards	MODERATE FLASH POINT. VAPORS HEAVIER THAN AIR, MAY TRAVEL ALONG THE GROUND TO LOW SPOTS AT CONSIDERABLE DISTANCES TO A SOURCE OF IGNITION RESULTING IN POTENTIAL FLASHBACK.

BURNING LIQUID MAY FLOAT ON WATER. HEAT MAY BUILD UP PRESSURE AND RUPTURE CONTAINERS

SECTION V - Reactivity Data

Stability	YES
Stability Conditions to Avoid	HEAT, SPARKS, OPEN FLAMES, STRONG OXIDIZING. TEMPS ABOVE 500 F
Materials to Avoid	GASEOUS OXYGEN, STRONG OXIDIZING MATERIALS, MOLTEN ALKALI METALS
Hazardous Decomposition Products	CO, CO2, FRAGMENTED HYDROCARBONS
Hazardous Polymerization	NO
Polymerization Conditions to Avoid	WILL NOT OCCUR
LD50 - LD50 Mixture	NR

SECTION VI - Health Hazard Data

Route of Entry: Skin	YES
Route of Entry: Ingestion	YES
Route of Entry: Inhalation	YES
Health Hazards - Acute and Chronic	[EYES] WATERING, BLURRED VISION, IRRITATION [SKIN] IRRITATION, DERMATITIS [INHAL] IRRITATION, DIZZINESS, NARCOSIS, HEADACHE, NAUSEA, CNS DEPRESSION, UNCONSCIOUSNESS [INGEST] NAUSEA, VOMITING, CNS DEPRESSION, IRRITATION, LIVER AND PERITONEAL WALL, LUNG CONGESTION
Carcinogenity: NTP	NR
Carcinogenity: IARC	NR
Carcinogenity: OSHA	NR
Explanation of Carcinogenity	NR
Symptoms of Overexposure	[EYES] WATERING, BLURRED VISION, IRRITATION [SKIN] IRRITATION, DERMATITIS [INHAL] IRRITATION, DIZZINESS, NARCOSIS, HEADACHE, NAUSEA, CNS DEPRESSION, UNCONSCIOUSNESS [INGEST] NAUSEA, VOMITING, CNS DEPRESSION, IRRITATION, LIVER AND PERITONEAL WALL, LUNG CONGESTION
Medical Cond. Aggravated by Exposure	NR

Emergency/First Aid Procedures	[EYES] FLUSH W/ WATER FOR 15 MINUTES [SKIN] WASH W/ SOAP AND WATER, REMOVE CONTAMINATED CLOTHING, LAUNDRER BEFORE REUSE [INHAL] REMOVE TO FRESH AIR [INGEST] IF CONSCIOUS, WASH OUT MOUTH WITH COPIOUS AMOUNTS OF WATER. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY
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SECTION VII - Precautions for Safe Handling and Use

Steps if Material Released/Spilled	REMOVE ALL SOURCES OF IGNITION. USE ABSORBENT MATERIALS TO PREVENT SLIPPING HAZARDS
Neutralizing Agent	NR
Waste Disposal Method	DISPOSE IAW FEDERAL, STATE, LOCAL REGULATIONS
Handling and Storage Precautions	KEEP CONTAINER CLOSED AND UPRIGHT WHEN NOT IN USE. DO NOT STORE NEAR HEAT, SPARKS OR FLAMES
Other Precautions	NR

SECTION VIII - Control Measures

Respiratory Protection	IN CONFINED AREA, USE NIOSH/MSHA AIR RESPIRATORS
Ventilation	LOCAL: ACCEPTABLE MECHANICAL: PREFERABLE
Protective Gloves	IMPERVIOUS GLOVES
Eye Protection	CHEM GOGGLES
Other Protective Equipment	NR
Work Hygenic Practices	WASH HANDS AFTER USE
Supplemental Health/Safety Data	NR
Disposal Code	O

SECTION IX - Label Data

Protect Eye	YES
Protect Skin	YES
Protect Respiratory	NO
Chronic Indicator	YES
Contact Code	SLIGHT
Fire Code	UNKNOWN
Health Code	UNKNOWN
React Code	UNKNOWN

Specific Hazard and Precaution

TARGET ORGANS: SKIN, LIVER,
KIDNEY

SECTION X - Transportation Data

Container Quantity	1
Unit of Measure	PT

SECTION XI - Site Specific/Reporting Information

Volatile Organic Compounds (P/G)	3.45
Volatile Organic Compounds (G/L)	413.444

SECTION XII - Ingredients/Identity Information

Ingredient #	01
Ingredient Name	2-PENTANONE, 4-HYDROXY-4-METHYL- (20-30%)
CAS Number	123422
Proprietary	NO
Percent	30
OSHA PEL	50 PPM
ACGIH TLV	50 PPM

30R752-4423

MATERIAL SAFETY DATA SHEET

RESOLUTION

Version: 2.0
Revision Date: 08/18/2006

REVCHEM

Print Date: 08/18/2006
ANSI/EWG1500000-42768

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name	752-4423 UPR
Product Identification Number(s)	7524423
Manufacturer/Supplier/Importer	Resolution Specialty Materials 100 Cottage Place CARPENTERSVILLE Illinois 60110 USA +18003235806
Chemical Name	
Synonym(s)	
Molecular Formula	
Molecular Weight	
Product Use	
OSHA Status	hazardous/hazardous

For emergency health, safety & environmental information, call 1-800-323-5806 (within USA) or 847-428-2857 (from outside USA).

For emergency transportation information, call CHEMTREC at 1-800-424-9300 (within USA) or 703-527-3887 (from outside USA).

2. COMPOSITION INFORMATION ON INGREDIENTS

Component	CAS Registry No.	Weight %
unsaturated polyester polymer	proprietary (TSP# 10070055)	50.6%
styrene	100-42-5	35.6%
triethyl phosphate	78-40-0	3%
residual additives, modifiers, colorants, reactants, and/or impurities	not applicable	1.0%

3. HAZARDS IDENTIFICATION

WARNING!
CONTAINS STYRENE
POSSIBLE CANCER HAZARD - MAY CAUSE CANCER BASED ON ANIMAL DATA
HARMFUL IF INHALED, ABSORBED THROUGH SKIN, OR SWALLOWED
CAUSES SKIN AND EYE IRRITATION.
FLAMMABLE LIQUID AND VAPOR
MAY FORM EXPLOSIVE PEROXIDES
MAY POLYMERIZE

MATERIAL SAFETY DATA SHEET**RESOLUTION**

Version: 2.0

Revision Date: 05/18/2003

Print Date: 05/19/2005
ANG/EN/150000042765

THE PHYSICAL-CHEMICAL AND TOXICOLOGICAL PROPERTIES OF THIS MATERIAL HAVE NOT BEEN FULLY INVESTIGATED

HMSD Hazard Ratings: Health - 2, Flammability - 3, Chemical Reactivity - 1

HMSD rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

4. FIRST-AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Eyes: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
Skin: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
Ingestion: Call a physician or poison control center immediately. Induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Extinguishing Media: water spray, dry chemical, carbon dioxide, foam
Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Fight fire from a protected location. Use water spray to keep fire-exposed containers cool. **USE WATER WITH CAUTION.** Water may be ineffective in fighting the fire.
Hazardous Combustion Products: carbon dioxide, carbon monoxide
Unusual Fire and Explosion Hazards: Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations. May form explosive peroxides. Fire or excessive heat may result in rupture of container due to bulk polymerization. Heating may cause an explosion.

6. ACCIDENTAL RELEASE MEASURES

Wear appropriate personal protective equipment. Eliminate all ignition sources. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

7. HANDLING AND STORAGE

Personal Precautionary Measures: Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.

MATERIAL SAFETY DATA SHEET
RESOLUTION

Version: 2.0

Revision Date: 08/15/2005

Print Date: 08/18/2005
ANSI/ISO 15000042766

Prevention of Fire and Explosion: Keep away from heat, sparks, and flame. Keep from contact with oxidizing materials. Use only with adequate ventilation. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids. Do not expose to air. After opening, purge container with nitrogen before reclosing. Do not distill to near dryness. Periodically test for peroxide formation on long-term storage. If peroxide formation is suspected, do not open or move container.

Storage: Keep container tightly closed. Store in a cool place. Store away from heat and light. Protect from contamination.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Country specific exposure limits have not been established or are not applicable unless listed below.

Recommended Decontamination Facilities:

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: viscous liquid

Color: amber

Odor: styrene

Specific Gravity: 1.2861 (25 °C)

> 64.44 °C

Solubility in Water: negligible

Flash Point: 91.67 °C (Setaflash closed cup)

10. STABILITY AND REACTIVITY

Stability:

11. TOXICOLOGICAL INFORMATION

Acute toxicity data, if available, are listed below. Additional toxicity data may be available on request.

12. ECOLOGICAL INFORMATION

Acute toxicity data, if available, are listed below. Additional toxicity data may be available on request.

13. DISPOSAL CONSIDERATIONS

MATERIAL SAFETY DATA SHEET**RESOLUTION**

Version: 2.0
 Revision Date: 08/18/2005

Print Date: 08/18/2005
 ANR/EN/150000042785

14. TRANSPORT INFORMATION

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

Possible Shipping Description(s):

Reportable Quantity:	1,831 kg / 0 kg
	(styrene)

DOT (USA)

UN Number:	1808
Class:	3
Packing group:	III
Proper Shipping Name:	RESIN SOLUTION

Reg - IMDG (International Maritime Dangerous Goods)

UN Number:	1808
Class:	3
Packing group:	III
Proper Shipping Name:	RESIN SOLUTION

Air - ICAO (International Civil Aviation Organization)

UN Number:	1808
Class:	3
Packing group:	III
Proper Shipping Name:	RESIN SOLUTION

15. REGULATORY INFORMATION

MATERIAL SAFETY DATA SHEET
RESOLUTION

Version: 2.0

Revision Date: 08/18/2008

Print Date: 08/18/2008
ANSI#EN15000043765

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS (Canada) Status: controlled

WHMIS (Canada) Hazard Classification: B2, D2/A

GARA 311-312 Hazard Classification(s):

immediate (acute) health hazard
delayed (chronic) health hazard
fire hazard
reactive hazard
sudden release of pressure

GARA 313: none, unless listed below**Carcinogenicity Classification (components present at 0.1% or more):** none, unless listed below**16. OTHER INFORMATION**

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information. Users should make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials, the safety and health of employees and customers, and the protection of the environment.



MATERIAL SAFETY DATA SHEET

PARTALL® FILM #10

MSDS Number: P10-001

Effective Date: 16 June 2007

Page 1 of 6

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME **PARTALL® Film #10**
GENERIC NAME Polyvinyl Alcohol (PVA) coating

MANUFACTURER **REXCO**
 P.O. Box 80996
 Conyers, Georgia 30013
 USA

TRANSPORTATION EMERGENCY:

CHEMTREC (800) 424-9300 U.S.A. (24 hours/day)
CHEMTREC (703) 527-3887 International (Collect calls accepted)

CUSTOMER SERVICE AND PRODUCT EMERGENCY:

REXCO (800) 888-1060 U.S.A and Canada
REXCO (770) 483-7610 International

SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NUMBER	CONCENTRATION (%)
Water	7732-18-5	58 - 61
Ethyl Alcohol	64-17-5	31 - 34
Acetic Acid Ethenyl Ester, Polymer with Ethenol	25213-24-5	7 - 8
Butyl Alcohol	71-36-3	1 - 2

SECTION 3: HAZARDS IDENTIFICATION

NFPA RATING: Health 2, Fire 3, Reactivity 0

HMIS RATING: Health 2, Fire 3, Reactivity 0

0=MINIMAL, 1=SLIGHT, 2=MODERATE, 3=HIGH, 4=EXTREME

POTENTIAL HEALTH EFFECTS

EYES Can cause eye irritation. Prolonged or repeated exposure may result in conjunctiva.

SKIN May cause skin irritation. Prolonged or repeated exposure may result in defatting, skin dermatitis.

INHALATION Repeated or prolonged exposure may cause central nervous system depression, including headache, dizziness, loss of coordination, unconsciousness.

INGESTION May cause nausea, vomiting, gastrointestinal bleeding, abdominal pain, and central nervous system depression with symptoms ranging from drunkenness to unconsciousness, narcosis, coma, respiratory failure, and death, depending on the quantity ingested.



MATERIAL SAFETY DATA SHEET

PARTALL® FILM #10

MSDS Number: P10-001

Effective Date: 16 June 2007

Page 2 of 6

CHRONIC HEALTH EFFECTS: May result in irritation of mucous membranes, headache, central nervous system depression, and liver damage.

SYMPTOMS OF EXPOSURE: Symptoms of exposure through inhalation, ingestion, or direct contact with skin may include nausea, vomiting, diarrhea, irritation of nose, throat, airways, or skin, central nervous system depression – possibly including headache, loss of coordination, drowsiness, fatigue, and unconsciousness – and death in extreme cases. Pre-existing eye, skin, or respiratory disorders may be aggravated by exposure to this product.

PRIMARY ROUTES OF ENTRY: Skin contact, skin absorption, eye contact, and inhalation

CANCER INFORMATION: Neither this product nor any of its components is listed as a carcinogen or partial carcinogen by the following agencies: the National Toxicology Program, the International Agency for Research on Cancer, and the Occupational Safety and Health Administration.

SECTION 4: FIRST AID MEASURES

EYES	Flush immediately with cold water for 15 minutes and seek medical attention.
SKIN	Remove contaminated clothing and wash affected area with soap and hot water. If irritation from contact persists, seek medical attention. Launder contaminated clothing – including shoes – prior to reuse.
INHALATION	If light-headed or having difficulty breathing, expose individual to fresh air and/or oxygen. If breathing stops, begin artificial respiration and seek immediate medical attention.
INGESTION	Seek immediate medical attention. Only induce vomiting if directed to do so by medical personnel. If vomiting occurs spontaneously, keep victim's head below hips to prevent aspiration into lungs. If possible, do not leave victim unattended.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT / METHOD: 76 °F (24 °C) / Tagliabue Closed Cup method (TCC)

AUTO IGNITION TEMPERATURE: 670 °F (354 °C)

FLAMMABLE LIMITS IN AIR (% BY VOLUME): LEL Lower 3.3% / UEL Upper 18.7%

FIRE AND EXPLOSION HAZARDS: Low flash point. Keep work areas free of hot metal surfaces and other sources of ignition.

EXTINGUISHING MEDIA: Use dry chemicals, CO₂, water fog, water spray, or alcohol-resistant foam.

FIRE FIGHTING INSTRUCTIONS: Wear a NIOSH-approved self contained breathing apparatus in positive pressure mode and full bunker gear. Water may be unsuitable as an extinguishing media but helpful in keeping adjacent containers cool in order to prevent container rupture. Avoid spreading burning liquid with water used for cooling purposes.



MATERIAL SAFETY DATA SHEET

PARTALL® FILM #10

MSDS Number: P10-001

Effective Date: 16 June 2007

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SECTION 6: ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL: Keep sources of ignition and hot metal surfaces isolated from spill. Persons involved in clean-up should wear personal protection equipment. Stop spill at source and prevent from spreading. Flush spilled material into suitable retaining areas or containers. Small amounts of spilled material may be absorbed with any standard absorbent. If run-off occurs, notify proper authorities as required. Place in chemical waste container and dispose of in accordance with local, state, and federal regulations.

CAUTION! FLOORS COVERED WITH RESIDUAL MATERIAL BECOME EXTREMELY SLIPPERY WHEN WET.

SECTION 7: HANDLING AND STORAGE

Store in a cool, dry location at 100 °F (38 °C) or below and away from open flames, heat, and sparks. Store only in areas approved for Flammable Liquid. Keep work areas free of hot metal surfaces and other sources of ignition. Keep container tightly closed when not in use to prevent drying out of material.

Repack only into high-density polyethylene (HDPE). Containers used for repackaging should be thoroughly tested for long-term product compatibility before use. All new containers must exhibit product labels required for proper identification, safety, handling, and storage. Empty containers may contain product residue such as vapors – continue to observe proper handling and storage precautions.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

EYE PROTECTION: Safety glasses, goggles, or face shield are advised. Eye washes are recommended for work areas.

SKIN PROTECTION: Wear impervious gloves, clothing, and shoes to prevent skin contact. Safety showers are recommended for work areas. Remove contaminated clothing and wash in hot water and soap prior to reuse.

RESPIRATORY PROTECTION: Exposure levels should be kept below the PEL or TLV for this product. If exposure exceeds recommended levels, use of NIOSH-approved cartridge respirator or gas mask is advised. Engineering controls should be implemented if necessary to reduce exposure.

ENGINEERING CONTROLS: Provide sufficient general and/or local exhaust (explosion-proof ventilation) to keep exposure below PEL or TLV.

EXPOSURE GUIDELINES

COMPONENT	OSHA PEL	ACGIH TLV
Water	None Established	None Established
Ethyl Alcohol	1000 ppm PEL/TWA	1000 ppm TLV/TWA
Acetic Acid Ethenyl Ester, Polymer with Ethenol	None Established	None Established
Butyl Alcohol	50 ppm PEL/TWA	50 ppm TLV/TWA

PEL = PERMISSIBLE EXPOSURE LIMITS

TLV = THRESHOLD LIMIT VALUE

TWA = TIME WEIGHTED AVERAGE (8 HOURS)



MATERIAL SAFETY DATA SHEET

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear or Green Liquid
ODOR: Alcohol
BOILING POINT: 158 – 220 °F (70 – 104 °C)
MELTING POINT: Not Applicable
V.O.C. (BY % CALCULATION): 347 g/L
V.O.C. = VOLATILE ORGANIC CONTENT

SPECIFIC GRAVITY (H₂O=1): 0.95
VAPOR PRESSURE (mm Hg): 26.67
VAPOR DENSITY (AIR=1): 1.2
SOLUBILITY IN WATER: Complete
REACTIVITY IN WATER: No

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Open flames, hot surfaces, or any ignition source.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids or bases, alkali metals, halogens, and strong alkalis.

HAZARDOUS DECOMPOSITION: Thermal decomposition in the presence of air may yield carbon monoxide and/or carbon dioxide. Above 200 °C, may yield acetaldehyde, crontonaldehyde, and acetone.

HAZARDOUS POLYMERIZATION: Will not occur

SECTION 11: TOXICOLOGICAL INFORMATION

No data available specific to this product. Following is data as pertains to one or more major ingredients:

EYES: Standard Draize eye test (Rabbit)
Dose: 500 mg Reaction: Severe
Dose: 500 mg / 24 hours Reaction: Mild

SKIN: Standard Draize skin test (Rabbit)
Dose: 20 mg / 24 hours Reaction: Moderate

INHALATION: LC50 (Rat): 20000 ppm / 10 hours

INGESTION: LD50 (Rat): 7606 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

Product would not be expected to cause damage to the environment and is inherently biodegradable.



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SECTION 13: DISPOSAL CONSIDERATIONS

Waste material may be incinerated at an approved facility where permitted under appropriate Federal, State, and Local regulations.

SECTION 14: TRANSPORT INFORMATION

DOT CLASSIFICATION: Alcohols, n.o.s. (Ethyl Alcohol); 3; UN1987; Packing Group III
ICAO / IATA CLASSIFICATION: Alcohols, n.o.s. (Ethyl Alcohol); 3; UN1987; Packing Group III
IMDG CLASSIFICATION: Alcohols, n.o.s. (Ethyl Alcohol); 3; UN1987; Packing Group III; Marine Pollutant: No

SECTION 15: REGULATORY INFORMATION

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT OF 1980 (CERCLA)

<u>COMPONENT</u>	<u>REPORTABLE QUANTITY (RQ)</u>
Butyl Alcohol	5000 lbs

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III

SARA 302: Contains no chemicals subject to SARA 302 reporting

<u>SARA 311/312 HAZARD CATEGORIES:</u>	<u>COMPONENT</u>	<u>CATEGORY</u>
	Ethyl Alcohol	Immediate Health, Delayed Health, Fire
	Butyl Alcohol	Immediate (Acute) Health Hazard, Fire

SARA 313: Contains no chemicals subject to SARA 313 reporting

OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (OSHA) CLASSIFICATION: Hazardous

CALIFORNIA PROPOSITION 65: Contains no detectable quantities of Proposition 65 chemicals.

WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM (WHMIS) CLASSIFICATION:

Hazardous: Flammable Liquid

CHEMICAL INVENTORY: This product is not listed on regulatory inventories or listings. Components are either listed on the following chemical inventories or qualify for an exemption:

UNITED STATES	Toxic Substances Control Act (TSCA)
CANADA	Canadian Domestic Substance List (DSL)
EUROPE	European Inventory of Existing Commercial Chemical Substances (EINECS)
AUSTRALIA	Australian Inventory of Chemical Substances (AICS)
JAPAN	Existing and New Chemical Substances (ENCS)
KOREA	Existing Chemicals List (ECL)
PHILIPPINES	Philippines Inventory of Chemicals and Chemical Substances (PICCS)



MATERIAL SAFETY DATA SHEET

PARTALL[®] FILM #10

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SECTION 16: OTHER INFORMATION

All information provided in this Material Safety Data Sheet is **believed to be accurate and reliable**. REXCO makes **no warranty** of any kind, express or implied, including warranties of merchantability or fitness for a particular purpose, concerning the safe use of this material in your process or in combination with other substances. Users should make their own tests and assessments as to the suitability of this product or the information contained herein for their particular purposes and uses.

Prepared by: REXCO Product Stewardship Department



MATERIAL SAFETY DATA SHEET

PARTALL® PASTE #2

MSDS Number: P02-001

Effective Date: 16 June 2007

Page 1 of 6

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME **PARTALL® Paste #2**
GENERIC NAME Wax polishing compound

MANUFACTURER REXCO
 P.O. Box 80996
 Conyers, Georgia 30013
 USA

TRANSPORTATION EMERGENCY:

CHEMTREC (800) 424-9300 U.S.A. (24 hours/day)
CHEMTREC (703) 527-3887 International (Collect calls accepted)

CUSTOMER SERVICE AND PRODUCT EMERGENCY:

REXCO (800) 888-1060 U.S.A and Canada
REXCO (770) 483-7610 International

SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NUMBER	CONCENTRATION (%)
Light Petroleum Distillate	64742-47-8	64 - 72
Paraffin Wax	8002-74-2	18 - 22
Microcrystalline Wax	64742-42-3	8 - 11
Oxidized Ethene Homopolymer	68609-21-2	2 - 3

SECTION 3: HAZARDS IDENTIFICATION

NFPA RATING: Health 1, Fire 2, Reactivity 0

HMS RATING: Health 1, Fire 2, Reactivity 0

0=MINIMAL, 1=SLIGHT, 2=MODERATE, 3=HIGH, 4=EXTREME

POTENTIAL HEALTH EFFECTS

EYES Can cause eye irritation. Prolonged or repeated exposure may result in conjunctivitis.

SKIN May cause skin irritation. Prolonged or repeated exposure may result in defatting, skin dermatitis.

INHALATION Repeated or prolonged exposure may cause central nervous system depression, including headache, dizziness, loss of coordination, unconsciousness.

INGESTION Can cause nausea and vomiting with danger of Chemical Pneumonia.

CHRONIC HEALTH EFFECTS: Possible central nervous system depression and skin dermatitis.



MATERIAL SAFETY DATA SHEET

PARTALL® PASTE #2

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SYMPTOMS OF EXPOSURE: Symptoms of exposure through inhalation, ingestion, or direct contact with skin may include nausea, vomiting, diarrhea, irritation of nose, throat, airways, or skin, central nervous system depression – possibly including headache, loss of coordination, drowsiness, fatigue, and unconsciousness – and death in extreme cases. Pre-existing eye, skin, or respiratory disorders may be aggravated by exposure to this product.

PRIMARY ROUTES OF ENTRY: Skin contact, skin absorption, eye contact, and inhalation

CANCER INFORMATION: Neither this product nor any of its components is listed as a carcinogen or partial carcinogen by the following agencies: the National Toxicology Program, the International Agency for Research on Cancer, and the Occupational Safety and Health Administration.

SECTION 4: FIRST AID MEASURES

EYES Flush immediately with cold water for 15 minutes and seek medical attention.

SKIN Remove contaminated clothing and wash affected area with soap and hot water. If irritation from contact persists, seek medical attention. Launder contaminated clothing – including shoes – prior to reuse.

INHALATION If light-headed or having difficulty breathing, expose individual to fresh air and/or oxygen. If breathing stops, begin artificial respiration and seek immediate medical attention.

INGESTION Seek immediate medical attention. **DO NOT INDUCE VOMITING.** If vomiting occurs spontaneously, keep victim's head below hips to prevent aspiration into lungs. If possible, do not leave victim unattended.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT / METHOD: >142 °F (>61 °C) / Tagliabue Closed Cup method (TCC)

AUTO IGNITION TEMPERATURE: 440 °F (226 °C)

FLAMMABLE LIMITS IN AIR (% BY VOLUME): LEL Lower 0.9% / UEL Upper 6.0%

FIRE AND EXPLOSION HAZARDS: Low flash point. Keep work areas free of hot metal surfaces and other sources of ignition.

EXTINGUISHING MEDIA: Use dry chemicals, CO₂, water fog, water spray, or foam.

FIRE FIGHTING INSTRUCTIONS: Wear a NIOSH-approved self contained breathing apparatus in positive pressure mode and full bunker gear. Water may be unsuitable as an extinguishing media but helpful in keeping adjacent containers cool in order to prevent container rupture. Avoid spreading burning liquid with water used for cooling purposes.

SECTION 6: ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL: Keep sources of ignition and hot metal surfaces isolated from spill. Persons involved in clean-up should wear personal protection equipment. Stop spill at source and prevent from spreading. If spilled as a solid, scrape and then sweep up spilled material. If spilled as a free-flowing liquid, confine spill



MATERIAL SAFETY DATA SHEET

PARTALL® PASTE #2

MSDS Number: PD2-001

Effective Date: 16 June 2007

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and allow liquid to solidify prior to clean-up. If run-off occurs, notify proper authorities as required. Place in chemical waste container and dispose of in accordance with local, state, and federal regulations.

CAUTION! FLOORS COVERED WITH RESIDUAL MATERIAL BECOME EXTREMELY SLIPPERY.

SECTION 7: HANDLING AND STORAGE

Store in a cool, dry location at 90 °F (32 °C) or below and away from open flames, heat, and sparks. Keep work areas free of hot metal surfaces and other sources of ignition. Keep container tightly closed when not in use to prevent drying out of material.

Repack only into high-density polyethylene (HDPE). Containers used for repackaging should be thoroughly tested for long-term product compatibility before use. All new containers must exhibit product labels required for proper identification, safety, handling, and storage. Empty containers may contain product residue such as vapors – continue to observe proper handling and storage precautions.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

EYE PROTECTION: Safety glasses, goggles, or face shield are advised. Eye washes are recommended for work areas.

SKIN PROTECTION: Wear impervious gloves, clothing, and shoes to prevent skin contact. Safety showers are recommended for work areas. Remove contaminated clothing and wash in hot water and soap prior to reuse.

RESPIRATORY PROTECTION: Exposure levels should be kept below the PEL or TLV for this product. If exposure exceeds recommended levels, use of NIOSH-approved cartridge respirator or gas mask is advised. Engineering controls should be implemented if necessary to reduce exposure.

ENGINEERING CONTROLS: Provide sufficient general and/or local exhaust (explosion-proof ventilation) to keep exposure below PEL or TLV.

EXPOSURE GUIDELINES

COMPONENT	OSHA PEL	ACGIH TLV
Light Petroleum Distillate	100 ppm PEL/TWA	100 ppm TLV/TWA
Paraffin Wax	None Established	None Established
Microcrystalline Wax	None Established	None Established
Oxidized Ethene Homopolymer	None Established	None Established

Threshold limit for wax fumes is 2 mg/m³ in air for 8-hour workday. Avoid generation and inhalation of wax fumes.

PEL = PERMISSIBLE EXPOSURE LIMITS

TLV = THRESHOLD LIMIT VALUE

TWA = TIME WEIGHTED AVERAGE (8 HOURS)



MATERIAL SAFETY DATA SHEET

PARTALL® PASTE #2

MSDS Number: P02-001

Effective Date: 16 June 2007

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White or Green Paste Wax
ODOR: Solvent
BOILING POINT: 310 - 410 °F (154 - 210 °C)
MELTING POINT: 120 °F (48 °C)
V.O.C. (BY % CALCULATION): 533 g/L
V.O.C. = VOLATILE ORGANIC CONTENT

SPECIFIC GRAVITY (H₂O=1): 0.788
VAPOR PRESSURE (mm Hg): 3.0
VAPOR DENSITY (AIR=1): 1.4
SOLUBILITY IN WATER: No
REACTIVITY IN WATER: No

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Open flames, hot surfaces, or any ignition source.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids or bases, alkali metals, halogens, and strong alkalis.

HAZARDOUS DECOMPOSITION: Normal combustion forms carbon dioxide and water vapor. Incomplete combustion will produce carbon monoxide and other toxic substances.

HAZARDOUS POLYMERIZATION: Will not occur

SECTION 11: TOXICOLOGICAL INFORMATION

No data available specific to this product. Following is data as pertains to one or more major ingredients:

EYES: Primary Eye Irritation Index (Rabbits): Maximum average score = 3.3 (Maximum score is 110)

SKIN: Primary Skin Irritation Index (Rabbits): 2.2 (Maximum score is 8.0)
Acute Dermal LD50 (Rabbit): 2.0 - 4.0 g/kg for similar products

INHALATION: LC50 (Rat): (male and female) > 6.8 mg/L

INGESTION: Acute Oral LD50 (Rat): > 5 g/kg

SECTION 12: ECOLOGICAL INFORMATION

Product would not be expected to cause damage to the environment and is inherently biodegradable. Product would be expected to biodegrade slowly, depending upon conditions to which it is exposed.



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PARTALL® PASTE #2

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Effective Date: 16 June 2007

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SECTION 13: DISPOSAL CONSIDERATIONS

Waste material may be incinerated at an approved facility where permitted under appropriate Federal, State, and Local regulations.

SECTION 14: TRANSPORT INFORMATION

DOT CLASSIFICATION: This product is not regulated for transportation.
ICAO / IATA CLASSIFICATION: This product is not regulated for transportation.
IMDG CLASSIFICATION: This product is not regulated for transportation.

SECTION 15: REGULATORY INFORMATION

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT OF 1980 (CERCLA)
Contains no chemicals on the CERCLA hazardous chemicals list.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III

SARA 302: Contains no chemicals subject to SARA 302 reporting

SARA 311/312 HAZARD CATEGORIES: Not hazardous

SARA 313: Contains no chemicals subject to SARA 313 reporting

OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (OSHA) CLASSIFICATION: Not applicable

CALIFORNIA PROPOSITION 65: Contains no detectable quantities of Proposition 65 chemicals.

WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM (WHMIS) CLASSIFICATION: Not regulated

CHEMICAL INVENTORY: This product is not listed on regulatory inventories or listings. Components are either listed on the following chemical inventories or qualify for an exemption:

UNITED STATES	Toxic Substances Control Act (TSCA)
CANADA	Canadian Domestic Substance List (DSL)
EUROPE	European Inventory of Existing Commercial Chemical Substances (EINECS)
AUSTRALIA	Australian Inventory of Chemical Substances (AICS)
JAPAN	Existing and New Chemical Substances (ENCS)
KOREA	Existing Chemicals List (ECL)
PHILIPPINES	Philippines Inventory of Chemicals and Chemical Substances (PICCS)

SECTION 16: OTHER INFORMATION

All information provided in this Material Safety Data Sheet is believed to be accurate and reliable. REXCO makes no warranty of any kind, express or implied, including warranties of merchantability or fitness for a particular purpose, concerning the safe use of this material in your process or in combination with other



MATERIAL SAFETY DATA SHEET

PARTALL[®] PASTE #2

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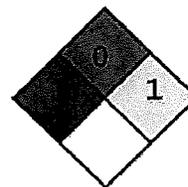
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substances. Users should make their own tests and assessments as to the suitability of this product or the information contained herein for their particular purposes and uses.

Prepared by: REXCO Product Stewardship Department

LEAR CHEMICAL RESEARCH CORP.
P.O. Box 1040 Station B - Mississauga, Ontario L4Y 3W3



1	HEALTH
0	FLAMMABILITY
1	REACTIVITY
0	PROTECTIVE EQUIPMENT

MATERIAL SAFETY DATA SHEET

Emergency Telephone Number: 800-256-2548 (day) 905-890-3466 (night) Fax Number: 905-564-7077
Poison Control Center: Poisonsdex Alert System
Dangerous Goods Emergency: CANUTEC 613-996-6666 & CCOHS 905-572-2981

SECTION I - PRODUCT IDENTIFICATION & USE

Product Name: CORROSION BLOCK® NON-FLAMMABLE AEROSOL
Product Code: 20012
Company ID: Manufacturer-Lear Chemical Research Corp.
Application: CORROSION BLOCK® is an industrial product designed to prevent and treat corrosion on ferrous and non-ferrous metals, protect electronic equipment, and to lubricant/penetrate mechanized parts.

SECTION II - COMPOSITION

Chemical Composition: Corrosion Block is a proprietary blend of ultra pure synthetic and organic Hydrocarbons. Toxicology testing has been performed as a complete complex mixture (prior to aerosolizing) and is considered non-toxic by EPA /OECD guidelines.

SECTION III - HAZARDOUS COMPONENTS

Chemical Names:	CAS #	OSHA/ACGIH	% vol
Corrosion Block	NA	5 mg/m ³ (TWA) oil mist	90-95
Tetrafluoroethane 1,1,1,2 (propellant)	811-97-2	PEL/TLV None established 1000 ppm TWA (suggested)	5-10

SECTION IV - PHYSICAL/ CHEMICAL CHARACTERISTICS

Boiling Point: >212 F° (aerosol concentrate)	Specific Gravity (H²O=1): .92
Vapor Pressure: NA	Melting Point (Deg F): not applicable
Vapor Density: Heavier than air (Air=1)	Evaporation Rate: Slower (Butyl acetate=1)
Solubility: Slight emulsification with H ² O	Odor: Fresh Scent
Appearance: Turquoise Aerosol Liquid	pH: neutral

SECTION V - FIRE AND EXPLOSION HAZARD DATA

Product:	Non-flammable Aerosol	Auto-ignition Temp.	>410 F°
Flash Point:	Flame extension 0 cm.		
Flammable Limits:	Not applicable		
Extinguishing Media:	Use media appropriate for surrounding material.		
Fire Fighting Procedures:	Cool containers with water spray to prevent pressure build-up, auto-ignition or explosion. Self Contained Breathing Apparatus (SCBA) may be required if containers rupture under thermal conditions.		
Fire Explosion Hazards:	Aerosol cans are an explosion risk when exposed to fire.		
Fire Hazard Identification:	NFPA NPCA-HMIS	Health -1	Flammability-0 Reactivity-1

SECTION VI - REACTIVITY DATA

Stability:	Stable
Incompatibility:	Avoid Oxidizing materials (Liquid or compressed oxygen, peroxides, chlorine), strong alkalis.
Hazardous Decomposition:	Thermal conditions produce normal products of combustion including: Hydrogen fluoride, Carbon Oxides (CO- CO ²), Nitrogen oxides (NO ² -NO), Sulfur oxides (SO ² SO ₃)
Polymerization:	Will not occur

SECTION VII - TOXICOLOGICAL PROPERTIES

Corrosion Block Liquid has been tested (oral, eye, dermal) as a complete mixture and is considered "Non Toxic" according to EPA/OECD and FHSA guidelines.

Primary Routes of entry:

Acute Oral:	LD50 > 5000 mg/kg	Acute Eye:	LC50 > 5000 mg/kg
Acute Dermal:	LD50 > 5000 mg/kg	Acute Vapor (est)	LC50 > 5000 ppm -Rat-Aliphatic hydrocarbon LC50 > 5000 ppm -Rat-Petroleum distillate

Tetrafluoroethane 1, 1, 1, 2

Acute Dermal:	None determined	Acute Inhal.	LC50 > 500,000 ppm (Rat)
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Acute Eye: None determined

Carcinogenicity: Corrosion Block Ingredients: Non-carcinogenic, according to NTP, IARC, OSHA or ACGIH.
Tetrafluoroethane 1,1,1,2: Non-carcinogenic, according to NTP, IARC, OSHA or ACGIH.

Sensitization: Non-sensitizer

Mutagenic effects:	No	Tetragenic:	No
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Reproductive:	No	Developmental:	No
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POTENTIAL EFFECTS OF OVEREXPOSURE:

Inhalation: May cause headache, nausea, or dizziness. Gross overexposure to vapor may cause CNS depression or confusion. Tetrafluoroethane is rapidly equilibrated in tissue, after inhalation, and eliminated with expelled air. May act as simple asphyxiant if air is displaced by vapor.

Skin: May cause drying, chapping of skin. Chilling sensation with liquid evaporation.

Eyes: May cause redness of eyes and tearing. Chilling sensation with liquid evaporation.

Ingestion: Not likely to occur. However should small amounts be ingested then liquid may cause irritation to mouth & throat. Aspiration into the lungs may cause chemical pneumontis, which can be fatal.

SECTION VIII - EMERGENCY AND FIRST AID PROCEDURES

Skin: Remove excess by wiping, followed by washing with soap and water.

Eyes: Copious warm water flush for 15 minutes, lifting upper and lower lids. If irritation persists contact a physician.

Inhalation: Evacuate to fresh air. If breathing is difficult administer oxygen. If breathing stops apply CPR and call a physician.

Ingestion: Not likely to occur. However should it occur: **DO NOT INDUCE VOMITING.** Give 1/2 pint of milk to drink. If vomiting takes place naturally, lean victim forward to prevent aspiration into lungs. Aspiration into the lungs may cause chemical pneumontis, which can be fatal. Physician's assessment is mandatory. **Note to Physician: Consult standard literature for Hydrocarbon poison.**

SECTION IX - PREVENTIVE MEASURES

Spills/Leaks: Absorb using inert material (dry clay, commercial sorbents) and collect residue into suitable disposal container.

Waste Disposal: Dispose in approved landfill site or incinerate at licensed waste reclaim facility. Follow all Local, State and Federal Requirements. See Section X for further instructions.

Storage: Contents under pressure. Do not store above 120 F. Store in well ventilated area.

Respiratory Protection: None normally needed - unless atomizing in enclosed space, then use approved NIOSH organic, mist/vapor respirator.

Protective Equipment: Not applicable for aerosol containers.

Hygienic Practices: Wash hands and face with soap and water after use. Launder soiled clothing.

SECTION X - REGULATORY INFORMATION

U.S. Federal Regulations:	Tetrafluoroethane 1, 1, 1, 2	Zinc Compounds
TSCA Inventory:	All components included	Reported/Included
SARA Extreme Hazard:	NO	NO
CERCLA:	NO	NO
SARA Toxic Chemical:	NO	YES
TITLE III Hazard Classification Section 311, 312:		Section 313:
Fire: No	Chronic: Yes	Pressure: Yes
Reactivity: No	Acute: Yes	
		CAS# Name %-Wt.
		Not applicable Zinc Compound < 1

SECTION XI - TRANSPORTATION INFORMATION

TDG Road / Rail Classification:	CONSUMER COMMODITY		
DOT/IMO Label:	NON-FLAMMABLE GAS		
HAZARD CLASS:	2		
AIR-IATA Class:	Aerosols, non-flammable, n.o.s.	Class 2.2	UN1950 Non-flammable gas
	(Each not exceeding 1L capacity)		(Hazard label-green diamond)

Lear Chemical and its affiliates assume no responsibility for injury to anyone caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Lear Chemical Research Corp. and affiliates assume no responsibility for injury to anyone caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee and third persons assume the risk in their use of the material.

Date Issued: July 2005

Prepared by: Lear Chemical Research Corp.



Revision Date: 01/07/2004

Issue date: 01/08/2004

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Hydraulic Jack Oil
Product type: Lubricant
Company address:
Henkel Corporation
1001 Trout Brook Crossing
Rocky Hill, Connecticut 06067

Item number: 30522 / IDH No. 234902
Region: United States
Contact Information:
Telephone: (860) 571-5100
Emergency telephone: (860) 571-5100
Internet: www.loctite.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Distillates (petroleum), solvent-refined heavy paraffinic 64741-88-4	60-100	5 mg/m ³ TWA (mist) 10mg/m ³ STEL (mist)	5 mg/m ³ TWA (mist)	None
1-Hexanol, 2-ethyl 104-76-7	0.0-1	None	None	None
Calcium petroleum sulfonate 61789-86-4	0.1-1	None	None	None
Phosphorodithioic acid, O,O-di-C1-14-dialkyl esters, zinc salts 68649-42-3	0.1-1	None	None	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Liquid	HMIS:	
Color: Amber	HEALTH:	0
Odor: Slight	FLAMMABILITY:	1
	PHYSICAL HAZARD:	0
	Personal Protection:	See Section 8

CAUTION: MAY CAUSE EYE AND SKIN IRRITATION.

Relevant routes of exposure: Skin, Eyes

Potential Health Effects

Inhalation: Harmful effects are not expected from static vapor at ambient temperature. Hydrogen sulphide may be generated when heated above 93.3°C (200°F). This can cause central nervous system effects, nausea, dizziness, confusion, loss of sense of smell, muscle cramps, in-coordination, unconsciousness, coma, respiratory failure or death.

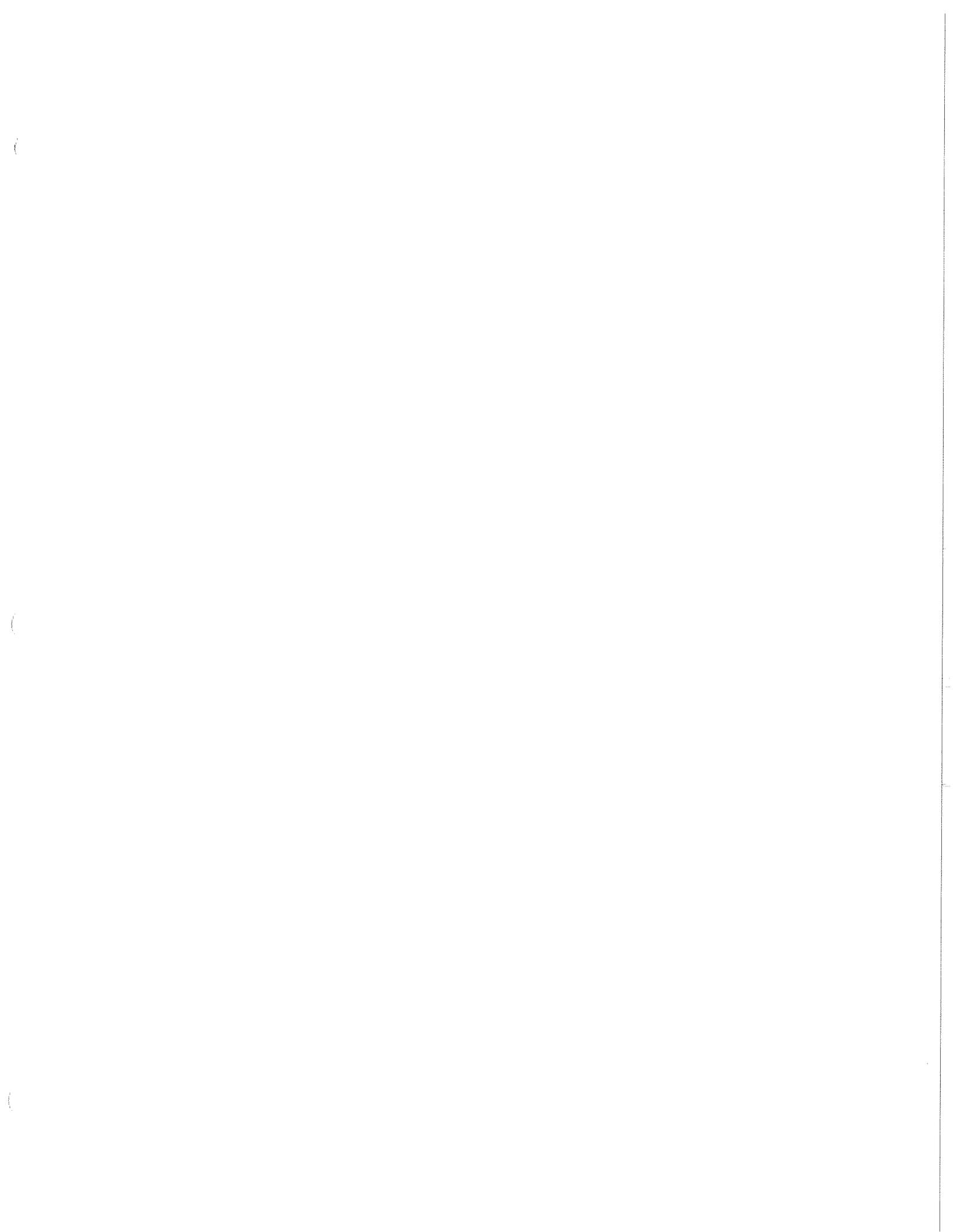
Skin contact: Prolonged or repeated contact may cause irritation. May cause allergic skin reaction.

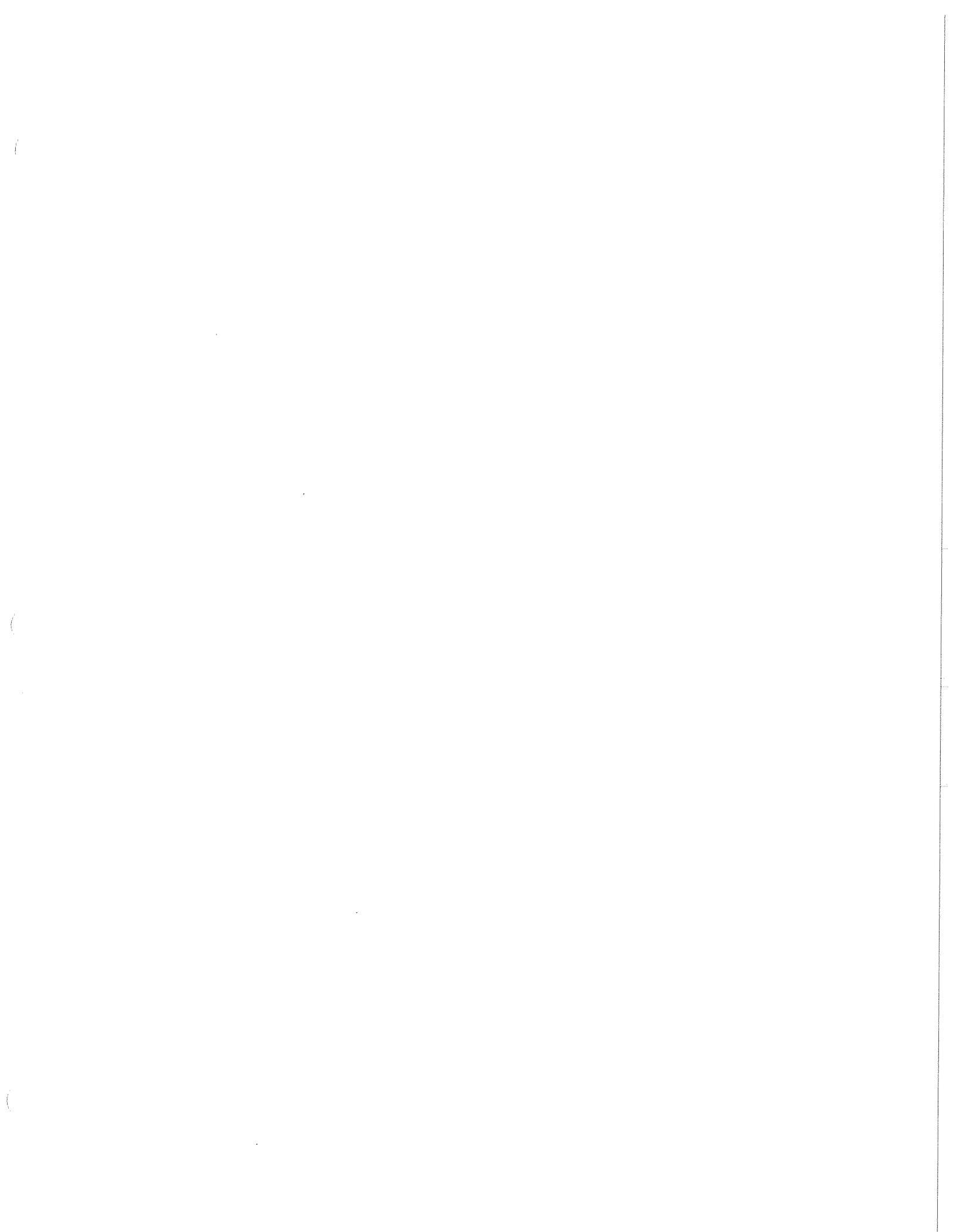
Eye contact: Non-irritating

Ingestion: Not expected to be harmful by ingestion.

Existing conditions aggravated by exposure: Skin disorders. Eye disorders.

See Section 11 for additional toxicological information.





Revision Date: 01/07/2004

Issue date: 01/08/2004

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Hydraulic Jack Oil	Item number: 30522 / IDH No. 234902
Product type: Lubricant	Region: United States
Company address: Henkel Corporation 1001 Trout Brook Crossing Rocky Hill, Connecticut 06067	Contact Information: Telephone: (860) 571-5100 Emergency telephone: (860) 571-5100 Internet: www.loctite.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Distillates (petroleum), solvent-refined heavy paraffinic 64741-88-4	60-100	5 mg/m ³ TWA (mist) 10mg/m ³ STEL (mist)	5 mg/m ³ TWA (mist)	None
1-Hexanol, 2-ethyl 104-76-7	0.0-1	None	None	None
Calcium petroleum sulfonate 61789-86-4	0.1-1	None	None	None
Phosphorodithioic acid, O,O-di-C1-14-dialkyl esters, zinc salts 68649-42-3	0.1-1	None	None	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Liquid
Color: Amber
Odor: Slight

HMIS:

HEALTH: 0
FLAMMABILITY: 1
PHYSICAL HAZARD: 0
Personal Protection: See Section 8

CAUTION: MAY CAUSE EYE AND SKIN IRRITATION.

Relevant routes of exposure: Skin, Eyes

Potential Health Effects

Inhalation: Harmful effects are not expected from static vapor at ambient temperature. Hydrogen sulphide may be generated when heated above 93.3°C (200°F). This can cause central nervous system effects, nausea, dizziness, confusion, loss of sense of smell, muscle cramps, in-coordination, unconsciousness, coma, respiratory failure or death.

Skin contact: Prolonged or repeated contact may cause irritation. May cause allergic skin reaction.

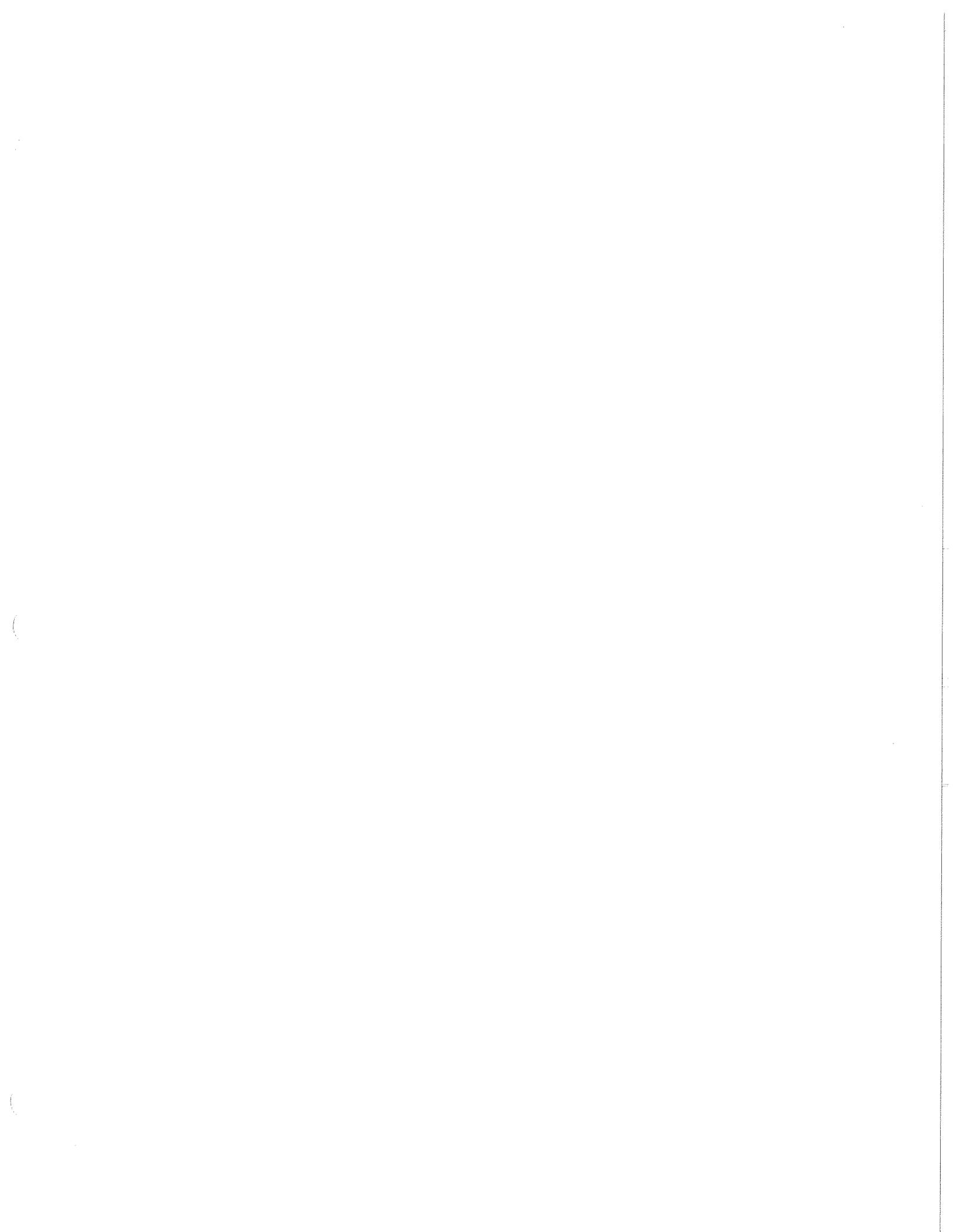
Eye contact: Non-irritating

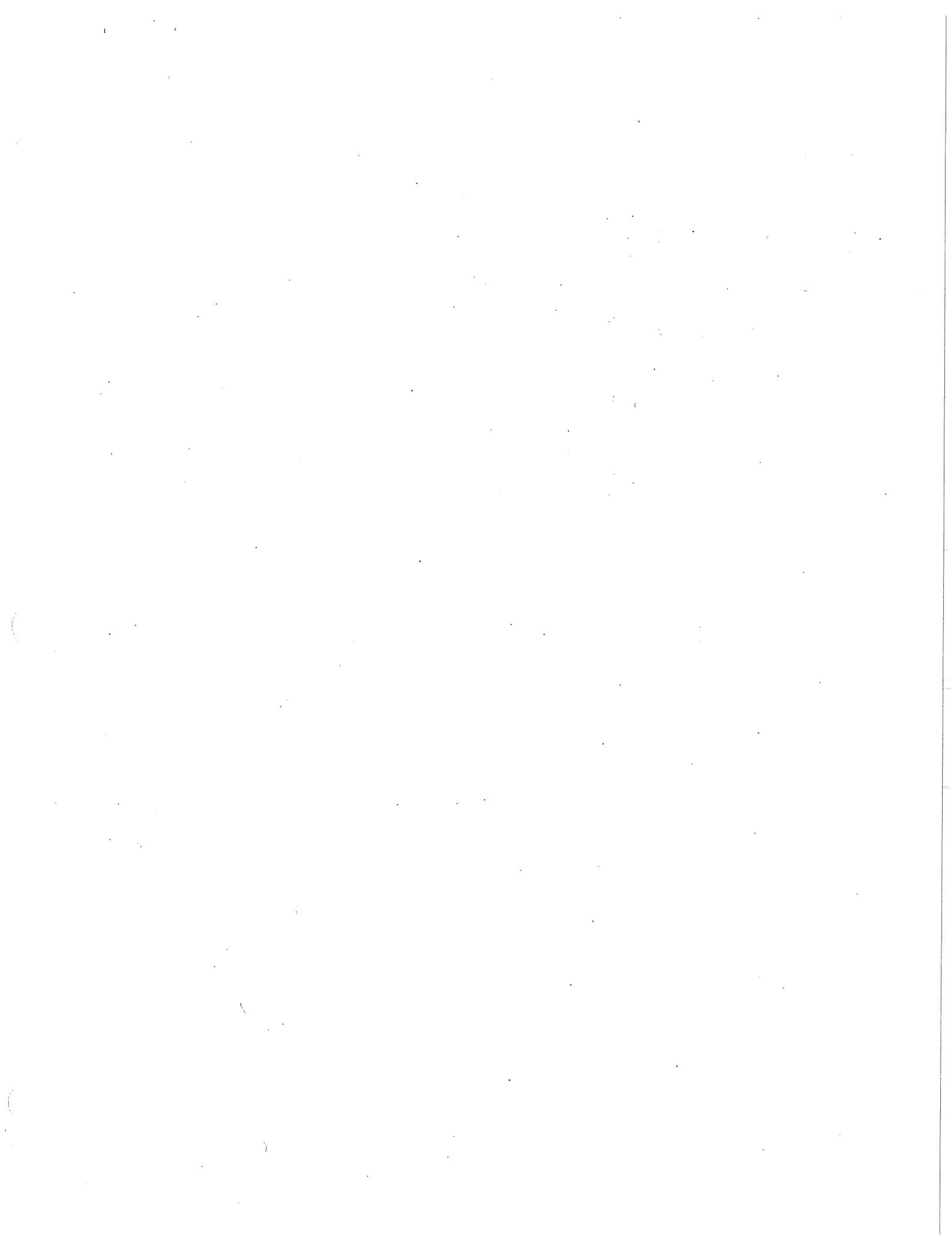
Ingestion: Not expected to be harmful by ingestion.

Existing conditions aggravated by exposure: Skin disorders. Eye disorders.

See Section 11 for additional toxicological information.

Item number: 30522 / IDH No. 234902





Physical state: Liquid
Color: Amber
Odor: Slight
Vapor pressure: Less than 0.0001 mm Hg at 20°C (68°F)
pH: Not applicable
Boiling point/range: Not available
Melting point/range: Not available
Specific gravity: 0.86
Vapor density: Greater than 10 (air equals 1)
Evaporation rate: 1000 (Ether = 1)
Solubility in water: Insoluble
Partition coefficient (n-octanol/water): Not available
VOC content: <1%

10. STABILITY AND REACTIVITY

Stability: Stable.
Hazardous polymerization: Will not occur.
Hazardous decomposition products: Carbon oxides
Incompatibility: Strong oxidizing agents.
Conditions to avoid: None known.

11. TOXICOLOGICAL INFORMATION

Product toxicity data: Acute oral LD50 greater than mg/kg (rat)(estimated).

Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Distillates (petroleum), solvent-refined heavy paraffinic	No	No	No
1-Hexanol, 2-ethyl	No	No	No
Calcium petroleum sulfonate	No	No	No
Phosphorodithioic acid, O,O-di-C1-14-dialkyl esters, zinc salts	No	No	No

Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Distillates (petroleum), solvent-refined heavy paraffinic	Irritant
1-Hexanol, 2-ethyl	Cardiac, Central nervous system, Immune system, Irritant, Kidney, Liver
Calcium petroleum sulfonate	No Target Organs
Phosphorodithioic acid, O,O-di-C1-14-dialkyl esters, zinc salts	No Target Organs

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of in accordance with Federal, State and local regulations.
EPA hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR):
Proper shipping name: Not regulated

Item number: 30522 / IDH No. 234902

Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA):

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG):

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None
Marine pollutant: None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: None.

CERCLA/SARA Section 302 EHS: None.
CERCLA/SARA Section 311/312: None.
CERCLA/SARA 313: None.

California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Domestic Substances List.
WHMIS hazard class: D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections:
Revised to new format.

Prepared by: Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.



Revision Date: 01/25/2006

Issue date: 02/08/2006

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE® THREAD SEALANT WITH PTFE
Product type: Sealant
Company address: Henkel Corporation
1001 Trout Brook Crossing
Rocky Hill, Connecticut 06067

Item No. : 30561 / IDH No. 234956
Region: United States
Contact Information:
Telephone: (860) 571-5100
Emergency telephone: (860) 571-5100
Internet: www.loctite.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

Table with 5 columns: Hazardous components, %, ACGIH TLV, OSHA PEL, OTHER. Rows include Isopropyl alcohol, Talc, Castor Oil, Vinyl terpolymer, Titanium dioxide, Poly(tetrafluoroethylene), and Silica, quartz.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
HMIS:
Physical state: Paste
Color: White
Odor: Alcoholic
HEALTH: 2*
FLAMMABILITY: 3
PHYSICAL HAZARD: 0
Personal Protection: See Section 8
WARNING: FLAMMABLE LIQUID AND VAPOR.
MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Inhalation, Ingestion, Eye contact, Skin contact

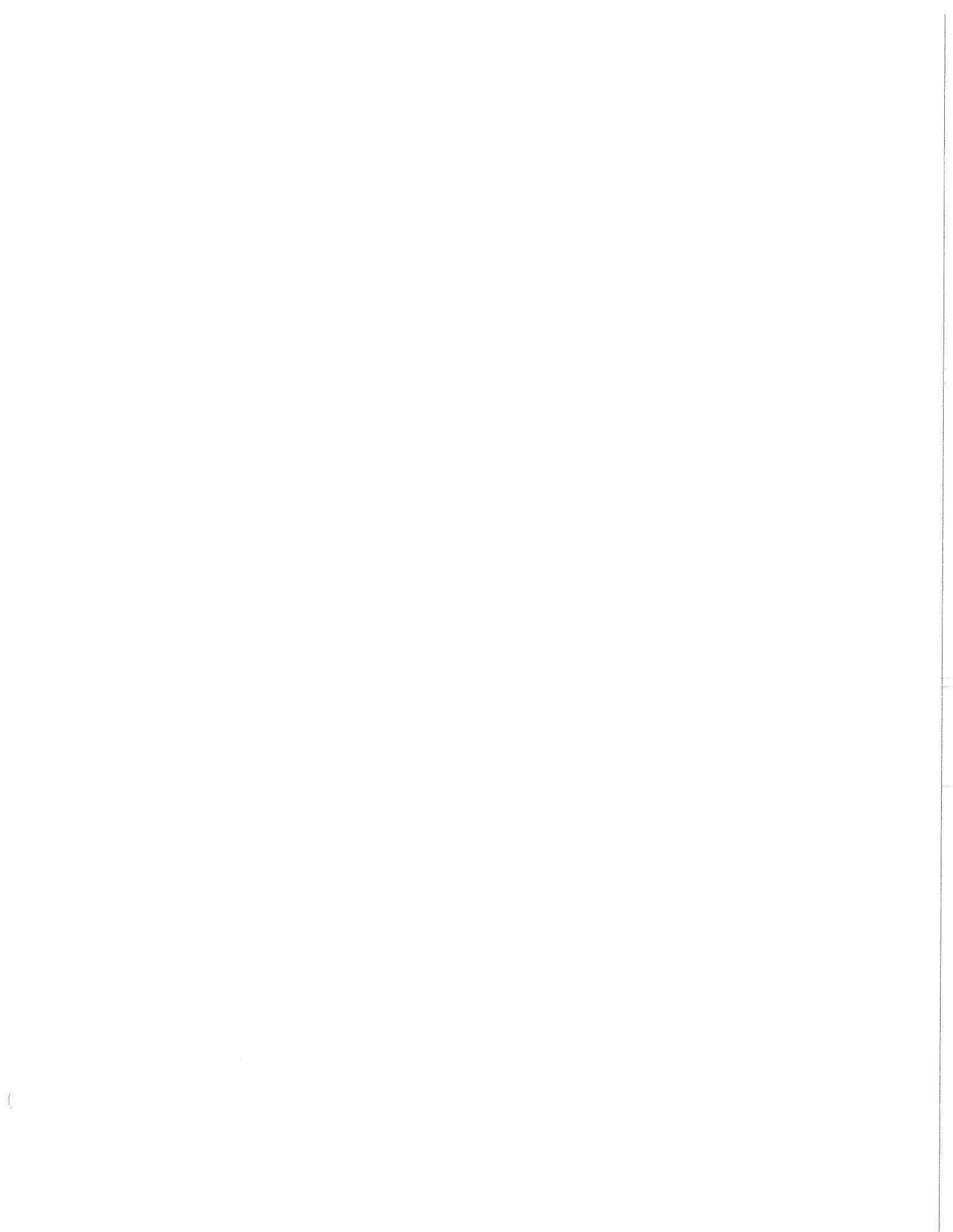
Potential Health Effects

Inhalation: Vapors may cause headaches, nausea, dizziness and respiratory tract irritation.
Skin contact: Irritating to skin.
Eye contact: Vapors may irritate eyes. Contact with eyes will cause irritation.
Ingestion: Contains material that may be slightly toxic.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

Item No. : 30561 / IDH No. 234956

Product name: LOCTITE® THREAD SEALANT WITH PTFE





Revision Date: 01/16/2007

Issue date: 01/17/2007

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: C5-A® Copper Based Anti-Seize Lubricant	Item No. : 51005 / IDH No. 234200
Product type: Lubricant	Region: United States
Company address: Henkel Corporation 1001 Trout Brook Crossing Rocky Hill, Connecticut 06067	Contact Information: Telephone: (860) 571-5100 Emergency telephone: (860) 571-5100 Internet: www.loctite.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	30-60	5 mg/m ³ TWA (mist) 10mg/m ³ STEL (mist)	5 mg/m ³ TWA (mist)	None
Calcium hydroxide 1305-62-0	10-30	5 mg/m ³ TWA	15 mg/m ³ TWA total dust 5 mg/m ³ TWA respirable fraction	None
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6	10-30	5 mg/m ³ TWA (mist) 10mg/m ³ STEL (mist)	5 mg/m ³ TWA (mist)	None
Copper 7440-50-8	10-30	0.2 mg/m ³ TWA 1 mg/m ³ TWA	0.1 mg/m ³ TWA fume 1 mg/m ³ TWA dusts and mists	None
Graphite 7782-42-5	5-10	2 mg/m ³ TWA all forms except graphite fibers	15 mg/m ³ (total), 5 mg/m ³ (respirable)	None
Silica, quartz 14808-60-7	0.1-1	0.025 mg/m ³ TWA respirable fraction	0.1mg/m ³ TWA (respirable)	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Paste
Color: Copper
Odor: Mild petroleum

HMIS:

HEALTH: 1
FLAMMABILITY: 1
PHYSICAL HAZARD: 0
Personal Protection: See Section 8

CAUTION: MAY CAUSE EYE AND SKIN IRRITATION.

Relevant routes of exposure: Skin, Eyes

Potential Health Effects

Inhalation: This product has low volatility and is not expected to cause respiratory tract irritation during normal conditions of use. Inhalation of copper fumes may result in metal fume fever. Symptoms include metallic taste, discoloration of skin or hair.

Skin contact: Prolonged or repeated contact may cause irritation.

Eye contact: Contact with eyes will cause irritation.

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Principal hazard of ingestion is aspiration into the lungs and subsequent pneumonitis.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

Item No. : 51005 / IDH No. 234200

Product name: C5-A® Copper Based Anti-Seize Lubricant

See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

Inhalation:	Remove to fresh air. If discomfort persists seek medical attention.
Skin contact:	Wash with soap and water. Get medical attention if symptoms develop and persist.
Eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Ingestion:	Do not induce vomiting. Aspiration may cause pulmonary edema and pneumonitis. Obtain medical attention.

5. FIRE-FIGHTING MEASURES

Flash point:	Greater than 93°C (200°F) (estimated)
Autoignition temperature:	Not determined
Flammable/Explosive limits-lower %:	Not determined
Flammable/Explosive limits-upper %:	Not determined
Extinguishing media:	Carbon dioxide (CO ₂). Dry chemical. Foam. Water spray.
Special fire fighting procedures:	None
Unusual fire or explosion hazards:	None
Hazardous combustion products:	Oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions:	Do not allow material to contaminate ground water system.
Clean-up methods:	Scrape up as much material as possible. Clean residue with soap and water. Dispose of in accordance with local and national regulations.

7. HANDLING AND STORAGE

Handling:	Keep container closed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.
Storage:	Keep in a cool, well ventilated area.
Incompatible products:	Oxidizing agents.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

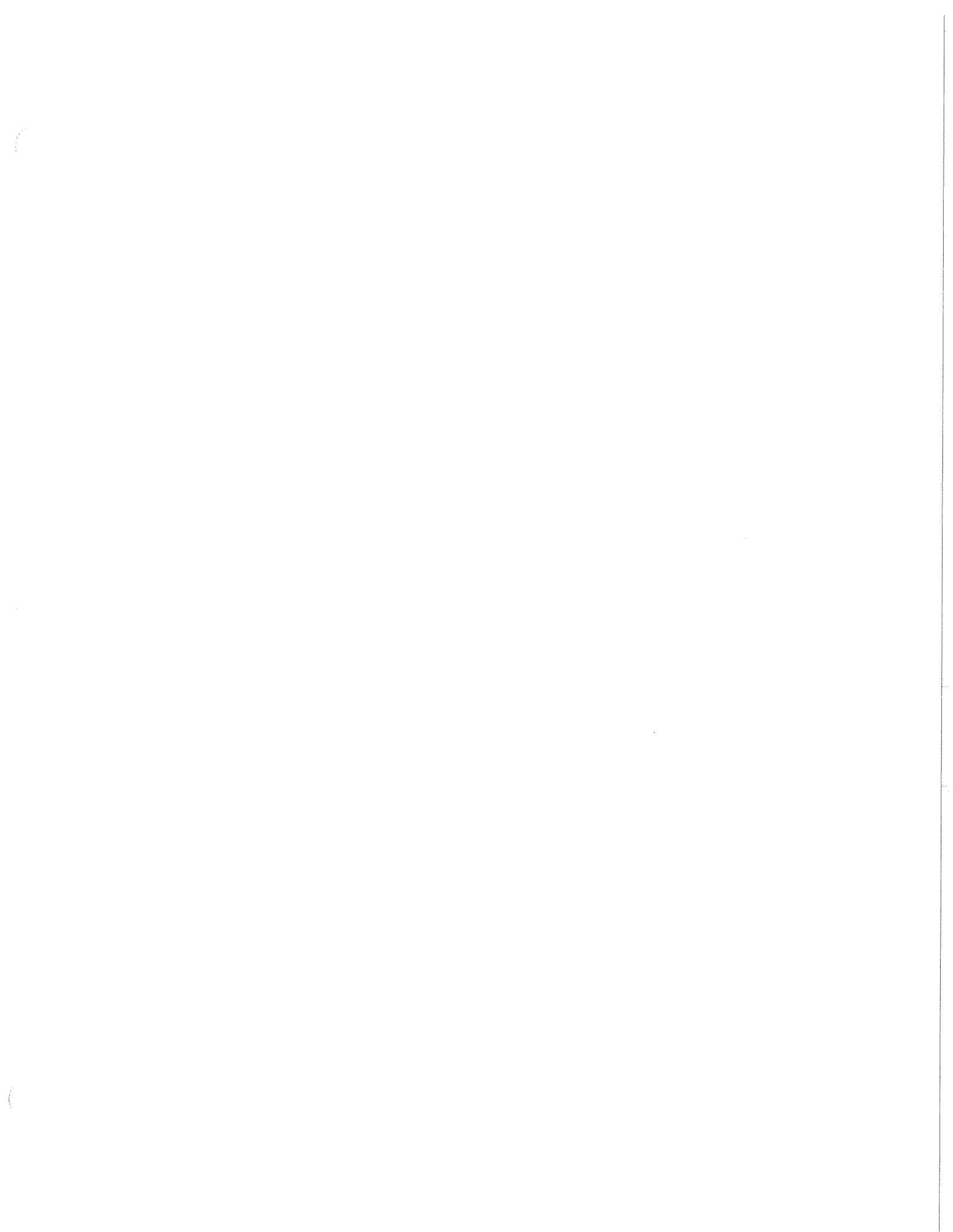
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:	Ensure adequate ventilation. Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.
Respiratory protection:	Use NIOSH approved respirator if there is potential to exceed exposure limit(s). Observe OSHA regulations for respiratory use (29 CFR 1910.134).
Skin protection:	Cover as much of the exposed skin area as possible with appropriate clothing.
Eye/face protection:	Safety glasses with side-shields. Goggles.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Item No. : 51005 / IDH No. 234200





Revision Date: 01/16/2007

Issue date: 01/17/2007

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: C5-A® Copper Based Anti-Seize Lubricant	Item No. : 51005 / IDH No. 234200
Product type: Lubricant	Region: United States
Company address: Henkel Corporation 1001 Trout Brook Crossing Rocky Hill, Connecticut 06067	Contact Information: Telephone: (860) 571-5100 Emergency telephone: (860) 571-5100 Internet: www.loctite.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	30-60	5 mg/m ³ TWA (mist) 10mg/m ³ STEL (mist)	5 mg/m ³ TWA (mist)	None
Calcium hydroxide 1305-62-0	10-30	5 mg/m ³ TWA	15 mg/m ³ TWA total dust 5 mg/m ³ TWA respirable fraction	None
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6	10-30	5 mg/m ³ TWA (mist) 10mg/m ³ STEL (mist)	5 mg/m ³ TWA (mist)	None
Copper 7440-50-8	10-30	0.2 mg/m ³ TWA 1 mg/m ³ TWA	0.1 mg/m ³ TWA fume 1 mg/m ³ TWA dusts and mists	None
Graphite 7782-42-5	5-10	2 mg/m ³ TWA all forms except graphite fibers	15 mg/m ³ (total), 5 mg/m ³ (respirable)	None
Silica, quartz 14808-60-7	0.1-1	0.025 mg/m ³ TWA respirable fraction	0.1mg/m ³ TWA (respirable)	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Paste
Color: Copper
Odor: Mild petroleum

HMIS:

HEALTH: 1
FLAMMABILITY: 1
PHYSICAL HAZARD: 0
Personal Protection: See Section 8

CAUTION: MAY CAUSE EYE AND SKIN IRRITATION.

Relevant routes of exposure: Skin, Eyes

Potential Health Effects

Inhalation: This product has low volatility and is not expected to cause respiratory tract irritation during normal conditions of use. Inhalation of copper fumes may result in metal fume fever. Symptoms include metallic taste, discoloration of skin or hair.

Skin contact: Prolonged or repeated contact may cause irritation.

Eye contact: Contact with eyes will cause irritation.

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Principal hazard of ingestion is aspiration into the lungs and subsequent pneumonitis.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

Item No. : 51005 / IDH No. 234200

Physical state: Paste
 Color: Copper
 Odor: Mild petroleum
 Vapor pressure: Less than 5 mm Hg
 pH: Not applicable
 Boiling point/range: Greater than 260°C (500°F)
 Melting point/range: Not available
 Specific gravity: 1.30
 Vapor density: Heavier than air
 Evaporation rate: Slower than ether.
 Solubility in water: Insoluble.
 Partition coefficient (n-octanol/water): Not determined
 VOC content: Essentially Zero

10. STABILITY AND REACTIVITY

Stability: Stable at normal conditions
 Hazardous polymerization: Will not occur.
 Hazardous decomposition products: Oxides of carbon. Hydrocarbons.
 Incompatibility: Oxidizing agents. Strong acids and strong bases.
 Conditions to avoid: Prolonged exposure to heat.

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	No	No	No
Calcium hydroxide 1305-62-0	No	No	No
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6	No	No	No
Copper 7440-50-8	No	No	No
Graphite 7782-42-5	No	No	No
Silica, quartz 14808-60-7	Known Carcinogen	Group 1	Yes

Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	Irritant
Calcium hydroxide 1305-62-0	Irritant, Corrosive
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6	Irritant
Copper 7440-50-8	Skin, Sensory, Mutagen, Liver, Kidney, Irritant, Immune system, Gastrointestinal, Central nervous system, Blood, Allergen, Developmental
Graphite 7782-42-5	Lung
Silica, quartz 14808-60-7	Some evidence of carcinogenicity, Lung, Immune system

12. ECOLOGICAL INFORMATION

Ecological information: Not available

Item No. : 51005 / IDH No. 234200

See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If discomfort persists seek medical attention.

Skin contact: Wash with soap and water. Get medical attention if symptoms develop and persist.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion: Do not induce vomiting. Aspiration may cause pulmonary edema and pneumonitis. Obtain medical attention.

5. FIRE-FIGHTING MEASURES

Flash point: Greater than 93°C (200°F) (estimated)

Autoignition temperature: Not determined

Flammable/Explosive limits-lower %: Not determined

Flammable/Explosive limits-upper %: Not determined

Extinguishing media: Carbon dioxide (CO₂). Dry chemical. Foam. Water spray.

Special fire fighting procedures: None

Unusual fire or explosion hazards: None

Hazardous combustion products: Oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: Do not allow material to contaminate ground water system.

Clean-up methods: Scrape up as much material as possible. Clean residue with soap and water. Dispose of in accordance with local and national regulations.

7. HANDLING AND STORAGE

Handling: Keep container closed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Storage: Keep in a cool, well ventilated area.

Incompatible products: Oxidizing agents.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Ensure adequate ventilation. Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s). Observe OSHA regulations for respiratory use (29 CFR 1910.134).

Skin protection: Cover as much of the exposed skin area as possible with appropriate clothing.

Eye/face protection: Safety glasses with side-shields. Goggles.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Item No. : 51005 / IDH No. 234200

2 of 4

Product name: C5-A® Copper Based Anti-Seize Lubricant

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.
EPA hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR):

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None
DOT reportable quantity (lbs): Copper (CAS# 7440-50-8) is reportable at 5000 pounds (2700kg)
Marine pollutant: Copper

International Air Transportation (ICAO/IATA):

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG):

Proper shipping name: Environmentally hazardous substances, liquid, n.o.s. (Copper)
Hazard class or division: 9
Identification number: UN3082
Packing group: III
Marine pollutant: Copper

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: None.
CERCLA/SARA Section 302 EHS: None.
CERCLA/SARA Section 311/312: Immediate Health Hazard
CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Copper (CAS# 7440-50-8).
California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

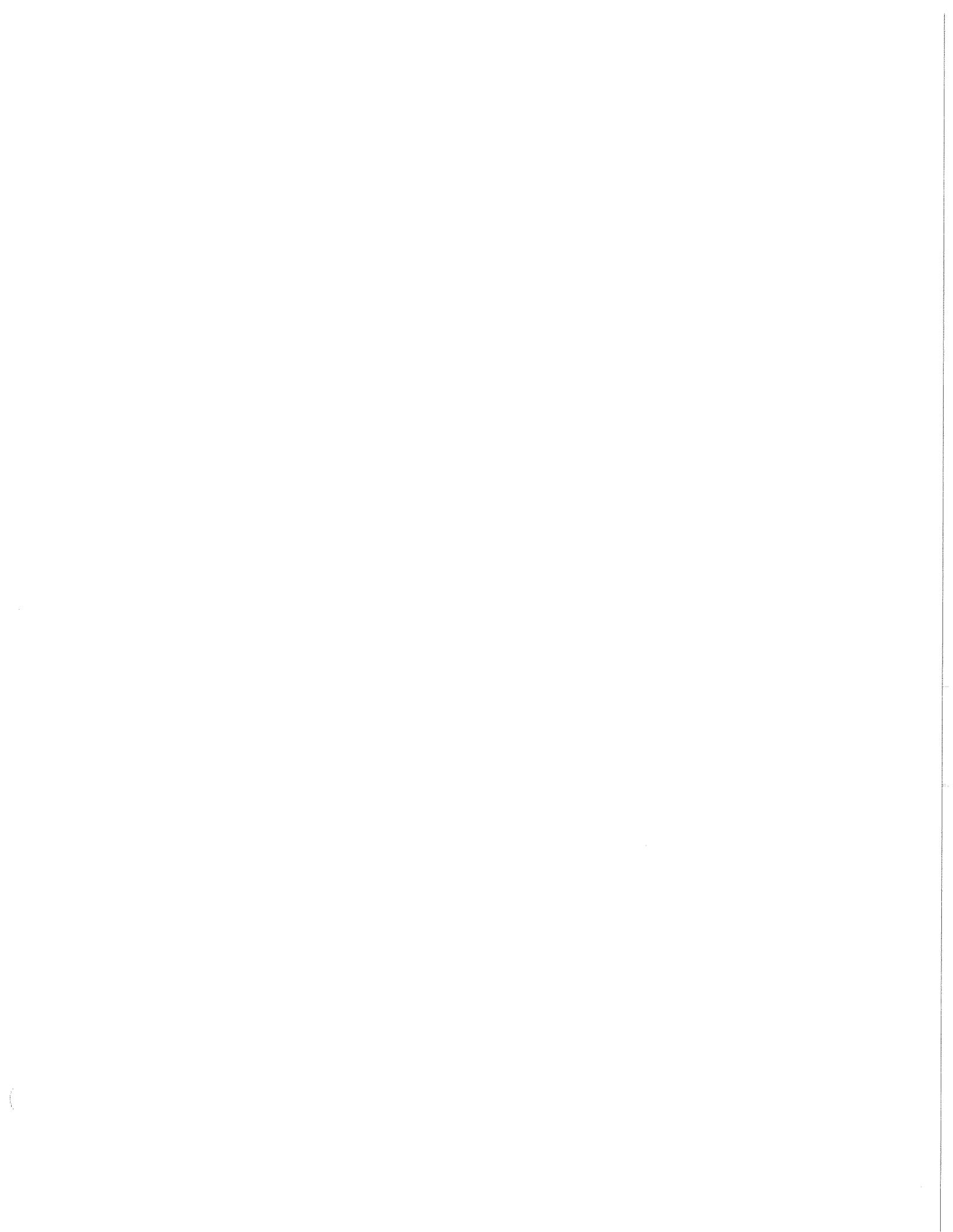
CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Domestic Substances List.
WHMIS hazard class: D.2.A, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: 2,11

Prepared by: Regulatory Affairs

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Revision Date: 06/05/2006

Issue date: 06/05/2006

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Silver Grade Anti-Seize Lubricant
Product type: Lubricant
Company address:
 Henkel Corporation
 1001 Trout Brook Crossing
 Rocky Hill, Connecticut 06067

Item No.: 76764 / IDH No. 235005
Region: United States
Contact Information:
 Telephone: (860) 571-5100
 Emergency telephone: (860) 571-5100
 Internet: www.loctite.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	30-60	5 mg/m ³ TWA (mist) 10mg/m ³ STEL (mist)	5 mg/m ³ TWA (mist)	None
Graphite 7782-42-5	10-30	2 mg/m ³ TWA respirable fraction, all forms except graphite fibers	15 mg/m ³ (total), 5 mg/m ³ (respirable)	None
Calcium oxide 1305-78-8	10-30	2 mg/m ³ TWA	5 mg/m ³ (TWA)	None
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6	10-30	5 mg/m ³ TWA (mist) 10mg/m ³ STEL (mist)	5 mg/m ³ TWA (mist)	None
Aluminum 7429-90-5	5-10	10 mg/m ³ TWA metal dust 5 mg/m ³ TWA as Al	15 mg/m ³ TWA (total), 5 mg/m ³ (respirable)	None
Distillates (petroleum), straight-run middle 64741-44-2	1-5	5 mg/m ³ TWA (mist) 10mg/m ³ STEL (mist)	5 mg/m ³ mist	None
Silica, quartz 14808-60-7	0.1-1	0.05 mg/m ³ TWA respirable fraction	0.1mg/m ³ TWA (respirable)	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Paste
Color: Silver
Odor: Hydrocarbon-like

HMIS:

HEALTH: 1
FLAMMABILITY: 1
PHYSICAL HAZARD: 1
Personal Protection: See Section 8

WARNING: CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: Moderate respiratory tract irritation.
Skin contact: Moderate skin irritation.
Eye contact: Moderate eye irritation.
Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Principal hazard of ingestion is aspiration into the lungs and subsequent pneumonitis.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.
EPA hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR):

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None
DOT reportable quantity (lbs): Copper (CAS# 7440-50-8) is reportable at 5000 pounds (2700kg)
Marine pollutant: Copper

International Air Transportation (ICAO/IATA):

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/MDG):

Proper shipping name: Environmentally hazardous substances, liquid, n.o.s. (Copper)
Hazard class or division: 9
Identification number: UN3082
Packing group: III
Marine pollutant: Copper

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: None.
CERCLA/SARA Section 302 EHS: None.
CERCLA/SARA Section 311/312: Immediate Health Hazard
CERCLA/SARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Copper (CAS# 7440-50-8).
California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Domestic Substances List.
WHMIS hazard class: D.2.A, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: 2,11

Prepared by: Regulatory Affairs

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Existing conditions aggravated by exposure:

Eye, skin, and respiratory disorders.

See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If discomfort persists seek medical attention.

Skin contact: Wash with soap and water. If symptoms persist, obtain medical attention.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion: Do not induce vomiting. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

Flash point: >93°C (>200°F)

Autoignition temperature: Not determined

Flammable/Explosive limits-lower %: Not available

Flammable/Explosive limits-upper %: Not available

Extinguishing media: Carbon dioxide (CO₂). Foam. Dry chemical.

Special fire fighting procedures: None

Unusual fire or explosion hazards: None

Hazardous combustion products: Oxides of carbon. Oxides of nitrogen.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: Prevent further leakage or spillage.

Clean-up methods: Remove all ignition sources. Soak up with inert absorbent. Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Handling: Keep away from heat, spark and flame. Avoid contact with skin and eyes.

Storage: Keep in a cool, well ventilated area.

Incompatible products: No special restrictions on storage with other products.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Skin protection: Neoprene or oil resistant gloves

Eye/face protection: Safety goggles or safety glasses with side shields.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Paste
Color: Silver
Odor: Hydrocarbon-like
Vapor pressure: <5 mmHg @20°C (68° F)
pH: Not applicable
Boiling point/range: Not available
Melting point/range: Not available
Specific gravity: 1.25
Vapor density: Not available
Evaporation rate: Not available
Solubility in water: Insoluble
Partition coefficient (n-octanol/water): Not determined
VOC content: 12.96%; 162 grams/liter

10. STABILITY AND REACTIVITY

Stability: Stable.
Hazardous polymerization: Will not occur.
Hazardous decomposition products: None reasonably foreseeable
Incompatibility: Strong oxidizing agents.
Conditions to avoid: None known.

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	No	No	No
Graphite 7782-42-5	No	No	No
Calcium oxide 1305-78-8	No	No	No
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6	No	No	No
Aluminum 7429-90-5	No	No	No
Distillates (petroleum), straight-run middle 64741-44-2	No	No	No
Silica, quartz 14808-60-7	Known Carcinogen	Group 1	Yes

Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	Irritant
Graphite 7782-42-5	Lung
Calcium oxide 1305-78-8	Irritant, Eyes, Corrosive
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6	Irritant
Aluminum 7429-90-5	Central nervous system, Irritant, Lung
Distillates (petroleum), straight-run middle 64741-44-2	Irritant
Silica, quartz 14808-60-7	Some evidence of carcinogenicity, Lung, Immune system

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

EPA hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR):

Proper shipping name: Unrestricted
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA):

Proper shipping name: Unrestricted
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG):

Proper shipping name: Unrestricted
Hazard class or division: None
Identification number: None
Packing group: None
Marine pollutant: None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: None.

CERCLA/SARA Section 302 EHS: None.
CERCLA/SARA Section 311/312: Immediate Health Hazard
CERCLA/SARA 313: Aluminum (CAS# 7429-90-5) (dust and fumes only).

California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Domestic Substances List.
WHMIS hazard class: D.2.A, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New information added in section(s): 2

Prepared by: Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

MATERIAL SAFETY DATA SHEET

EU31477

03 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	DATE OF PREPARATION	HMIS CODES
EU31477	29-SEP-07	Health 3* Flammability 3 Reactivity 1

PRODUCT NAME
EURO GREEN CATALYST™

MANUFACTURER'S NAME
M. L. CAMPBELL
101 Prospect Ave. N.W.
Cleveland, OH 44115

TELEPHONE NUMBERS and WEBSITES

Product Information
(800) 364-1359 www.mlcampbell.com

Regulatory Information
(216) 566-2902 www.paintdocs.com

Medical Emergency
(216) 566-2917

Transportation Emergency for Chemical Emergency ONLY (spill, leak,
(800) 424-9300 fire, exposure, or accident)

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
5	100-41-4	Ethylbenzene		
		ACGIH TLV	100 ppm	7.1 mm
		ACGIH TLV	125 ppm STEL	
		OSHA PEL	100 ppm	
		OSHA PEL	125 ppm STEL	
27	1330-20-7	Xylene		
		ACGIH TLV	100 ppm	5.9 mm
		ACGIH TLV	150 ppm STEL	
		OSHA PEL	100 ppm	
		OSHA PEL	150 ppm STEL	
18	141-78-6	Ethyl Acetate		
		ACGIH TLV	400 ppm	86 mm
		OSHA PEL	400 ppm	
20	123-86-4	n-Butyl Acetate		
		ACGIH TLV	150 ppm	10 mm
		ACGIH TLV	200 ppm STEL	
		OSHA PEL	150 ppm	
		OSHA PEL	200 ppm STEL	
30	Proprietary	Toluene Diisocyanate Polymer		
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	

Continued on page 2

 Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary, blood forming and reproductive systems.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

May cause allergic respiratory and/or skin reaction in susceptible persons or sensitization. This effect may be delayed several hours after exposure.

Persons sensitive to isocyanates will experience increased allergic reaction on repeated exposure.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

 Section 4 -- FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes.
Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.

INHALATION: If any breathing problems occur during use, LEAVE THE AREA and get fresh air. If problems remain or occur later, IMMEDIATELY get medical attention.

INGESTION: Do not induce vomiting.
Get medical attention immediately.

 Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
25 F PMCC	1.0	10.7

FLAMMABILITY CLASSIFICATION

RED LABEL -- Flammable, Flash below 100 F (38 C)

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

Continued on page 3

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

All personnel in the area should be protected as in Section 8.

Cover spill with absorbent material. Deactivate spilled material with a 10% ammonium hydroxide solution (household ammonia). After 10 minutes, collect in open containers and add more ammonia. Cover loosely. Wash spill area with soap and water.

Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class IB

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are FLAMMABLE. Keep away from heat, sparks, and open flame.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

NO PERSON SHOULD USE THIS PRODUCT, OR BE IN THE AREA WHERE IT IS BEING USED, IF THEY HAVE CHRONIC (LONG-TERM) LUNG OR BREATHING PROBLEMS OR IF THEY EVER HAD A REACTION TO ISOCYANATES.

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

Continued on page 4

RESPIRATORY PROTECTION

Where overspray is present, a positive pressure air supplied respirator (TC19C NIOSH/MSHA approved) should be worn. If unavailable, a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2 may be effective. Follow respirator manufacturer's directions for use. Wear the respirator for the whole time of spraying and until all vapors and mists are gone. NO PERSONS SHOULD BE ALLOWED IN THE AREA WHERE THIS PRODUCT IS BEING USED UNLESS EQUIPPED WITH THE SAME RESPIRATOR PROTECTION RECOMMENDED FOR THE PAINTERS.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

To prevent skin contact, wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PROTECTIVE EQUIPMENT

Use barrier cream on exposed skin.

OTHER PRECAUTIONS

This product must be mixed with other components before use. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS.

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	7.93 lb/gal	950 g/l
SPECIFIC GRAVITY	0.95	
BOILING POINT	163 - 292 F	72 - 144 C
MELTING POINT	Not Available	
VOLATILE VOLUME	76 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
5.54 lb/gal	664 g/l	Less Water and Federally Exempt Solvents
5.54 lb/gal	664 g/l	Emitted VOC

Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

Contamination with Water, Alcohols, Amines and other compounds which react with isocyanates, may result in dangerous pressure in, and possible bursting of, closed containers.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

Continued on page 5

 Section 11 -- TOXICOLOGICAL INFORMATION

 CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

 TOXICOLOGY DATA

CAS No.	Ingredient Name				
100-41-4	Ethylbenzene	LC50	RAT	4HR	Not Available
		LD50	RAT		3500 mg/kg
1330-20-7	Xylene	LC50	RAT	4HR	5000 ppm
		LD50	RAT		4300 mg/kg
141-78-6	Ethyl Acetate	LC50	RAT	4HR	Not Available
		LD50	RAT		5600 mg/kg
123-86-4	n-Butyl Acetate	LC50	RAT	4HR	2000 ppm
		LD50	RAT		13100 mg/kg
Proprietary	Toluene Diisocyanate Polymer	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

 Section 12 -- ECOLOGICAL INFORMATION

 ECOTOXICOLOGICAL INFORMATION

No data available.

 Section 13 -- DISPOSAL CONSIDERATIONS

 WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Continued on page 6

 Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)

1 Gallon and Less may be Classed as CONSUMER COMMODITY, ORM-D
 Larger Containers are Regulated as:
 UN1263, PAINT RELATED MATERIAL, 3, PG II, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities

n-Butyl acetate 5000 lb RQ
 Ethyl benzene 1000 lb RQ
 Ethylacetate 5000 lb RQ
 Xylenes (isomers and mixture) 100 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):

RQ, UN1263, PAINT RELATED MATERIAL, 3, PG II, (XYLENES (ISOMERS AND MIXTURE)), (ERG#128)

Canada (TDG)

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG II, (ERG#128)

IMO

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG II, (-4 C c.c.), EmS F-E, S-E

 Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
100-41-4	Ethylbenzene	5	
1330-20-7	Xylene	27	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
 TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

 Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

EU30374
03 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	DATE OF PREPARATION	HMIS CODES
EU30374	17-OCT-07	Health 2* Flammability 3 Reactivity 0

PRODUCT NAME
EUROBILD™ Clear 2K Polyurethane, Clear Satin

MANUFACTURER'S NAME
M. L. CAMPBELL
101 Prospect Ave. N.W.
Cleveland, OH 44115

TELEPHONE NUMBERS and WEBSITES

Product Information
(800) 364-1359 www.mlcampbell.com

Regulatory Information
(216) 566-2902 www.paintdocs.com

Medical Emergency
(216) 566-2917

Transportation Emergency for Chemical Emergency ONLY (spill, leak,
(800) 424-9300 fire, exposure, or accident)

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
6	100-41-4	Ethylbenzene		
		ACGIH TLV	100 ppm	7.1 mm
		ACGIH TLV	125 ppm STEL	
		OSHA PEL	100 ppm	
		OSHA PEL	125 ppm STEL	
33	1330-20-7	Xylene		
		ACGIH TLV	100 ppm	5.9 mm
		ACGIH TLV	150 ppm STEL	
		OSHA PEL	100 ppm	
		OSHA PEL	150 ppm STEL	
9	123-86-4	n-Butyl Acetate		
		ACGIH TLV	150 ppm	10 mm
		ACGIH TLV	200 ppm STEL	
		OSHA PEL	150 ppm	
		OSHA PEL	200 ppm STEL	
3	98516-30-4	Ethoxypropyl Acetate		
		ACGIH TLV	Not Available	1.73 mm
		OSHA PEL	Not Available	

Continued on page 2

 Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary, blood forming and reproductive systems.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

May cause allergic respiratory and/or skin reaction in susceptible persons or sensitization. This effect may be delayed several hours after exposure.

Persons sensitive to isocyanates will experience increased allergic reaction on repeated exposure.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

 Section 4 -- FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water. Remove contaminated clothing and launder before re-use.

INHALATION: If any breathing problems occur during use, LEAVE THE AREA and get fresh air. If problems remain or occur later, IMMEDIATELY get medical attention.

INGESTION: Do not induce vomiting. Get medical attention immediately.

 Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
73 F PMCC	1.0	9.8

FLAMMABILITY CLASSIFICATION

RED LABEL -- Flammable, Flash below 100 F (38 C)

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

Continued on page 3

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class IC

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are FLAMMABLE. Keep away from heat, sparks, and open flame.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

NO PERSON SHOULD USE THIS PRODUCT, OR BE IN THE AREA WHERE IT IS BEING USED, IF THEY HAVE CHRONIC (LONG-TERM) LUNG OR BREATHING PROBLEMS OR IF THEY EVER HAD A REACTION TO ISOCYANATES.

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

Where overspray is present, a positive pressure air supplied respirator (TC19C NIOSH/MSHA approved) should be worn. If unavailable, a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2 may be effective. Follow respirator manufacturer's directions for use. Wear the respirator for the whole time of spraying and until all vapors and mists are gone. NO PERSONS SHOULD BE ALLOWED IN THE AREA WHERE THIS PRODUCT IS BEING USED UNLESS EQUIPPED WITH THE SAME RESPIRATOR PROTECTION RECOMMENDED FOR THE PAINTERS.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

To prevent skin contact, wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PROTECTIVE EQUIPMENT

Use barrier cream on exposed skin.

OTHER PRECAUTIONS

This product must be mixed with other components before use. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS.

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	8.26 lb/gal	989 g/l
SPECIFIC GRAVITY	0.99	
BOILING POINT	255 - 317 F	123 - 158 C
MELTING POINT	Not Available	
VOLATILE VOLUME	58 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
4.21 lb/gal	504 g/l	Less Water and Federally Exempt Solvents
4.21 lb/gal	504 g/l	Emitted VOC

Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

Continued on page 5

Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

TOXICOLOGY DATA

CAS No.	Ingredient Name				
100-41-4	Ethylbenzene	LC50	RAT	4HR	Not Available
		LD50	RAT		3500 mg/kg
1330-20-7	Xylene	LC50	RAT	4HR	5000 ppm
		LD50	RAT		4300 mg/kg
123-86-4	n-Butyl Acetate	LC50	RAT	4HR	2000 ppm
		LD50	RAT		13100 mg/kg
98516-30-4	Ethoxypropyl Acetate	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Continued on page 6

 Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)

1 Gallon and Less may be Classed as CONSUMER COMMODITY, ORM-D
 Larger Containers are Regulated as:
 UN1263, PAINT, 3, PG III, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities
 Ethyl benzene 1000 lb RQ
 Xylenes (isomers and mixture) 100 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):
 RQ, UN1263, PAINT, 3, PG III, (XYLENES (ISOMERS AND MIXTURE)),
 (ERG#128)

Canada (TDG)

UN1263, PAINT, CLASS 3, PG III, LIMITED QUANTITY, (ERG#128)

IMO

UN1263, PAINT, CLASS 3, PG III, (23 C c.c.), EmS F-E, S-E

 Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
100-41-4	Ethylbenzene	6	
1330-20-7	Xylene	33	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
 TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

 Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

EU31197

03 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	DATE OF PREPARATION	HMIS CODES
EU31197	29-SEP-07	Health 2 Flammability 3 Reactivity 0

PRODUCT NAME
EURO REDUCER™ Polyurethane Reducer

MANUFACTURER'S NAME
M. L. CAMPBELL
101 Prospect Ave. N.W.
Cleveland, OH 44115

TELEPHONE NUMBERS and WEBSITES

Product Information	(800) 364-1359	www.mlcampbell.com
Regulatory Information	(216) 566-2902	www.paintdocs.com
Medical Emergency	(216) 566-2917	
Transportation Emergency	(800) 424-9300	for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
15	141-78-6	Ethyl Acetate		
		ACGIH TLV	400 ppm	86 mm
		OSHA PEL	400 ppm	
80	123-86-4	n-Butyl Acetate		
		ACGIH TLV	150 ppm	10 mm
		ACGIH TLV	200 ppm STEL	
		OSHA PEL	150 ppm	
		OSHA PEL	200 ppm STEL	
5	628-63-7	Amyl Acetate		
		ACGIH TLV	100 ppm	4 mm
		OSHA PEL	100 ppm	

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

Continued on page 2

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to blood forming systems.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

Section 4 -- FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes.
Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.

INHALATION: If affected, remove from exposure. Restore breathing.
Keep warm and quiet.

INGESTION: Do not induce vomiting.
Get medical attention immediately.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
24 F PMCC	1.1	10.7

FLAMMABILITY CLASSIFICATION

RED LABEL -- Flammable, Flash below 100 F (38 C)

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Continued on page 3

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class IB

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are FLAMMABLE. Keep away from heat, sparks, and open flame.
During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	7.33 lb/gal	878 g/l
SPECIFIC GRAVITY	0.88	
BOILING POINT	163 - 306 F	72 - 152 C
MELTING POINT	Not Available	
VOLATILE VOLUME	100 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS	(VOC Theoretical - As Packaged)	
7.33 lb/gal	878 g/l	Less Water and Federally Exempt Solvents
7.33 lb/gal	878 g/l	Emitted VOC

Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

CAS No.	Ingredient Name				
141-78-6	Ethyl Acetate	LC50	RAT	4HR	Not Available
		LD50	RAT		5600 mg/kg
123-86-4	n-Butyl Acetate	LC50	RAT	4HR	2000 ppm
		LD50	RAT		13100 mg/kg
628-63-7	Amyl Acetate	LC50	RAT	4HR	Not Available
		LD50	RAT		6500 mg/kg

Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

Continued on page 5

 Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)

1 Gallon and Less may be Classed as CONSUMER COMMODITY, ORM-D

Larger Containers are Regulated as:

UN1263, PAINT RELATED MATERIAL, 3, PG II, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities
n-Butyl acetate 5000 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):

UN1263, PAINT RELATED MATERIAL, 3, PG II, (ERG#128)

Canada (TDG)

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG II, (ERG#128)

IMO

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG II, (-4 C c.c.), EmS F-E,
S-E

Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
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No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

CALIFORNIA PROPOSITION 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Continued on page 6

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

EU31297
02 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	DATE OF PREPARATION	HMIS CODES
EU31297	29-SEP-07	Health 2 Flammability 3 Reactivity 0

PRODUCT NAME
EURO Retarder™ Polyurethane Retarder

MANUFACTURER'S NAME
M. L. CAMPBELL
101 Prospect Ave. N.W.
Cleveland, OH 44115

TELEPHONE NUMBERS and WEBSITES

Product Information
(800) 364-1359 www.mlcampbell.com
Regulatory Information
(216) 566-2902 www.paintdocs.com
Medical Emergency
(216) 566-2917
Transportation Emergency for Chemical Emergency ONLY (spill, leak,
(800) 424-9300 fire, exposure, or accident)

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
75	123-86-4	n-Butyl Acetate		
		ACGIH TLV	150 ppm	10 mm
		ACGIH TLV	200 ppm STEL	
		OSHA PEL	150 ppm	
		OSHA PEL	200 ppm STEL	
25	628-63-7	Amyl Acetate		
		ACGIH TLV	100 ppm	4 mm
		OSHA PEL	100 ppm	

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to blood forming systems.

Continued on page 2

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

Section 4 -- FIRST AID MEASURES

- EYES:** Flush eyes with large amounts of water for 15 minutes.
Get medical attention.
- SKIN:** Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
- INHALATION:** If affected, remove from exposure. Restore breathing.
Keep warm and quiet.
- INGESTION:** Do not induce vomiting.
Get medical attention immediately.
-

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT LEL UEL
76 F PMCC 1.1 7.6

FLAMMABILITY CLASSIFICATION
RED LABEL -- Flammable, Flash below 100 F (38 C)

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

 Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class IC

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are FLAMMABLE. Keep away from heat, sparks, and open flame.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

 Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

 Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	7.31 lb/gal	875 g/l
SPECIFIC GRAVITY	0.88	
BOILING POINT	255 - 306 F	123 - 152 C
MELTING POINT	Not Available	
VOLATILE VOLUME	100 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS	(VOC Theoretical - As Packaged)	
7.30 lb/gal	875 g/l	Less Water and Federally Exempt Solvents
7.30 lb/gal	875 g/l	Emitted VOC

Continued on page 4

 Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable
 CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

 Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

CAS No.	Ingredient Name					
123-86-4	n-Butyl Acetate	LC50	RAT	4HR	2000	ppm
		LD50	RAT		13100	mg/kg
628-63-7	Amyl Acetate	LC50	RAT	4HR	Not Available	
		LD50	RAT		6500	mg/kg

 Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

 Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Continued on page 5

 Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)

1 Gallon and Less may be Classed as CONSUMER COMMODITY, ORM-D
 Larger Containers are Regulated as:
 UN1263, PAINT RELATED MATERIAL, 3, PG III, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities
 Amyl acetate 5000 lb RQ
 n-Butyl acetate 5000 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):
 UN1263, PAINT RELATED MATERIAL, 3, PG III, (ERG#128)

Canada (TDG)

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG III, LIMITED QUANTITY,
 (ERG#128)

IMO

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG III, (24 C c.c.), EmS F-E,
 S-E

 Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
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No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

 Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

WR5024
02 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	DATE OF PREPARATION	HMIS CODES
WR5024	02-SEP-07	Health 1 Flammability 1 Reactivity 0

PRODUCT NAME
AQUASTAR Water Borne Flow Additive

MANUFACTURER'S NAME
M. L. CAMPBELL
101 Prospect Ave. N.W.
Cleveland, OH 44115

TELEPHONE NUMBERS and WEBSITES

Product Information
(800) 364-1359 www.mlcampbell.com
Regulatory Information
(216) 566-2902 www.paintdocs.com
Medical Emergency
(216) 566-2917
Transportation Emergency for Chemical Emergency ONLY (spill, leak,
(800) 424-9300 fire, exposure, or accident)

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
No ingredients in this product are hazardous as defined by the Department of Labor.				

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.
In a confined area vapors in high concentration may cause headache, nausea or dizziness.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

 Section 4 -- FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes.
Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.

INHALATION: If affected, remove from exposure. Restore breathing.
Keep warm and quiet.

INGESTION: Do not induce vomiting.
Get medical attention immediately.

 Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
200 F PMCC	2.6	12.5

FLAMMABILITY CLASSIFICATION

Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

 Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

 Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class IIIB

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

 Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.

Continued on page 3

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	8.49 lb/gal	1017 g/l
SPECIFIC GRAVITY	1.02	
BOILING POINT	212 - 369 F	100 - 187 C
MELTING POINT	Not Available	
VOLATILE VOLUME	100 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	7.0	
VOLATILE ORGANIC COMPOUNDS	(VOC Theoretical - As Packaged)	
8.62 lb/gal	1032 g/l	Less Water and Federally Exempt Solvents
5.09 lb/gal	610 g/l	Emitted VOC

Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA

CAS No.	Ingredient Name
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No LC50 or LD50 data available.

Continued on page 4

Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)

Not Regulated for Transportation.

Canada (TDG)

Not Regulated for Transportation.

IMO

Not Regulated for Transportation.

Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
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No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

C59810
14 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	DATE OF PREPARATION	HMIS CODES	
C59810	29-SEP-07	Health	2
		Flammability	0
		Reactivity	0

PRODUCT NAME
ULTRASTAR™ Water Borne Clear Lacquer, Sanding Sealer

MANUFACTURER'S NAME
M. L. CAMPBELL
101 Prospect Ave. N.W.
Cleveland, OH 44115

TELEPHONE NUMBERS and WEBSITES

Product Information
(800) 364-1359 www.mlcampbell.com
Regulatory Information
(216) 566-2902 www.paintdocs.com
Medical Emergency
(216) 566-2917
Transportation Emergency for Chemical Emergency ONLY (spill, leak,
(800) 424-9300 fire, exposure, or accident)

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
1	95-63-6	1,2,4-Trimethylbenzene		
		ACGIH TLV	25 ppm	2.03 mm
		OSHA PEL	25 ppm	
3	107-98-2	1-Methoxy-2-propanol		
		ACGIH TLV	100 ppm	10.9 mm
		ACGIH TLV	150 ppm STEL	
		OSHA PEL	100 ppm	
		OSHA PEL	150 ppm STEL	
2	34590-94-8	2-Methoxymethylethoxypropanol		
		ACGIH TLV	100 ppm (Skin)	0.4 mm
		ACGIH TLV	150 ppm (Skin) STEL	
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

Continued on page 2

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary and reproductive systems.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

Section 4 -- FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes.
Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.

INHALATION: If affected, remove from exposure. Restore breathing.
Keep warm and quiet.

INGESTION: Do not induce vomiting.
Get medical attention immediately.

Section 5 -- FIRE FIGHTING MEASURES**FLASH POINT**

Not Applicable

LEL

UEL

N.A.

N.A.

FLAMMABILITY CLASSIFICATION

Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

Continued on page 3

 Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

 Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

 Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	8.47 lb/gal	1014 g/l
SPECIFIC GRAVITY	1.02	
BOILING POINT	212 - 357 F	100 - 180 C
MELTING POINT	Not Available	
VOLATILE VOLUME	75 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	8.4	
VOLATILE ORGANIC COMPOUNDS	(VOC Theoretical - As Packaged)	
2.09 lb/gal	250 g/l	Less Water and Federally Exempt Solvents
0.71 lb/gal	86 g/l	Emitted VOC

Continued on page 4

 Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable
 CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

 Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA

CAS No.	Ingredient Name				
95-63-6	1,2,4-Trimethylbenzene	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
107-98-2	1-Methoxy-2-propanol	LC50	RAT	4HR	Not Available
		LD50	RAT		6600. mg/kg
34590-94-8	2-Methoxymethylethoxypropanol	LC50	RAT	4HR	Not Available
		LD50	RAT		5135 mg/kg

 Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

 Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Continued on page 5

 Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)

Not Regulated for Transportation.

Canada (TDG)

Not Regulated for Transportation.

IMO

Not Regulated for Transportation.

 Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
95-63-6	1,2,4-Trimethylbenzene	1	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

 Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

EU31477
03 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	DATE OF PREPARATION	HMIS CODES	
EU31477	13-MAY-08	Health	3*
		Flammability	3
		Reactivity	1
PRODUCT NAME			
EURO GREEN CATalyst™			

MANUFACTURER'S NAME
M. L. CAMPBELL
101 Prospect Ave. N.W.
Cleveland, OH 44115

TELEPHONE NUMBERS and WEBSITES

Product Information	(800) 364-1359	www.mlcampbell.com
Regulatory Information	(216) 566-2902	www.paintdocs.com
Medical Emergency	(216) 566-2917	
Transportation Emergency	(800) 424-9300	for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
5	100-41-4	Ethylbenzene		
		ACGIH TLV	100 ppm	7.1 mm
		ACGIH TLV	125 ppm STEL	
		OSHA PEL	100 ppm	
		OSHA PEL	125 ppm STEL	
27	1330-20-7	Xylene		
		ACGIH TLV	100 ppm	5.9 mm
		ACGIH TLV	150 ppm STEL	
		OSHA PEL	100 ppm	
		OSHA PEL	150 ppm STEL	
18	141-78-6	Ethyl Acetate		
		ACGIH TLV	400 ppm	86 mm
		OSHA PEL	400 ppm	
20	123-86-4	n-Butyl Acetate		
		ACGIH TLV	150 ppm	10 mm
		ACGIH TLV	200 ppm STEL	
		OSHA PEL	150 ppm	
		OSHA PEL	200 ppm STEL	
30	Proprietary	Toluene Diisocyanate Polymer		
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	

 Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary, blood forming and reproductive systems.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

May cause allergic respiratory and/or skin reaction in susceptible persons or sensitization. This effect may be delayed several hours after exposure.

Persons sensitive to isocyanates will experience increased allergic reaction on repeated exposure.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

 Section 4 -- FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes.
Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.

INHALATION: If any breathing problems occur during use, LEAVE THE AREA and get fresh air. If problems remain or occur later, IMMEDIATELY get medical attention.

INGESTION: Do not induce vomiting.
Get medical attention immediately.

 Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
25 F PMCC	1.0	10.7

FLAMMABILITY CLASSIFICATION

RED LABEL -- Flammable, Flash below 100 F (38 C)

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

Continued on page 3

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

All personnel in the area should be protected as in Section 8.

Cover spill with absorbent material. Deactivate spilled material with a 10% ammonium hydroxide solution (household ammonia). After 10 minutes, collect in open containers and add more ammonia. Cover loosely. Wash spill area with soap and water.

Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class IB

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are **FLAMMABLE**. Keep away from heat, sparks, and open flame.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

NO PERSON SHOULD USE THIS PRODUCT, OR BE IN THE AREA WHERE IT IS BEING USED, IF THEY HAVE CHRONIC (LONG-TERM) LUNG OR BREATHING PROBLEMS OR IF THEY EVER HAD A REACTION TO ISOCYANATES.

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist. Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

Where overspray is present, a positive pressure air supplied respirator (TC19C NIOSH/MSHA approved) should be worn. If unavailable, a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2 may be effective. Follow respirator manufacturer's directions for use. Wear the respirator for the whole time of spraying and until all vapors and mists are gone. NO PERSONS SHOULD BE ALLOWED IN THE AREA WHERE THIS PRODUCT IS BEING USED UNLESS EQUIPPED WITH THE SAME RESPIRATOR PROTECTION RECOMMENDED FOR THE PAINTERS.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

To prevent skin contact, wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PROTECTIVE EQUIPMENT

Use barrier cream on exposed skin.

OTHER PRECAUTIONS

This product must be mixed with other components before use. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS.

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	7.93 lb/gal	950 g/l
SPECIFIC GRAVITY	0.95	
BOILING POINT	163 - 292 F	72 - 144 C
MELTING POINT	Not Available	
VOLATILE VOLUME	76 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS	(VOC Theoretical - As Packaged)	
5.54 lb/gal	664 g/l	Less Water and Federally Exempt Solvents
5.54 lb/gal	664 g/l	Emitted VOC

Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

Contamination with Water, Alcohols, Amines and other compounds which react with isocyanates, may result in dangerous pressure in, and possible bursting of, closed containers.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

Continued on page 5

Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

TOXICOLOGY DATA

CAS No.	Ingredient Name				
100-41-4	Ethylbenzene	LC50	RAT	4HR	Not Available
		LD50	RAT		3500 mg/kg
1330-20-7	Xylene	LC50	RAT	4HR	5000 ppm
		LD50	RAT		4300 mg/kg
141-78-6	Ethyl Acetate	LC50	RAT	4HR	Not Available
		LD50	RAT		5600 mg/kg
123-86-4	n-Butyl Acetate	LC50	RAT	4HR	2000 ppm
		LD50	RAT		13100 mg/kg
Proprietary	Toluene Diisocyanate Polymer	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Continued on page 6

 Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)

1 Gallon and Less may be Classed as CONSUMER COMMODITY, ORM-D
 Larger Containers are Regulated as:
 UN1263, PAINT RELATED MATERIAL, 3, PG II, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities
 n-Butyl acetate 5000 lb RQ
 Ethyl benzene 1000 lb RQ
 Ethylacetate 5000 lb RQ
 Xylenes (isomers and mixture) 100 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):
 RQ, UN1263, PAINT RELATED MATERIAL, 3, PG II, (XYLENES (ISOMERS AND
 MIXTURE)), (ERG#128)

Canada (TDG)

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG II, (ERG#128)

IMO

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG II, (-4 C c.c.), EmS F-E,
 S-E

 Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
100-41-4	Ethylbenzene	5	
1330-20-7	Xylene	27	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of
 California to cause cancer and birth defects or other reproductive harm.
 TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing,
 on the TSCA Inventory.

 Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria
 of the Canadian Controlled Products Regulations (CPR) and the MSDS contains
 all of the information required by the CPR.

The above information pertains to this product as currently formulated,
 and is based on the information available at this time. Addition of
 reducers or other additives to this product may substantially alter the
 composition and hazards of the product. Since conditions of use are
 outside our control, we make no warranties, express or implied, and assume
 no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

EU30374
03 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	DATE OF PREPARATION	HMIS CODES
EU30374	13-MAY-08	Health 2* Flammability 3 Reactivity 0

PRODUCT NAME
EUROBILD™ Clear 2K Polyurethane, Clear Satin

MANUFACTURER'S NAME
M. L. CAMPBELL
101 Prospect Ave. N.W.
Cleveland, OH 44115

TELEPHONE NUMBERS and WEBSITES

Product Information (800) 364-1359	www.mlcampbell.com
Regulatory Information (216) 566-2902	www.paintdocs.com
Medical Emergency (216) 566-2917	
Transportation Emergency (800) 424-9300	for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
6	100-41-4	Ethylbenzene		
		ACGIH TLV	100 ppm	7.1 mm
		ACGIH TLV	125 ppm STEL	
		OSHA PEL	100 ppm	
		OSHA PEL	125 ppm STEL	
33	1330-20-7	Xylene		
		ACGIH TLV	100 ppm	5.9 mm
		ACGIH TLV	150 ppm STEL	
		OSHA PEL	100 ppm	
		OSHA PEL	150 ppm STEL	
9	123-86-4	n-Butyl Acetate		
		ACGIH TLV	150 ppm	10 mm
		ACGIH TLV	200 ppm STEL	
		OSHA PEL	150 ppm	
		OSHA PEL	200 ppm STEL	
3	98516-30-4	Ethoxypropyl Acetate		
		ACGIH TLV	Not Available	1.73 mm
		OSHA PEL	Not Available	

Continued on page 2

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary, blood forming and reproductive systems.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

May cause allergic respiratory and/or skin reaction in susceptible persons or sensitization. This effect may be delayed several hours after exposure.

Persons sensitive to isocyanates will experience increased allergic reaction on repeated exposure.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

Section 4 -- FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes.
Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.

INHALATION: If any breathing problems occur during use, LEAVE THE AREA and get fresh air. If problems remain or occur later, IMMEDIATELY get medical attention.

INGESTION: Do not induce vomiting.
Get medical attention immediately.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
73 F PMCC	1.0	9.8

FLAMMABILITY CLASSIFICATION

RED LABEL -- Flammable, Flash below 100 F (38 C)

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

Continued on page 3

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class IC

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are **FLAMMABLE**. Keep away from heat, sparks, and open flame. During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

NO PERSON SHOULD USE THIS PRODUCT, OR BE IN THE AREA WHERE IT IS BEING USED, IF THEY HAVE CHRONIC (LONG-TERM) LUNG OR BREATHING PROBLEMS OR IF THEY EVER HAD A REACTION TO ISOCYANATES.

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

Continued on page 4

RESPIRATORY PROTECTION

Where overspray is present, a positive pressure air supplied respirator (TC19C NIOSH/MSHA approved) should be worn. If unavailable, a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2 may be effective. Follow respirator manufacturer's directions for use. Wear the respirator for the whole time of spraying and until all vapors and mists are gone. NO PERSONS SHOULD BE ALLOWED IN THE AREA WHERE THIS PRODUCT IS BEING USED UNLESS EQUIPPED WITH THE SAME RESPIRATOR PROTECTION RECOMMENDED FOR THE PAINTERS.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

To prevent skin contact, wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PROTECTIVE EQUIPMENT

Use barrier cream on exposed skin.

OTHER PRECAUTIONS

This product must be mixed with other components before use. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS.

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	8.26 lb/gal	989 g/l
SPECIFIC GRAVITY	0.99	
BOILING POINT	255 - 317 F	123 - 158 C
MELTING POINT	Not Available	
VOLATILE VOLUME	58 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
4.21 lb/gal	504 g/l	Less Water and Federally Exempt Solvents
4.21 lb/gal	504 g/l	Emitted VOC

Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

Continued on page 5

Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

TOXICOLOGY DATA

CAS No.	Ingredient Name				
100-41-4	Ethylbenzene	LC50	RAT	4HR	Not Available
		LD50	RAT		3500 mg/kg
1330-20-7	Xylene	LC50	RAT	4HR	5000 ppm
		LD50	RAT		4300 mg/kg
123-86-4	n-Butyl Acetate	LC50	RAT	4HR	2000 ppm
		LD50	RAT		13100 mg/kg
98516-30-4	Ethoxypropyl Acetate	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Continued on page 6

 Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)

1 Gallon and Less may be Classed as CONSUMER COMMODITY, ORM-D
 Larger Containers are Regulated as:
 UN1263, PAINT, 3, PG III, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities
 Ethyl benzene 1000 lb RQ
 Xylenes (isomers and mixture) 100 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):
 RQ, UN1263, PAINT, 3, PG III, (XYLENES (ISOMERS AND MIXTURE)),
 (ERG#128)

Canada (TDG)

UN1263, PAINT, CLASS 3, PG III, LIMITED QUANTITY, (ERG#128)

IMO

UN1263, PAINT, CLASS 3, PG III, (23 C c.c.), EmS F-E, S-E

 Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
100-41-4	Ethylbenzene	6	
1330-20-7	Xylene	33	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
 TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

 Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

EU31697
06 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	DATE OF PREPARATION	HMIS CODES
EU31697	01-JUL-08	Health 3 Flammability 2 Reactivity 0
PRODUCT NAME EURO™ Super Slow Retarder		
MANUFACTURER'S NAME M. L. CAMPBELL 101 Prospect Ave. N.W. Cleveland, OH 44115		
TELEPHONE NUMBERS and WEBSITES		
Product Information (800) 364-1359	www.mlcampbell.com	
Regulatory Information (216) 566-2902	www.paintdocs.com	
Medical Emergency (216) 566-2917		
Transportation Emergency (800) 424-9300	for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)	

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
49	110-43-0	Methyl n-Amyl Ketone		
		ACGIH TLV	50 ppm	3.855 mm
		OSHA PEL	100 ppm	
3	111-14-8	Heptanoic acid		
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
49	112-07-2	2-Butoxyethyl Acetate		
		ACGIH TLV	Not Available	1 mm
		OSHA PEL	Not Available	

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

Contains alcohols and acetates which can be absorbed through the skin.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary and blood forming systems.

Continued on page 2

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

Section 4 -- FIRST AID MEASURES

- EYES:** Flush eyes with large amounts of water for 15 minutes. Get medical attention.
- SKIN:** Wash affected area thoroughly with soap and water. Remove contaminated clothing and laundry before re-use.
- INHALATION:** If affected, remove from exposure. Restore breathing. Keep warm and quiet.
- INGESTION:** Do not induce vomiting. Get medical attention immediately.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
116 F SETA	0.5	7.9

FLAMMABILITY CLASSIFICATION

Combustible, Flash above 99 and below 200 F

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class II

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are COMBUSTIBLE. Keep away from heat and open flame.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PROTECTIVE EQUIPMENT

Use of barrier cream on exposed skin is recommended.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

 Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	7.26 lb/gal	869 g/l
SPECIFIC GRAVITY	0.87	
BOILING POINT	297 - 384 F	147 - 195 C
MELTING POINT	Not Available	
VOLATILE VOLUME	97 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
7.03 lb/gal	843 g/l	Less Water and Federally Exempt Solvents
7.03 lb/gal	843 g/l	Emitted VOC

 Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

 Will not occur

 Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

 Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

CAS No.	Ingredient Name				
110-43-0	Methyl n-Amyl Ketone	LC50	RAT	4HR	Not Available
		LD50	RAT		1670 mg/kg
111-14-8	Heptanoic acid	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
112-07-2	2-Butoxyethyl Acetate	LC50	RAT	4HR	Not Available
		LD50	RAT		2400 mg/kg

 Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

 No data available.

Continued on page 5

 Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)

May be Classed as a Combustible Liquid for U.S. Ground.

UN1263, PAINT RELATED MATERIAL, 3, PG III, (ERG#128)

Bulk Containers may be Shipped as:

UN1263, PAINT RELATED MATERIAL, COMBUSTIBLE LIQUID, PG III, (ERG#128)

Canada (TDG)

May be Classed as a Combustible Liquid for Canadian Ground.

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG III, (ERG#128)

IMO

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG III, (47 C c.c.), EmS F-E, S-E

Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Glycol Ethers	49	

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.



NOROX[®] MEKP-925

DESCRIPTION

Norox[®] MEKP-925 has a high MEKP dimer content that gives excellent performance in most vinyl ester resins. Norox[®] MEKP-925 also performs well when used with general purpose ortho and isophthallic resins. Norox[®] MEKP-925 should be considered when an initiator is desired for use with most all resin types.

TYPICAL PROPERTIES

Active Oxygen	9.0 %, max.
Form	Liquid
Color	Water white
Specific Gravity @ 25°/4°C	1.10
Fire point	200°F, min.
Flash point (SETA C.C.)	170°F, min.
Soluble in	Oxygenated organic solvents
Slightly soluble in	Water

APPLICATION

Norox[®] MEKP-925 is a methyl ethyl ketone peroxide composition formulated to be an excellent cure initiator for both unsaturated polyester resins and vinyl ester resins. With most unsaturated polyesters it gives longer gel and gel to cure times but with a higher peak exotherm than Norox[®] MEKP-9, particularly in thick sections.

NOROX[®] MEKP-925

STORAGE

- Storage at 80°F or below is recommended. Storage below 70°F is recommended for maximum shelf life.
- Store in original containers **away** from flammables and all sources of heat, sparks, or flames; out of direct sunlight; and **away** from **cobalt naphthenate**, other promoters, accelerators, oxidizing or reducing agents and strong acids or bases.
- **Leaking containers** – Remove and isolate in a safe area. Re-package or dispose immediately (see **spills**).
- **Never** store in refrigerators containing food and/or beverages.
- Consult National Fire Protection Association (NFPA) Code 432 and/or local regulatory agencies.
- Rotate stock, use oldest date first.

HANDLING

- Inform all personnel of procedures for safe handling and review MSDS with them.
- Remove from storage area only the amount needed for one shift.
- Wear safety glasses or goggles and chemical resistant gloves.
- Keep away from heat, flames, and sparks.
- Avoid breathing vapors.
- Dilution is not recommended.
- **Never** add peroxides directly to promoters or vice-versa, violent decomposition can occur.
- Prevent contamination such as contact with dust, over spray, wood, and combustible material.
- Avoid contact with materials other than polyethylene, polypropylene, Teflon®, Tygon®, or similar materials, glass or glass-lined steel, and 304 or 316 stainless steel or equivalent.

FIRST AID

- EYES – Flush immediately with large amounts of fresh water and continue washing for at least 15 minutes. **Medical attention is needed.**
- SKIN – Wash with soap and water.
- INGESTION – Administer large amounts of milk or water and call a physician immediately. Do not induce vomiting. As an aid to the physician, suggest calling your local Poison Control Center.

SPILLS

- Clean up immediately by absorbing with inert material – vermiculite or sand.
 - After absorbing, moderately wet immediately with water and place in a clean plastic bag inside a plastic pail.
 - Dispose of immediately in accordance with local, state, and federal regulations.
- NOTE:** Spilled peroxides, if not immediately cleaned up, can become contaminated and ignite or decompose in a hazardous, violent manner.

FIRE

- Peroxides ignite readily and burn vigorously with acceleration.
- Use water from a safe distance – preferably with a water-fog nozzle.
- For very small fires, an extinguisher with carbon dioxide, foam, or dry chemical may be effective.
- In case of fire in or near a storage area, cool stored containers with water spray.

PACKAGING, SHIPPING & AVAILABILITY

- The standard package sizes of Norox[®] MEKP-925 are cases of 4x8 lb. and 4x4 kg polyethylene bottles; and 40 lb. or 20 kg Hedpacks. For custom package sizes, please contact your local distributor or NORAC, Inc.
- Classification – Please refer to the specific Norox[®] MEKP-925 Material Safety Data Sheet under section 14, Shipping Description.
- Norox[®] MEKP-925 is available through a nation-wide distributor network. Call Norac, Inc. for the name of the distributor in your area.

NOTE: MSDS's for all Norac products may be requested on the Norac website at www.norac.com

"The information contained in this bulletin is based on information received of our staff and of others and is presented in good faith and with every belief in its accuracy. Due to the extensive technology involved in its usage, the manufacturer in no way guarantees such information, nor does he make any recommendations as to its use in the infringement of any patent. The information contained in this bulletin supersedes and replaces all information contained in all previous bulletins. Seller makes no warranty of any kind, expressed or implied, except that the goods sold hereunder shall meet the specifications of the buyer. After goods are accepted by the buyer within the time specified the buyer assumes all risk and liability for damages resulting from the use of the goods. Whether used by the buyer singly or in combination with other products, or if sold by buyer to third persons either in its original form or if repackaged by buyer and then sold to third persons."



NORAC, INC.

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Tel. (626) 334-2908 • Fax (626) 334-3512 • www.norac.com

MATERIAL SAFETY DATA SHEET

SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

Trade Name: OATEY BLACK ABS CEMENT
Product Use: Cement for ABS Pipe
Formula: ABS Resin in Solvent Solution
Synonyms: ABS Plastic Pipe Cement
Firm Name & Mailing Address: OATEY CO. 4700 West 160th Street P.O. Box 35906 Cleveland, Ohio 44135, U.S.A. <http://www.oatey.com>
Oatey Phone Number: (216) 267-7100 or (800) 321-9532
Emergency Phone Numbers: For Emergency First Aid call 1-303-623-5716 COLLECT. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared By: Corporate Director - Safety and Environmental Compliance
Preparation Date: May 20, 2005

SECTION 2

COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENTS:</u>	<u>% by wt:</u>	<u>CAS NUMBER:</u>	<u>ACGIH TLV TWA:</u>	<u>OSHA PEL TWA:</u>	<u>OTHER:</u>
Methyl Ethyl Ketone	55 - 75%	78-93-3	200 ppm 300 ppm STEL	200 ppm	None
ABS Resin (Non-hazardous)	25 - 40%	9003-56-9	None Established	None Established	None
Black Colorant (Non-hazardous)	0 - 5%	N/A	None Established	None Established	None

OSHA Hazard Classification: Flammable, irritant, organ effects

SECTION 3

HAZARDS IDENTIFICATION

Emergency Overview:
Black liquid with a sharp, penetrating odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting and diarrhea. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.

SECTION 4

FIRST AID MEASURES

CALL 1-303-623-5716 COLLECT

Skin: Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with Oatey Plumber's Hand Cleaner or baby oil.

Eyes: If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.

Inhalation: If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

Ingestion: **DO NOT INDUCE VOMITING.** Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

SECTION 5 FIRE FIGHTING MEASURES

Flashpoint / Method: 20 - 30 Degrees F. (-7 to -1 Degrees C) / PMCC
Flammability: LEL = 1.8 % Volume, UEL = 11.8 % Volume
Extinguishing: Use dry chemical, CO₂, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.
Media:
Special Fire Fighting Procedure: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored
Unusual Fire and Explosion Hazards: Extremely flammable liquid. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back.
Hazardous Decomposition Products: Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Remove all sources of ignition and ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with an inert absorbent such as sand, earth or other non-combusting material. Put absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 12 for disposal information.

SECTION 7 HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.
Storage: Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.
Other: "Empty" containers retain product residue and can be hazardous. Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.
Respiratory Protection: For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.
Skin Protection: Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.
Eye Protection: Safety glasses with side shields or safety goggles.
Other: Eye wash and safety shower should be available.

SECTION 12 ECOLOGICAL INFORMATION

This product is not expected to be toxic to aquatic organisms.
Methyl Ethyl Ketone: 96 hour LC50 for fish is greater than 100 mg/L.
VOC Information: This product emits VOC's (volatile organic compounds) in its use.
Information: Make sure that use of this product complies with local VOC emission regulations, where they exist.
VOC Level: 450 g/l per SCAQMD Test Method 316A

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose in accordance with current local, state and federal regulations.
RCRA Hazardous Waste Number: U159
EPA Hazardous Waste ID Number: D001, D035, F005
EPA Hazard Waste Class: Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content)

SECTION 14 TRANSPORT INFORMATION

DOT Less than 1 Liter (0.3 gal) Greater than 1 Liter (0.3 gal)
Proper Shipping Name: Consumer Commodity Adhesives
Hazard Class/Packing Group: ORM-D 3, PGII
UN/NA Number: None UN1133
Hazard Labels: None Flammable Liquid
IMDG
Proper Shipping Name: Adhesives Adhesives
Hazard Class/Packing Group: 3, II 3, II
UN Number: UN1133 UN1133
Label: None (Limited Quantities are excepted from labeling) Class 3 (Flammable Liquid)

2000 North American Emergency Response Guidebook Number: 127 or 128

SECTION 15 REGULATORY INFORMATION

Hazard Category for Section 311/312: Acute Health, Flammable

Section 302 Extremely Hazardous Substances (TPQ): This product does not contain chemicals regulated under SARA Section 302.
Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements:

Chemical	CAS #	% wt/wt
Methyl Ethyl Ketone	78-93-3	55-75%

CERCLA 103 Reportable Quantity: Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Methyl Ethyl Ketone (75% maximum) of 5,000 lbs, is 6,667 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

California Proposition 65: This product does not contain any chemicals subject To California Proposition 65 regulation.

TSCA Inventory: All of the components of this product are listed on the TSCA inventory.

Canadian WHIMS Classification: Class B, Division 2; Class D, Division 2, Subdivision B
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

MSDS No: CEM160E5
Issue Date: 20 May 2005
Page: 5 of 5

SECTION 16 OTHER INFORMATION

NFPA and HMIS

NFPA Hazard Signal: Health: 1 Flammability: 3 Reactivity: 0 Special: None

HMIS Hazard Signal: Health: 2 Flammability: 3 Reactivity: 0 PPE: G

DISCLAIMER

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, Oatey cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.

MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION
Trade Name: OATEY PURPLE PRIMER/CLEANER
Product Use: Primer/Cleaner for cementing PVC and CPVC pipe.
Formula: See Section 2
Synonyms: Primer, Cleaner
Firm Name & Mailing Address: OATEY CO. 4700 West 160th Street P.O. Box 35906 Cleveland, Ohio 44135, U.S.A. <http://www.oatey.com>
Oatey Phone Number: (216) 267-7100 or (800) 321-9532
Emergency Phone Numbers: For Emergency First Aid call 1-303-623-5716 COLLECT. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared By: Corporate Director - Safety and Environmental Compliance
Preparation Date: May 20, 2005

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENTS:</u>	<u>%:wt/wt</u>	<u>CAS NUMBER:</u>	<u>ACGIH TLV TWA:</u>	<u>OSHA PEL TWA:</u>	<u>OTHER:</u>
Acetone	60 - 100%	67-64-1	500 ppm 750 ppm STEL	1000 ppm	None
Methyl Ethyl Ketone	0 - 20%	78-93-3	200 ppm 300 ppm STEL	200 ppm	None
Tetrahydrofuran	0 - 20%	109-99-9	50 ppm(skin) 100 ppm STEL	200 ppm	25 ppm (Mfg)
Cyclohexanone	3 - 10%	108-94-1	20 ppm(skin) 50 ppm STEL	50 ppm	None

OSHA Hazard Classification: Flammable, irritant, organ effects

SECTION 3 HAZARDS IDENTIFICATION
Emergency Overview:
Purple liquid with a sharp, penetrating odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.

SECTION 4 FIRST AID MEASURES
CALL 1-303-623-5716 COLLECT

Skin: Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with Oatey Plumber's Hand Cleaner or baby oil.

Eyes: If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.

Inhalation: If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

Ingestion: **DO NOT INDUCE VOMITING.** Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

SECTION 5 FIRE FIGHTING MEASURES

Flashpoint / Method: 0 - 3 Degrees F. (-18 - -16 Degrees C) / PMCC
Flammability: LEL = 1.8 % Volume, UEL = 11.5 % Volume
Extinguishing Media: Use dry chemical, CO2, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.
Special Fire Fighting Procedure: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored
Unusual Fire and Explosion Hazards: Extremely flammable liquid. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.
Hazardous Decomposition Products: Combustion will produce toxic and irritating vapors including carbon monoxide and carbon dioxide.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Remove all sources of ignition and ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with an inert absorbent such as sand, earth or other non-combusting material. Put absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 13 for disposal information.

SECTION 7 HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.
Storage: Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.
Other: "Empty" containers retain product residue and can be hazardous. Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.
Respiratory Protection: For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.
Skin Protection: Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.

SECTION 8 (Continued)

Eye Safety glasses with side shields or safety goggles.
Protection:
Other: Eye wash and safety shower should be available.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 133 Degrees F / 56 Degrees C
Melting Point: Not applicable
Vapor Pressure: 70 mmHg @ 20 Degrees C
Vapor Density: (Air = 1) 2.5
Volatile Components: 99.96%
Solubility In Water: Negligible
pH: Not applicable
Specific Gravity: 0.80 +/- 0.02 @ 20 Degrees C
Evaporation Rate: (BUAC = 1) = 6.0 - 8.0
Appearance: Purple Liquid
Odor: Sharp, penetrating odor
Will Dissolve In: Tetrahydrofuran or methyl ethyl ketone
Material Is: Liquid

SECTION 10 STABILITY AND REACTIVITY

Stability: Stable.
Conditions To Avoid: Avoid heat, sparks, flames and other sources of ignition.
Hazardous Combustion will produce toxic and irritating vapors
Decomposition including carbon monoxide, carbon dioxide and hydrogen
Products: chloride.
Incompatibility/ Oxidizing agents, alkalis, amines, ammonia, acids, chlorine
Materials To Avoid: compounds, chlorinated inorganics (potassium, calcium and
sodium hypochlorite) and hydrogen peroxides. May attack
plastic, resins and rubber.
Hazardous Will not occur.
Polymerization:

SECTION 11 TOXICOLOGICAL INFORMATION

Inhalation: Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.
Skin: May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.
Eye: Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.
Ingestion: Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.
Chronic Prolonged or repeated overexposure cause dermatitis and damage
Toxicity: to the kidney, liver, lungs and central nervous system.
Toxicity Data: Acetone: Oral rat LD50: 5,800 mg/kg
Inhalation rat LC50: 50,100 mg/m3/8 hours
Cyclohexanone: Oral rat LD50: 1,620 mg/kg
Inhalation rat LC50: 8,000 ppm/4 hours
Skin rabbit LD50: 1 mL/kg
Tetrahydrofuran: Oral rat LD50: 1,650 mg/kg
Inhalation rat LC50: 21,000 ppm/3 hours

SECTION 11 (Continued)

Methyl Ethyl Ketone: Oral rat LD50: 2,737 mg/kg
Inhalation rat LC50: 23,500 mg/m³/8 hours
Skin rabbit LD50: 6,480 mg/kg

Sensitization: None of the components are known to cause sensitization.

Carcinogenicity: None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. The National Toxicology Program has reported that exposure of mice and rats to tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetime caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health is unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF. ACGIH has classified cyclohexanone (CYH) and tetrahydrofuran (THF) as "A3," Confirmed Animal Carcinogens with Unknown Relevance to Humans.

Mutagenicity: Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.

Reproductive Toxicity: Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran have been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Medical Conditions Aggravated By Exposure: Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.

SECTION 12 ECOLOGICAL INFORMATION

This product is not expected to be toxic to aquatic organisms.

Cyclohexanone: 96 hour LC50 values for fish is over 100 mg/l.

Tetrahydrofuran: 96 hour LC50 fathead minnow: 2160 mg/L.

Methyl Ethyl Ketone: 96 hour LC50 for fish is greater than 100 mg/L.

Acetone: 96 hour LC50 for fish is greater than 100 mg/L.

VOC Information: This product emits VOC's (volatile organic compounds) in its use. Make sure that use of this product complies with local VOC emission regulations, where they exist.

VOC Level: 300 g/l per SCAQMD Test Method 316A.

SECTION 12 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose in accordance with current local, state and federal regulations.

RCRA Hazardous Waste Number: U002, U057, U159, U213

EPA Hazardous Waste ID Number: D001, D035, F003, F005

EPA Hazard Waste Class: Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content)

SECTION 14 TRANSPORT INFORMATION

DOT

	<u>Less than 1 Liter (0.3 gal)</u>	<u>Greater than 1 Liter (0.3 gal)</u>
Proper Shipping Name:	Consumer Commodity	Flammable Liquid NOS
Hazard Class/Packing Group:	ORM-D	3, PGII
UN/NA Number:	None	UN1993
Hazard Labels:	None	Flammable Liquid (Acetone, Methyl Ethyl Ketone)

IMDG

Proper Shipping Name: Flammable Liquid, N.O.S. Limited Quantity
Hazard Class/Packing Group: 3, II
UN Number: UN1993
Label: None (Limited Quantities
are excepted
from labeling)

2004 North American Emergency Response Guidebook Number: 127 or 128

SECTION 15 REGULATORY INFORMATION

Hazard Category for Section 311/312: Acute Health, Chronic Health, Flammable

Section 302 Extremely Hazardous Substances (TPQ): This product does not contain chemicals regulated under SARA Section 302.

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements:

<u>Chemical</u>	<u>CAS #</u>	<u>% by wt.</u>
Methyl Ethyl Ketone	78-93-3	0 - 20%

CERCLA 103 Reportable Quantity:

Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Acetone (100% maximum) of 5,000 lbs, is 5,000 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

California Proposition 65:

This product does not contain any chemicals subject To California Proposition 65 regulation.

TSCA Inventory:

All of the components of this product are listed on the TSCA inventory.

Canadian WHIMS Classification:

Class B, Division 2; Class D, Division 2, Subdivision B; Class D, Division 2, Subdivision A. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16 OTHER INFORMATION

NFPA and HMIS:

NFPA Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 Special: None
HMIS Hazard Signal: Health: 2* Flammability: 3 Reactivity: 1 PPE: G

DISCLAIMER:

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, Oatey cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.

MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION
Trade Name: OATEY PVC REGULAR CLEAR CEMENT
Product Use: Cement for PVC Plastic Pipe
Formula: PVC Resin in Solvent Solution
Synonyms: PVC Plastic Pipe Cement
Firm Name & Mailing Address: OATEY CO. 4700 West 160th Street P.O. Box 35906 Cleveland, Ohio 44135, U.S.A. <http://www.oatey.com>
Oatey Phone Number: (216) 267-7100 or (800) 321-9532
Emergency Phone Numbers: For Emergency First Aid call 1-303-623-5716 COLLECT. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared By: Corporate Director - Safety and Environmental Compliance
Preparation Date: May 20, 2005

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENTS:</u>	<u>%wt/wt:</u>	<u>CAS NUMBER:</u>	<u>ACGIH TLV TWA:</u>	<u>OSHA PEL TWA:</u>	<u>OTHER:</u>
Methyl Ethyl Ketone	10 - 60%	78-93-3	200 ppm 300 ppm STEL	200 ppm	None
Tetrahydrofuran	20 - 50%	109-99-9	50 ppm(skin) 100 ppm STEL	200 ppm	25 ppm (Mfg)
Acetone	0 - 20%	67-64-1	500 ppm 750 ppm STEL	1000 ppm	None
PVC Resin (Non-hazardous)	10 - 18%	9002-86-2	10 mg/m3	15 mg/m3	None
Cyclohexanone	2 - 15%	108-94-1	20 ppm(skin) 50 ppm STEL	50 ppm	None

OSHA Hazard Classification: Flammable, irritant, organ effects

SECTION 3 HAZARDS IDENTIFICATION

Emergency Overview:
Clear liquid with an ether-like odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.

SECTION 4 FIRST AID MEASURES

CALL 1-303-623-5716 COLLECT

Skin: Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with Oatey Plumber's Hand Cleaner or baby oil.

Eyes: If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.

Inhalation: If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

Ingestion: **DO NOT INDUCE VOMITING.** Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

SECTION 5 FIRE FIGHTING MEASURES

Flashpoint / Method: 0 - 5 Degrees F. (-18 - -15 Degrees C) / PMCC
Flammability: LEL = 1.8 % Volume, UEL = 11.8 % Volume
Extinguishing Media: Use dry chemical, CO₂, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.
Special Fire Fighting Procedure: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored
Unusual Fire and Explosion Hazards: Extremely flammable liquid. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.
Hazardous Decomposition Products: Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Remove all sources of ignition and ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with an inert absorbent such as sand, earth or other non-combusting material. Put absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 13 for disposal information.

SECTION 7 HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.
Storage: Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.
Other: "Empty" containers retain product residue and can be hazardous. Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.
Respiratory Protection: For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.
Skin Protection: Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.

SECTION 8 (Continued)

Eye Protection: Safety glasses with side shields or safety goggles.
Other: Eye wash and safety shower should be available.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 151 Degrees F / 66 Degrees C
Melting Point: Not applicable
Vapor Pressure: 145 mmHg @ 20 Degrees C
Vapor Density: (Air = 1) 2.5
Volatile Components: 86-90%
Solubility In Water: Negligible
pH: Not applicable
Specific Gravity: 0.89 +/- 0.015 @ 20 Degrees C
Evaporation Rate: (BUAC = 1) = 5.5 - 8.0
Appearance: Clear Liquid
Odor: Ether-Like
Will Dissolve In: Tetrahydrofuran
Material Is: Liquid

SECTION 10 STABILITY AND REACTIVITY

Stability: Stable.
Conditions To Avoid: Avoid heat, sparks, flames and other sources of ignition.
Hazardous Decomposition Products: Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.
Incompatibility/ Materials To Avoid: Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.
Hazardous Polymerization: Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Inhalation: Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.
Skin: May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.
Eye: Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.
Ingestion: Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.
Chronic Toxicity: Prolonged or repeated overexposure cause dermatitis and damage to the kidney, liver, lungs and central nervous system.
Toxicity Data: Acetone: Oral rat LD50: 5,800 mg/kg
Inhalation rat LC50: 50,100 mg/m³/8 hours
Cyclohexanone: Oral rat LD50: 1,620 mg/kg
Inhalation rat LC50: 8,000 ppm/4 hours
Skin rabbit LD50: 1 mL/kg
Tetrahydrofuran: Oral rat LD50: 1,650 mg/kg
Inhalation rat LC50: 21,000 ppm/3 hours

SECTION 11 (Continued)

Methyl Ethyl Ketone: Oral rat LD50: 2,737 mg/kg
Inhalation rat LC50: 23,500 mg/m³/8 hours
Skin rabbit LD50: 6,480 mg/kg

Sensitization: None of the components are known to cause sensitization.

Carcinogenicity: None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. The National Toxicology Program has reported that exposure of mice and rats to tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetime caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health is unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF. ACGIH has classified cyclohexanone (CYH) and tetrahydrofuran as "A3," Confirmed Animal Carcinogens with Unknown Relevance to Humans.

Mutagenicity: Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.

Reproductive Toxicity: Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran have been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Medical Conditions Aggravated By Exposure: Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.

SECTION 12

ECOLOGICAL INFORMATION

This product is not expected to be toxic to aquatic organisms.

Cyclohexanone: 96 hour LC50 values for fish is over 100 mg/l.

Tetrahydrofuran: 96 hour LC50 fathead minnow: 2160 mg/L.

Methyl Ethyl Ketone: 96 hour LC50 for fish is greater than 100 mg/L.

Acetone: 96 hour LC50 for fish is greater than 100 mg/L.

VOC Information: This product emits VOC's (volatile organic compounds) in its use. Make sure that use of this product complies with local VOC emission regulations, where they exist.

VOC Level: 550 g/l per SCAQMD Test Method 316A.

SECTION 13

DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose in accordance with current local, state and federal regulations.

RCRA Hazardous Waste Number: U002, U057, U159, U213

EPA Hazardous Waste ID Number: D001, D035, F003, F005

EPA Hazard Waste Class: Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content)

SECTION 14 TRANSPORT INFORMATION

DOT Less than 1 Liter (0.3 gal) Greater than 1 Liter (0.3 gal)

Proper Shipping Name: Consumer Commodity Adhesives
Hazard Class/Packing Group: ORM-D 3, PGII
UN/NA Number: None UN1133
Hazard Labels: None Flammable Liquid

IMDG

Proper Shipping Name: Adhesives Adhesives
Hazard Class/Packing Group: 3, II 3, II
UN Number: UN1133 UN1133
Label: None (Limited Quantities are excepted from labeling) Class 3 (Flammable Liquid)

2004 North American Emergency Response Guidebook Number: 127 or 128

SECTION 15 REGULATORY INFORMATION

Hazard Category for Section 311/312: Acute Health, Chronic Health, Flammable

Section 302 Extremely Hazardous Substances (TPQ): This product does not contain chemicals regulated under SARA Section 302.

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements:

Chemical	CAS #	% by wt.
Methyl Ethyl Ketone	78-93-3	10-60%

CERCLA 103 Reportable Quantity:

Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Tetrahydrofuran (50% maximum) of 1,000 lbs, is 2,000 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

California Proposition 65:

This product contains trace amounts of chemicals known to the State of California to cause cancer. Under normal Use conditions, exposure to these chemicals at levels above the State of California "No Significant Risk Level" (NSRL) are unlikely. Oatey strongly encourages the use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 8 to minimize exposure to these chemicals.

TSCA Inventory:

All of the components of this product are listed on the TSCA inventory.

Canadian WHIMS Classification:

Class B, Division 2; Class D, Division 2, Subdivision B; Class D, Division 2, Subdivision A. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16 OTHER INFORMATION

NFPA and HMIS:

NFPA Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 Special: None

HMIS Hazard Signal: Health: 2* Flammability: 3 Reactivity: 1 PPE: G

Disclaimer:

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, Oatey cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.

MATERIAL SAFETY DATA SHEET

SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

Trade Name: OATEY ALL PURPOSE CEMENT
Product Use: Cement for PVC, ABS, AND CPVC Pipe
Formula: PVC & CPVC Resin in Solvent Solution
Synonyms: None
Firm Name & Mailing Address: OATEY CO. 4700 West 160th Street P.O. Box 35906 Cleveland, Ohio 44135, U.S.A. <http://www.oatey.com>
Oatey Phone Number: (216) 267-7100 or (800) 321-9532
Emergency Phone Numbers: For Emergency First Aid call 1-303-623-5716 COLLECT. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared By: Corporate Director - Safety and Environmental Compliance
Preparation Date: May 20, 2005

SECTION 2

COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENTS:</u>	<u>%wt/wt:</u>	<u>CAS NUMBER:</u>	<u>ACGIH TLV TWA:</u>	<u>OSHA PEL TWA:</u>	<u>OTHER:</u>
Tetrahydrofuran	30 - 45%	109-99-9	50 ppm(skin) 100 ppm STEL	200 ppm	25 ppm (Mfg)
Methyl Ethyl Ketone	20 - 40%	78-93-3	200 ppm 300 ppm STEL	200 ppm	None
Cyclohexanone	10 - 20%	108-94-1	20 ppm(skin) 50 ppm STEL	50 ppm	None
PVC Resin (Non-hazardous)	8 - 15%	9002-86-2	10 mg/m3	15 mg/m3	None
CPVC Resin (Non-hazardous)	3 - 7%	68648-82-8	10 mg/m3	None	None
Amorphous Fumed Silica (Non-hazardous)	1 - 4%	112945-52-5	10 mg/m3	Established None	None Established

OSHA Hazard Classification: Flammable, irritant, organ effects

SECTION 3

HAZARDS IDENTIFICATION

Emergency Overview:

Milky liquid with an ether-like odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.

SECTION 4

FIRST AID MEASURES

CALL 1-303-623-5716 COLLECT

Skin: Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with Oatey Plumber's Hand Cleaner or baby oil.
Eyes: If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.
Inhalation: If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.
Ingestion: **DO NOT INDUCE VOMITING.** Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

SECTION 5 FIRE FIGHTING MEASURES

Flashpoint / Method: 0 - 5 Degrees F. (-18 - -15 Degrees C) / PMCC
Flammability: LEL = 1.8 % Volume, UEL = 11.8 % Volume
Extinguishing Media: Use dry chemical, CO₂, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.
Special Fire Fighting Procedure: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored
Unusual Fire and Explosion Hazards: Extremely flammable liquid. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.
Hazardous Decomposition Products: Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Remove all sources of ignition and ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with an inert absorbent such as sand, earth or other non-combusting material. Put absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 13 for disposal information.

SECTION 7 HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.
Storage: Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.
Other: "Empty" containers retain product residue and can be hazardous. Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.
Respiratory Protection: For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.
Skin Protection: Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.

SECTION 8 (Continued)

Eye Protection: Safety glasses with side shields or safety goggles.
Other: Eye wash and safety shower should be available.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 151 Degrees F / 66 Degrees C
Melting Point: Not applicable
Vapor Pressure: 145 mmHg @ 20 Degrees C
Vapor Density: (Air = 1) 2.5
Volatile Components: 84-88%
Solubility In Water: Negligible
pH: Not applicable
Specific Gravity: 0.93 +/- 0.02 @ 20 Degrees C
Evaporation Rate: (BUAC = 1) = 5.5 - 8.0
Appearance: Milky Liquid
Odor: Ether-Like
Will Dissolve In: Tetrahydrofuran
Material Is: Liquid

SECTION 10 STABILITY AND REACTIVITY

Stability: Stable.
Conditions To Avoid: Avoid heat, sparks, flames and other sources of ignition.
Hazardous Decomposition Products: Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.
Incompatibility/ Materials To Avoid: Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.
Hazardous Polymerization: Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Inhalation: Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.
Skin: May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.
Eye: Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.
Ingestion: Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.
Chronic Toxicity: Prolonged or repeated overexposure cause dermatitis and damage to the kidney, liver, lungs and central nervous system.
Toxicity Data: Cyclohexanone: Oral rat LD50: 1,620 mg/kg
Inhalation rat LC50: 8,000 ppm/4 hours
Skin rabbit LD50: 1 mL/kg
Tetrahydrofuran: Oral rat LD50: 1,650 mg/kg
Inhalation rat LC50: 21,000 ppm/3 hours
Methyl Ethyl Ketone: Oral rat LD50: 2,737 mg/kg
Inhalation rat LC50: 23,500 mg/m3/8 hours
Skin rabbit LD50: 6,480 mg/kg

SECTION 11 (Continued)

Sensitization: None of the components are known to cause sensitization.

Carcinogenicity: None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. The National Toxicology Program has reported that exposure of mice and rats to tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetime caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health is unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF. ACGIH has classified cyclohexanone (CYH) and tetrahydrofuran as "A3," Confirmed Animal Carcinogens with Unknown Relevance to Humans.

Mutagenicity: Cyclohexanone has been positive in bacterial and mammalian assays. Methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.

Reproductive Toxicity: Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Tetrahydrofuran has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Medical Conditions Aggravated By Exposure: Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.

SECTION 12 ECOLOGICAL INFORMATION

This product is not expected to be toxic to aquatic organisms.

Cyclohexanone: 96 hour LC50 values for fish is over 100 mg/l.

Tetrahydrofuran: 96 hour LC50 fathead minnow: 2160 mg/L.

Methyl Ethyl Ketone: 96 hour LC50 for fish is greater than 100 mg/L.

VOC Information: This product emits VOC's (volatile organic compounds) in its use. Make sure that use of this product complies with local VOC emission regulations, where they exist.

VOC Level: 600 g/l per SCAQMD Test Method 316A.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose in accordance with current local, state and federal regulations.

RCRA Hazardous Waste Number: U057, U159, U213

EPA Hazardous Waste ID Number: D001, D035, F003, F005

EPA Hazard Waste Class: Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content)

SECTION 14 TRANSPORT INFORMATION

DOT	Less than 1 Liter (0.3 gal)	Greater than 1 Liter (0.3 gal)
Proper Shipping Name:	Consumer Commodity	Adhesives
Hazard Class/Packing Group:	ORM-D	3, PGII
UN/NA Number:	None	UN1133
Hazard Labels:	None	Flammable Liquid
IMDG		
Proper Shipping Name:	Adhesives	Adhesives
Hazard Class/Packing Group:	3, II	3, II
UN Number:	UN1133	UN1133
Label:	None (Limited Quantities are excepted from labeling)	Class 3 (Flammable Liquid)

2004 North American Emergency Response Guidebook Number: 127 or 128

SECTION 15 REGULATORY INFORMATION

Hazard Category for Section 311/312: Acute Health, Chronic Health, Flammable

Section 302 Extremely Hazardous Substances (TPQ): This product does not contain chemicals regulated under SARA Section 302.

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements:

<u>Chemical</u>	<u>CAS #</u>	<u>% by wt.</u>
Methyl Ethyl Ketone	78-93-3	20-40%

CERCLA 103 Reportable Quantity:

Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Tetrahydrofuran (45% maximum) of 1,000 lbs, is 2,222 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

California Proposition 65:

This product contains trace amounts of chemicals known to the State of to cause cancer. Under normal Use conditions, exposure to these chemicals at levels above the State of California "No Significant Risk Level" (NSRL) are unlikely. Oatey strongly encourages the use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 8 to minimize exposure to these chemicals.

TSCA Inventory:

All of the components of this product are listed on the TSCA inventory.

Canadian WHIMS Classification:

Class B, Division 2; Class D, Division 2, Subdivision B; Class D, Division 2, Subdivision A. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16 OTHER INFORMATION

NFPA and HMIS:

NFPA Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 Special: None
HMIS Hazard Signal: Health: 2* Flammability: 3 Reactivity: 1 PPE: G

Disclaimer:

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, Oatey cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.

MATERIAL SAFETY DATA SHEET

SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

Trade Name: OATEY CPVC MEDIUM ORANGE CEMENT
Product Use: Cement for CPVC Plastic Pipe
Formula: CPVC Resin in Solvent Solution
Synonyms: CPVC Plastic Pipe Cement
Firm Name & Mailing Address: OATEY CO. 4700 West 160th Street P.O. Box 35906 Cleveland, Ohio 44135, U.S.A. <http://www.oatey.com>
Oatey Phone Number: (216) 267-7100 or (800) 321-9532.
Emergency Phone Numbers: For Emergency First Aid call 1-303-623-5716 COLLECT. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared By: Corporate Director - Safety and Environmental Compliance
Preparation Date: May 20, 2005

SECTION 2

COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENTS:</u>	<u>%wt/wt:</u>	<u>CAS NUMBER:</u>	<u>ACGIH TLV TWA:</u>	<u>OSHA PEL TWA:</u>	<u>OTHER:</u>
Methyl Ethyl Ketone	30 - 45%	78-93-3	200 ppm 300 ppm STEL	200 ppm	None
Tetrahydrofuran	30 - 40%	109-99-9	50 ppm(skin) 100 ppm STEL	200 ppm	25 ppm (Mfg)
CPVC Resin (Non-hazardous)	10 - 20%	68648-82-8	10 mg/m3	None Established	None
Cyclohexanone	5 - 10%	108-94-1	20 ppm(skin) 50 ppm STEL	50 ppm	None
Amorphous Fumed Silica (Non-hazardous)	1 - 5%	112945-52-5	10 mg/m3	None Established	None

OSHA Hazard Classification: Flammable, irritant, organ effects

SECTION 3

HAZARDS IDENTIFICATION

Emergency Overview:
Orange liquid with an ether-like odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.

SECTION 4

FIRST AID MEASURES

CALL 1-303-623-5716 COLLECT

Skin: Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with Oatey Plumber's Hand Cleaner or baby oil.

Eyes: If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.

Inhalation: If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

Ingestion: **DO NOT INDUCE VOMITING.** Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

SECTION 5 FIRE FIGHTING MEASURES

Flashpoint / Method: 0 - 5 Degrees F. (-18 - -15 Degrees C) / PMCC
Flammability: LEL = 1.8 % Volume, UEL = 11.8 % Volume
Extinguishing Media: Use dry chemical, CO₂, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.
Special Fire Fighting Procedure: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored
Unusual Fire and Explosion Hazards: Extremely flammable liquid. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.
Hazardous Decomposition Products: Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Remove all sources of ignition and ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with an inert absorbent such as sand, earth or other non-combusting material. Put absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 13 for disposal information.

SECTION 7 HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.
Storage: Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.
Other: "Empty" containers retain product residue and can be hazardous. Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.
Respiratory Protection: For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.
Skin Protection: Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as

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4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.

SECTION 8 (Continued)

Eye Protection: Safety glasses with side shields or safety goggles.
Other: Eye wash and safety shower should be available.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 151 Degrees F / 66 Degrees C
Melting Point: Not applicable
Vapor Pressure: 145 mmHg @ 20 Degrees C
Vapor Density: (Air = 1) 2.5
Volatile Components: 86-88%
Solubility In Water: Negligible
pH: Not applicable
Specific Gravity: 0.93 +/- 0.02 @ 20 Degrees C
Evaporation Rate: (BUAC = 1) = 5.5 - 8.0
Appearance: Orange Liquid
Odor: Ether-Like
Will Dissolve In: Tetrahydrofuran
Material Is: Liquid

SECTION 10 STABILITY AND REACTIVITY

Stability: Stable.
Conditions To Avoid: Avoid heat, sparks, flames and other sources of ignition.
Hazardous Decomposition: Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.
Products: chloride.
Incompatibility/ Materials To Avoid: Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.
Hazardous Polymerization: Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Inhalation: Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.
Skin: May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.
Eye: Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.
Ingestion: Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.
Chronic Toxicity: Prolonged or repeated overexposure cause dermatitis and damage to the kidney, liver, lungs and central nervous system.
Toxicity Data: Cyclohexanone: Oral rat LD50: 1,620 mg/kg
Inhalation rat LC50: 8,000 ppm/4 hours
Skin rabbit LD50: 1 mL/kg
Tetrahydrofuran: Oral rat LD50: 1,650 mg/kg
Inhalation rat LC50: 21,000 ppm/3 hours
Methyl Ethyl Ketone: Oral rat LD50: 2,737 mg/kg
Inhalation rat LC50: 23,500 mg/m3/8 hours

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Skin rabbit LD50: 6,480 mg/kg

SECTION 11 (Continued)

Sensitization: None of the components are known to cause sensitization.
Carcinogenicity: None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. The National Toxicology Program has reported that exposure of mice and rats to Tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetime caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health is unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF. ACGIH has classified cyclohexanone (CYH) and tetrahydrofuran as "A3," confirmed Animal Carcinogens with Unknown Relevance to Humans.
Mutagenicity: Cyclohexanone has been positive in bacterial and mammalian assays. Methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.
Reproductive Toxicity: Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Tetrahydrofuran has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.
Medical Conditions Aggravated By Exposure: Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.

SECTION 12 ECOLOGICAL INFORMATION

This product is not expected to be toxic to aquatic organisms.
Cyclohexanone: 96 hour LC50 values for fish is over 100 mg/l.
Tetrahydrofuran: 96 hour LC50 fathead minnow: 2160 mg/L.
Methyl Ethyl Ketone: 96 hour LC50 for fish is greater than 100 mg/L.
VOC Information: This product emits VOC's (volatile organic compounds) in its use. Make sure that use of this product complies with local VOC emission regulations, where they exist.
VOC Level: 490 g/l per SCAQMD Test Method 316A.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose in accordance with current local, state and federal regulations.
RCRA Hazardous Waste Number: U057, U159, U213
EPA Hazardous Waste ID Number: D001, D035, F003, F005
EPA Hazard Waste Class: Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content)

SECTION 14 TRANSPORT INFORMATION

DOT Less than 1 Liter (0.3 gal) Greater than 1 Liter (0.3 gal)
Proper Shipping Name: Consumer Commodity Adhesives
Hazard Class/Packing Group: ORM-D 3, PGII
UN/NA Number: None UN1133
Hazard Labels: None Flammable Liquid
IMDG
Proper Shipping Name: Adhesives Adhesives
Hazard Class/Packing Group: 3, II 3, II
UN Number: UN1133 UN1133
Label: None (Limited Quantities are excepted from labeling) Class 3 (Flammable Liquid)

2004 North American Emergency Response Guidebook Number: 127 or 128

SECTION 15 REGULATORY INFORMATION

Hazard Category for Section 311/312: Acute Health, Chronic Health, Flammable

Section 302 Extremely Hazardous Substances (TPQ): This product does not contain chemicals regulated under SARA Section 302.

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements:

<u>Chemical</u>	<u>CAS #</u>	<u>% by wt.</u>
Methyl Ethyl Ketone	78-93-3	30 - 45%

CERCLA 103 Reportable Quantity:

Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Tetrahydrofuran (40% maximum) of 1,000 lbs, is 2,500 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

California Proposition 65:

This product contains trace amounts of chemicals known to the State of California to cause cancer. Under normal Use conditions, exposure to these chemicals at levels above the State of California "No Significant Risk Level" (NSRL) are unlikely. Oatey strongly encourages the use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 8 to minimize exposure to these chemicals.

TSCA Inventory:

All of the components of this product are listed on the TSCA inventory.

Canadian WHIMS Classification:

Class B, Division 2; Class D, Division 2, Subdivision B; Class D, Division 2, Subdivision A. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16 OTHER INFORMATION

NFPA and HMIS:

NFPA Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 Special: None
HMIS Hazard Signal: Health: 2* Flammability: 3 Reactivity: 1 PPE: G

Disclaimer:

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, Oatey cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.

SECTION V - HEALTH HAZARD DATA

PRIMARY ROUTES

OF ENTRY: X Inhalation X Skin Contact Eye Contact Ingestion

EFFECT OF OVEREXPOSURE

ACUTE:

Inhalation: Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
Skin Contact: Skin irritant. Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
Skin Absorption: Prolonged or widespread exposure may result in the absorption of harmful amounts of material.
Eye Contact: Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid. Vapors slightly uncomfortable.
Ingestion: Moderately toxic. May cause nausea, vomiting, diarrhea. May cause mental sluggishness.

CHRONIC:

Symptoms of respiratory tract irritation and damage to respiratory epithelium were reported in rats exposed to 5000 ppm THF for 90 days. Elevation of SGPT suggests a disturbance in liver function. The NOEL was reported to be 200 ppm.

REPRODUCTIVE EFFECTS	TERATOGENICITY	MUTAGENICITY	EMBRYOTOXICITY	SENSITIZATION TO PRODUCT	SYNERGISTIC PRODUCTS
N. AP.	N. AP.	N. AP.	N. AP.	N. AP.	N. AV.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing diseases of the eyes, skin or respiratory system may have increased susceptibility to the toxicity of excessive exposures.

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: If overcome by vapors, remove to fresh air and if breathing stopped, give artificial respiration. If breathing is difficult, give oxygen. Call physician.
Eye Contact: Flush eyes with plenty of water for 15 minutes and call a physician.
Skin Contact: Remove contaminated clothing and shoes. Wash skin with plenty of soap and water for at least 15 minutes. If irritation develops, get medical attention.
Ingestion: Give 1 or 2 glasses of water or milk. Do not induce vomiting. Call physician or poison control center immediately.

SECTION VI - REACTIVITY

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATIBILITY

(MATERIALS TO AVOID) Caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.

HAZARDOUS DECOMPOSITION PRODUCTS

When forced to burn, this product gives out carbon monoxide, carbon dioxide, hydrogen chloride and smoke.

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Eliminate all ignition sources. Avoid breathing of vapors. Keep liquid out of eyes. Flush with large amount of water. Contain liquid with sand or earth. Absorb with sand or nonflammable absorbent material and transfer into steel drums for recovery or disposal. Prevent liquid from entering drains.

WASTE DISPOSAL METHOD

Follow local, State and Federal regulations. Consult disposal expert. Can be disposed of by incineration. Excessive quantities should not be permitted to enter drains. Empty containers should be air dried before disposing. Hazardous Waste Code (CA): 214.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

Atmospheric levels should be maintained below established exposure limits contained in Section II. If airborne concentrations exceed those limits, use of a NIOSH approved organic vapor cartridge respirator with full face-piece is recommended. The effectiveness of an air purifying respirator is limited. Use it only for a single short-term exposure. For emergency and other conditions where short-term exposure guidelines may be exceeded, use an approved positive pressure self-contained breathing apparatus.

VENTILATION

Use only with adequate ventilation. Do not use in close quarters or confined spaces. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed in Section II. Use only explosion-proof ventilated equipment.

PROTECTIVE GLOVES PVA coated rubber gloves for frequent dipping/immersion. Use of latex/nitrile surgical gloves or solvent resistant barrier cream should provide adequate protection when normal solvent-cement welding practices and procedures are used for solvent welding of plastic sheet/pipe joints.

EYE PROTECTION Splashproof chemical goggles, face shield, safety glasses (spectacles) with brow guards & side shields, etc. as appropriate for exposure.

OTHER PROTECTIVE EQUIPMENT AND HYGIENIC PRACTICES

Impervious apron and a source of running water to flush or wash the eyes and skin in case of contact.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store in the shade between 40°F - 110°F (5°C - 43.7°C). Keep away from heat, sparks, open flame and other sources of ignition. Avoid prolonged breathing of vapor. Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Train employees on all special handling procedures before they work with this product.

OTHER PRECAUTIONS

Follow all precautionary information given on container label, product bulletins and our solvent cementing literature. All material handling equipment should be electrically grounded.

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

MATERIAL SAFETY DATA SHEET

Klean-Strip Lacquer Thinner

HEALTH	2
FLAMMABILITY	2
PHYSICAL HAZ.	1
PPE	G



Printed: 03/30/2006
Revision: 03/15/2006

Date Created: 12/13/2005

1. Product and Company Identification

Product Code: QML170
Product Name: Klean-Strip Lacquer Thinner
Reference #: 1605.34
Manufacturer Information
Company Name: W. M. Barr
 2105 Channel Avenue
 Memphis, TN 38113
Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
 W.M. Barr Customer Service (800)398-3892
Information:
Web site address: www.wmbarr.com
Preparer Name: W.M. Barr and Company, Inc. (901)775-0100

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Percentage	OSHA TWA	ACGIH TWA	Other Limits
1. Methanol	67-56-1	20.0 -25.0 %	200 ppm	200 ppm	
2. Toluene	108-88-3	5.0 -10.0 %	200 ppm	50 ppm	
3. Acetone	67-64-1	5.0 -20.0 %	1000 ppm	500 ppm	
Acetic acid, Ethyl ester	141-78-6	5.0 -15.0 %	400 ppm	400 ppm	
Hexane, Light aliphatic naptha	64742-89-8	30.0 -50.0 %			
6. Methyl ethyl ketone	78-93-3	5.0 -10.0 %	200 ppm	200 ppm	
7. Ethanol, 2-Butoxy-	111-76-2	1.0 -5.0 %	50 ppm	20 ppm	

Hazardous Components (Chemical Name)	CAS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Methanol	67-56-1			250 ppm	
2. Toluene	108-88-3	500 ppm/(10min)	300 ppm		
3. Acetone	67-64-1			750 ppm	
4. Acetic acid, Ethyl ester	141-78-6				
5. Hexane, Light aliphatic naptha	64742-89-8				
6. Methyl ethyl ketone	78-93-3			300 ppm	
7. Ethanol, 2-Butoxy-	111-76-2				

3. Hazards Identification

Emergency Overview

Danger! Extremely flammable. Keep away from heat, sparks, flame and all other sources of ignition. Vapors may cause flash fire or ignite explosively. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition during use and until all vapors are gone. Beware of static electricity that may be generated by synthetic clothing and other sources.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic)

Inhalation Acute Exposure Effects:

Vapor harmful. May cause dizziness; headache; watering of eyes; irritation of respiratory tract; weakness; drowsiness; nausea; numbness in fingers, arms and legs; depression of central nervous system; loss of appetite; fatigue; hallucinations; light headedness; visual disturbances; giddiness and intoxication; sleepiness; cough and dyspnea; cold, clammy extremities; diarrhea; vomiting; dilation of pupils; spotted vision. Severe overexposure may cause convulsions; unconsciousness; coma; and death. Intentional misuse of this product by deliberately concentrating and inhaling can be harmful or fatal.

Skin Contact Acute Exposure Effects:

May be absorbed through the skin. May cause irritation; numbness in the fingers and arms; drying of skin; and dermatitis. May cause increased severity of symptoms listed under inhalation.

Eye Contact Acute Exposure Effects:

This material is an eye irritant. May cause irritation; burns; conjunctivitis of eyes; and corneal ulcerations of the eye. Vapors may irritate eyes.

MATERIAL SAFETY DATA SHEET

Klean-Strip Lacquer Thinner

Page: 2
Printed: 03/30/2006
Revision: 03/15/2006

Ingestion Acute Exposure Effects:

Poison. Cannot be made non-poisonous. May be fatal or cause blindness. May cause dizziness; headache; nausea; vomiting; burning sensation in mouth, throat, and stomach; loss of coordination; depression of the central nervous system; narcosis; stupor; gastrointestinal irritation; liver, kidney, and heart damage; diarrhea; loss of appetite; coma and death. May produce symptoms listed under inhalation.

Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged or repeated contact may cause dermatitis. Prolonged skin contact may result in absorption of a harmful amount of this material. May cause conjunctivitis; gastric disturbances; insomnia; dizziness; headache; weakness; fatigue; nausea; heart palpitations; skin irritation; numbness in hands and feet; permanent central nervous system changes; some loss of memory; pancreatic damage; giddiness; visual impairment or blindness; kidney or liver damage; and death. May cause symptoms listed under inhalation.

Signs and Symptoms Of Exposure

Medical Conditions Generally Aggravated By Exposure

Diseases of the skin, eyes, liver, kidneys, central nervous system and respiratory system.

4. First Aid Measures

Emergency and First Aid Procedures

Inhalation:

If user experiences breathing difficulty, move to air free of vapors, Administer oxygen or artificial medical assistance can be rendered.

Skin Contact:

Wash with soap and large quantities of water and seek medical attention if irritation from contact persists.

Eye Contact:

Flush with large quantities of water for at least 15 minutes and seek immediate medical attention.

Ingestion:

Call your local poison control center, hospital emergency room or physician immediately for instructions to induce vomiting.

Note to Physician

Poison. This product contains methanol. Methanol is metabolized to formaldehyde and formic acid. These metabolites may cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used as an antidote. Methanol is effectively removed by hemodialysis. Call your local poison control center for further information.

5. Fire Fighting Measures

Flammability Classification:

Class IB

Flash Pt:

4.00 F Method Used: TOC

Explosive Limits:

LEL: 1.00 UEL:

Fire Fighting Instructions

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards

Extinguishing Media

Use carbon dioxide, dry powder, or foam.

Unsuitable Extinguishing Media

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Clean up:

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area.

Small spills:

Take up with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

MATERIAL SAFETY DATA SHEET

Klean-Strip Lacquer Thinner

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Large spills:

Dike far ahead of spill for later disposal.

Waste Disposal:

Dispose in accordance with applicable local, state and federal regulations.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.

Eye Protection

Safety glasses, goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

Other Protective Clothing

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after use. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

Engineering Controls (Ventilation etc.)

Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering - Stop - ventilation is inadequate. Leave area immediately.

9. Physical and Chemical Properties

Physical States: Gas Liquid Solid
Flash Pt: 4.00 F Method: TOC
Explosive Limits: LEL: 1.00 UEL:
Specific Gravity (Water = 1): 0.7642 - 0.7829
Percent Volatile: 100.0 % by weight.
VOC / Volume: 697.0000 G/L
Appearance and Odor

Water White / Free and Clear

10. Stability and Reactivity

Stability: Unstable Stable

Conditions To Avoid - Instability

Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents, strong caustics, hydrogen peroxide, and nitrates.

Hazardous Decomposition Or Byproducts

Decomposition may produce carbon monoxide; carbon dioxide; formaldehyde; and unidentified organic compounds in black smoke.

Hazardous Polymerization: Will occur Will not occur

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Conditions To Avoid - Hazardous Polymerization

Toxicological Information
Carcinogenicity/Other Information
Carcinogenicity:

11. Toxicological Information

NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

Ecological Information

13. Disposal Considerations

Waste Disposal Method

14. Transport Information

LAND TRANSPORT (US DOT)
DOT Proper Shipping Name
Additional Transport Information

For DOT information, contact W.M. Barr Technical Services.

No data available.

15. Regulatory Information

16. Other Information

Company Policy or Disclaimer

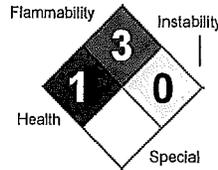
The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

MATERIAL SAFETY DATA SHEET

Klean-Strip Methyl Ethyl Ketone

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HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZ.	0
PPE	G



Printed: 12/13/2005
 Revision: 10/26/2005
 Supersedes Revision: 06/10/2005

1. Product and Company Identification

Product Code: GME71
Product Name: Klean-Strip Methyl Ethyl Ketone
Reference #: 1635.1

Manufacturer Information

Company Name: W. M. Barr
 2105 Channel Avenue
 Memphis, TN 38113

Phone Number: (901)775-0100

Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
 Information: W.M. Barr Customer Service (800)398-3892

Web site address: www.wmbarr.com

Preparer Name: W.M. Barr EHS Department (901)775-0100

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Percentage	OSHA PEL	ACGIH TWA	Other Limits
1. Methyl ethyl ketone	78-93-3	95.0 -100.0 %	200 ppm	200 ppm	No data.
Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
Methyl ethyl ketone	EL6475000	No data.	No data.	300 ppm	No data.

3. Hazards Identification

Emergency Overview

Danger! Flammable. Keep away from heat, sparks, flame and all other sources of ignition. Vapors may cause flash fire or ignite explosively. Vapors may travel long distances to other areas and rooms away from work site. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition anywhere in the structure, dwelling or building during use and until all vapors are gone from the work site and all areas away from the work site. Keep away from electrical outlets and switches. Beware of static electricity that may be generated by synthetic clothing and other sources.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

Health Hazards (Acute and Chronic)

Inhalation Acute Exposure Effects:

Vapor harmful. May cause dizziness, headache, watering of eyes, irritation of respiratory tract, drowsiness, nausea, and numbness in fingers, arms, and legs.

Skin Contact Acute Exposure Effects:

May cause drying of skin, and numbness in fingers and arms. Liquid is absorbed readily.

Eye Contact Acute Exposure Effects:

This material is an eye irritant. May cause irritation and pain, conjunctivitis of eyes, burns, corneal ulcerations of the eye, stinging, redness, and tearing. Vapors or mist can irritate eyes.

Ingestion Acute Exposure Effects:

Harmful if swallowed. May cause dizziness, headache, nausea, and irritation of mouth, throat, and stomach.

Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other

MATERIAL SAFETY DATA SHEET
Klean-Strip Methyl Ethyl Ketone

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Supersedes Revision: 06/10/2005

physiological damage. May cause weakness, fatigue, skin irritation, and numbness in hands and feet.

Signs and Symptoms Of Exposure

No data available.

Medical Conditions Generally Aggravated By Exposure

None known.

OSHA Hazard Classes:

HEALTH HAZARDS : N/E

PHYSICAL HAZARDS : N/E

TARGET ORGANS & EFFECTS: N/E

4. First Aid Measures

Emergency and First Aid Procedures

Inhalation:

If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

Skin Contact:

Irritation may result. Immediately wash with soap and water.

Eye Contact:

Immediately flush with water, remove any contact lenses, continue flushing with water for at least 15 minutes, then get medical attention.

Ingestion:

Call you local poison control center, hospital emergency room, or physician immediately for instructions.

Note to Physician

Call your local poison control center for further information.

5. Fire Fighting Measures

Flammability Classification:

OSHA Class IB

Flash Pt:

21.00 F Method Used: TCC

Explosive Limits:

LEL: 1.80 UEL: No data.

Autoignition Pt:

No data.

Special Fire Fighting Procedures

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Unusual Fire and Explosion Hazards

No data available.

Extinguishing Media

Use carbon dioxide, dry powder, or foam.

Unsuitable Extinguishing Media

No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Cleanup:

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area.

Small Spills:

MATERIAL SAFETY DATA SHEET

Klean-Strip Methyl Ethyl Ketone

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Supercedes Revision: 06/10/2005

Take up liquid with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large Spills:

Dike far ahead of spill for later disposal.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users --Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provided protection against vapors.

Eye Protection

Safety glasses, chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

Other Protective Clothing

Various application methods can dictate the use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after use. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

Ventilation

Use only with adequate ventilation to prevent buildup of vapors. Do not use in areas where vapors can accumulate and concentrate such as basements, bathrooms, or small enclosed areas. Whenever possible, use outdoors in an open area. If using indoors, open all windows and doors and maintain a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea or eye-watering -- Stop -- ventilation is inadequate. Leave area immediately. If the work area is not well ventilated, then do not use this product. A dust mask does not provide protection against vapors.

9. Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas	<input checked="" type="checkbox"/> Liquid	<input type="checkbox"/> Solid
Melting Point:	No data.		
Boiling Point:	175.00 F		
Autoignition Pt:	No data.		
Flash Pt:	21.00 F Method: TCC		
Explosive Limits:	LEL: 1.80	UEL: No data.	
Specific Gravity:	0.000000		

MATERIAL SAFETY DATA SHEET

Klean-Strip Methyl Ethyl Ketone

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Bulk Density: 6.689 LB/GA
Vapor Pressure: No data.
Vapor Density: No data.
Evaporation Rate: No data.
Solubility in Water: No data.
Percent Volatile: 99.999 % by weight.
VOC / Volume: 825.0000 G/L
Corrosion Rate: No data.
pH: No data.
Appearance and Odor
No data available.

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents, strong caustics, and hydrogen peroxide.

Hazardous Decomposition Or Byproducts

Decomposition may produce carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will occur [] Will not occur [X]

Conditions To Avoid - Hazardous Polymerization

No data available.

11. Toxicological Information

Toxicological Information

No data available.

Carcinogenicity/Other Information

No data available.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

Ecological Information

No data available.

13. Disposal Considerations

Waste Disposal Method

Dispose in accordance with local, state, and federal regulations.

RCRA Waste ID Code: D035

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name

No data available.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)

Methyl ethyl ketone

CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
78-93-3	No	Yes 5000 LB	Yes	Yes

US EPA CAA, CWA, TSCA

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Klean-Strip Methyl Ethyl Ketone

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Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
Methyl ethyl ketone	78-93-3	HAP	No	No	No

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

Sec.302: EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.

Sec.304: EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.

Sec.313: EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.

Sec.110: EPA SARA 110 Superfund Site Priority Contaminant List

TSCA (Toxic Substances Control Act) Lists:

5A(2): Chemical Subject to Significant New Rules (SNURS)

6A: Commercial Chemical Control Rules

8A: Toxic Substances Subject To Information Rules on Production

8A CAIR: Comprehensive Assessment Information Rules - (CAIR)

8A PAIR: Preliminary Assessment Information Rules - (PAIR)

8C: Records of Allegations of Significant Adverse Reactions

8D: Health and Safety Data Reporting Rules

8D TERM: Health and Safety Data Reporting Rule Terminations

Other Important Lists:

CWA NPDES: EPA Clean Water Act NPDES Permit Chemical

CAA HAP: EPA Clean Air Act Hazardous Air Pollutant

CAA ODC: EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)

CA PROP 65: California Proposition 65

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

Yes No Acute (immediate) Health Hazard

Yes No Chronic (delayed) Health Hazard

Yes No Fire Hazard

Yes No Reactive Hazard

Yes No Sudden Release of Pressure Hazard

16. Other Information

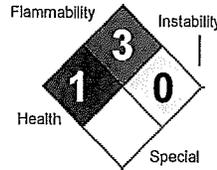
Company Policy or Disclaimer

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MATERIAL SAFETY DATA SHEET

Denatured Alcohol

HEALTH	1
FLAMMABILITY	3
PHYSICAL HAZ.	0
PPE	G



Printed: 12/14/2005
Revision: 06/13/2005

Date Created: 06/13/2005

1. Product and Company Identification

Product Code: CSL26
Product Name: Denatured Alcohol
Reference #: 1625.5
Manufacturer Information
Company Name: W. M. Barr
 2105 Channel Avenue
 Memphis, TN 38113
Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892
Web site address: www.wmbarr.com

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Percentage	OSHA PEL	ACGIH TWA	Other Limits
1. Ethyl alcohol	64-17-5	45.0 -50.0 %	1000 ppm	1000 ppm	No data.
2. Methanol	67-56-1	45.0 -50.0 %	200 ppm	200 ppm	No data.
3. Methyl isobutyl ketone	108-10-1	1.0 -4.0 %	100 ppm	50 ppm	No data.
Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
Ethyl alcohol	KQ6300000	No data.	No data.	No data.	No data.
Methanol	PC1400000	No data.	No data.	250 ppm	No data.
3. Methyl isobutyl ketone	SA9275000	No data.	No data.	75 ppm	No data.

3. Hazards Identification

Emergency Overview

Danger! Flammable! Keep away from heat, sparks, flame, and all other sources of ignition. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition during use and until all vapors are gone. Beware of static electricity that may be generated by synthetic clothing and other sources.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic)

Inhalation Acute Exposure Effects:

Vapor harmful. May cause dizziness, headache, watering of eyes, irritation of respiratory tract, irritation to the eyes, drowsiness, nausea, other central nervous system effects, spotted vision, dilation of pupils, and convulsions.

Skin Contact Acute Exposure Effects:

May cause irritation, drying of skin, redness, and dermatitis. May cause symptoms listed under inhalation. May be absorbed through damaged skin.

Eye Contact Acute Exposure Effects:

May cause irritation.

Ingestion Acute Exposure Effects:

Poison. Cannot be made non-poisonous. May be fatal or cause blindness. May produce fluid in the lungs and pulmonary edema. May cause dizziness, headache, nausea, drowsiness, loss of coordination, stupor, reddening of face and or neck, liver, kidney and heart damage, coma, and death. May produce symptoms listed under inhalation.

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Denatured Alcohol

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Chronic Exposure Effects:

May cause symptoms listed under inhalation, dizziness, fatigue, tremors, permanent central nervous system changes, blindness, pancreatic damage, and death.

Signs and Symptoms Of Exposure

No data available.

Medical Conditions Generally Aggravated By Exposure

Diseases of the liver.

OSHA Hazard Classes:

HEALTH HAZARDS : N/E

PHYSICAL HAZARDS : N/E

TARGET ORGANS & EFFECTS: N/E

4. First Aid Measures

Emergency and First Aid Procedures

Inhalation:

If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

Skin Contact:

Wash with soap and water.

Eye Contact:

Flush with large quantities of water for at least 15 minutes. If irritation from contact persists, get medical attention.

Ingestion:

Call your poison control center, hospital emergency room or physician immediately for instructions to induce vomiting.

Note to Physician

Poison. This product contains methanol. Methanol is metabolized to formaldehyde and formic acid. These metabolites may cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used as an antidote. Methanol is effectively removed by hemodialysis. Call your local poison control center for further instructions.

5. Fire Fighting Measures

Flammability Classification:	OSHA Class IB
Flash Pt:	45.00 F Method Used: SCC
Explosive Limits:	LEL: 1.00 UEL: No data.
Autoignition Pt:	No data.

Fire Fighting Instructions

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined area. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards

No data available.

Extinguishing Media

Use carbon dioxide, dry powder, or foam.

MATERIAL SAFETY DATA SHEET

Denatured Alcohol

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Unsuitable Extinguishing Media

No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Clean-up:

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources, keep flares, smoking or flames out of hazard area.

Small spills:

Take up liquid with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large spills:

Dike far ahead of spill for later disposal.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations.

Do not reuse this container.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.

Eye Protection

Safety glasses, chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

Other Protective Clothing

Various application methods can dictate the use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after use. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

Engineering Controls (Ventilation etc.)

Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering -- Stop -- ventilation is inadequate. Leave area immediately.

MATERIAL SAFETY DATA SHEET
Denatured Alcohol

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9. Physical and Chemical Properties

Physical States: [] Gas [X] Liquid [] Solid
Melting Point: No data.
Boiling Point: 147.00 F
Autoignition Pt: No data.
Flash Pt: 45.00 F Method: SCC
Explosive Limits: LEL: 1.00 UEL: No data.
Specific Gravity (Water = 1): No data.
Bulk Density: 6.61 LB/GA
Vapor Pressure (vs. Air or mm Hg): No data.
Vapor Density (vs. Air = 1): No data.
Evaporation Rate (vs Butyl Acetate=1): No data.
Solubility in Water: No data.
Percent Volatile: 100.0 % by weight.
VOC / Volume: 792.0000 G/L
Corrosion Rate: No data.
pH: No data.
Appearance and Odor
No data available.

10. Stability and Reactivity

Stability: Unstable [] Stable [X]
Conditions To Avoid - Instability
No data available.
Incompatibility - Materials To Avoid
Incompatible with strong oxidizing agents.
Hazardous Decomposition Or Byproducts
Decomposition may produce carbon monoxide and carbon dioxide.
Hazardous Polymerization: Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Polymerization
No data available.

11. Toxicological Information

Toxicological Information
No data available.
Carcinogenicity/Other Information
No data available.
Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

Ecological Information
No data available.

13. Disposal Considerations

Waste Disposal Method
Dispose in accordance with applicable local, state, and federal regulations.

MATERIAL SAFETY DATA SHEET

Denatured Alcohol

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14. Transport Information

AND TRANSPORT (US DOT)

DOT Proper Shipping Name

No data available.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Ethyl alcohol	64-17-5	No	No	No	No
2. Methanol	67-56-1	No	Yes 5000 LB	Yes	No
3. Methyl isobutyl ketone	108-10-1	No	Yes 5000 LB	Yes	Yes

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Ethyl alcohol	64-17-5	No	No	No	No
2. Methanol	67-56-1	HAP	No	No	No
3. Methyl isobutyl ketone	108-10-1	HAP	No	No	No

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

- Sec.302:** EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.
- Sec.304:** EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.
- Sec.313:** EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.
- Sec.110:** EPA SARA 110 Superfund Site Priority Contaminant List

SCA (Toxic Substances Control Act) Lists:

- 5A(2):** Chemical Subject to Significant New Rules (SNURS)
- 6A:** Commercial Chemical Control Rules
- 8A:** Toxic Substances Subject To Information Rules on Production
- 8A CAIR:** Comprehensive Assessment Information Rules - (CAIR)
- 8A PAIR:** Preliminary Assessment Information Rules - (PAIR)
- 8C:** Records of Allegations of Significant Adverse Reactions
- 8D:** Health and Safety Data Reporting Rules
- 8D TERM:** Health and Safety Data Reporting Rule Terminations

Other Important Lists:

- CWA NPDES:** EPA Clean Water Act NPDES Permit Chemical
- CAA HAP:** EPA Clean Air Act Hazardous Air Pollutant
- CAA ODC:** EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)
- CA PROP 65:** California Proposition 65

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

- Yes No Acute (immediate) Health Hazard
- Yes No Chronic (delayed) Health Hazard
- Yes No Fire Hazard
- Yes No Reactive Hazard
- Yes No Sudden Release of Pressure Hazard

MATERIAL SAFETY DATA SHEET
Denatured Alcohol

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Printed: 12/14/2005
Revision: 06/13/2005

16. Other Information

Company Policy or Disclaimer

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MATERIAL SAFETY DATA SHEET

Klean-Strip Paint Thinner

Page: 1

HEALTH	2
FLAMMABILITY	2
PHYSICAL HAZ.	0
PPE	G



Printed: 12/14/2005
Revision: 10/03/2005

Date Created: 10/03/2005

1. Product and Company Identification

Product Code: GKPT94002
Product Name: Klean-Strip Paint Thinner
Reference #: 1677.1

Manufacturer Information

Company Name: W. M. Barr
 2105 Channel Avenue
 Memphis, TN 38113

Phone Number: (901)775-0100

Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
 Information: W.M. Barr Customer Service (800)398-3892

Web site address: www.wmbarr.com

Preparer Name: W.M. Barr and Company, Inc. (901)775-0100

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Percentage	OSHA TWA	ACGIH TWA	Other Limits
1. Stoddard solvent	8052-41-3	95.0 -100.0 %	500 ppm	100 ppm	No data.
2. 1,2,4-Trimethylbenzene	95-63-6	1.0 -2.0 %	200 ppm	50 ppm	No data.
3. Raffinates (petroleum), sorption process	64741-85-1	95.0 -100.0 %	1000 ppm	500 ppm	No data.
Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Stoddard solvent	WJ8925000	No data.	No data.	250 ppm	No data.
2. 1,2,4-Trimethylbenzene	DC3325000	500 ppm/(10min)	300 ppm	No data.	No data.
3. Raffinates (petroleum), sorption process	NA	No data.	No data.	750 ppm	No data.

3. Hazards Identification

Emergency Overview

Caution! Combustible. Keep away from heat, sparks, flame and all other sources of ignition. Vapors may cause fire. Vapors may travel long distances to other areas and rooms away from work site. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition anywhere in the structure, dwelling or building during use and until all vapors are gone from work site and all areas away from work site. Keep away from electrical outlets and switches. Beware of static electricity that may be generated by synthetic clothing and other sources.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic)

Inhalation Acute Exposure Effects:

May cause dizziness; headache; watering of eyes; eye irritation; weakness; nausea; muscle twitches, and depression of central nervous system. Severe overexposure may cause convulsions; unconsciousness; and death. Intentional misuse of this product by deliberately concentrating and inhaling can be harmful or fatal.

Skin Contact Acute Exposure Effects:

May cause irritation; numbness in the fingers and arms; drying of skin; and dermatitis. May cause increased severity of symptoms listed under inhalation.

Eye Contact Acute Exposure Effects:

This material is an eye irritant. May cause irritation; burns; conjunctivitis of eyes; and corneal ulcerations of the eye. Vapors may irritate eyes.

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Ingestion Acute Exposure Effects:

Harmful or fatal if swallowed. May cause nausea; weakness; muscle twitches; gastrointestinal irritation; and diarrhea. Severe overexposure may cause convulsions; unconsciousness; and death.

Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged or repeated contact may cause dermatitis. May cause jaundice; bone marrow damage; liver damage; anemia; and skin irritation.

Signs and Symptoms Of Exposure

Inhalation, ingestion, and dermal are possible routes of exposure.

Medical Conditions Generally Aggravated By Exposure

Diseases of the skin, eyes, liver, kidneys, central nervous system and respiratory system.

OSHA Hazard Classes:

HEALTH HAZARDS : N/E

PHYSICAL HAZARDS : N/E

TARGET ORGANS & EFFECTS: N/E

4. First Aid Measures

Emergency and First Aid Procedures

Inhalation:

If user experiences breathing difficulty, move to air free of vapors, Administer oxygen or artificial medical assistance can be rendered.

Skin Contact:

Wash with soap and large quantities of water and seek medical attention if irritation from contact persists.

Eye Contact:

Flush with large quantities of water for at least 15 minutes and seek immediate medical attention.

Ingestion:

Do not induce vomiting. Call your local poison control center, hospital emergency room or physician immediately for instructions to induce vomiting.

Note to Physician

Call your local poison control center for further information.

5. Fire Fighting Measures

Flammability Classification:	Class II
Flash Pt:	105.00 F Method Used: SCC
Explosive Limits:	LEL: 1.00 UEL: No data.
Autoignition Pt:	No data.

Fire Fighting Instructions

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards

No data available.

Extinguishing Media

Use carbon dioxide, dry powder, or foam.

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Unsuitable Extinguishing Media

No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Clean up:

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area.

Small spills:

Take up with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large spills:

Dike far ahead of spill for later disposal.

Waste Disposal:

Dispose in accordance with applicable local, state and federal regulations.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.

Eye Protection

Safety glasses, goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

Other Protective Clothing

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after use. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

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Engineering Controls (Ventilation etc.)

Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering - Stop - ventilation is inadequate. Leave area immediately.

9. Physical and Chemical Properties

Physical States:	[] Gas [X] Liquid [] Solid
Melting Point:	No data.
Boiling Point:	> 310.00 F
Autoignition Pt:	No data.
Flash Pt:	105.00 F Method: SCC
Explosive Limits:	LEL: 1.00 UEL: No data.
Specific Gravity (Water = 1):	No data.
Bulk Density:	6.659 LB/GA
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Evaporation Rate (vs Butyl Acetate=1):	No data.
Solubility in Water:	No data.
Percent Volatile:	100.0 % by weight.
VOC / Volume:	800.0000 G/L
Corrosion Rate:	No data.
pH:	No data.

Appearance and Odor

Water White / Free and Clear

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents.

Hazardous Decomposition Or Byproducts

Decomposition may produce carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will occur [] Will not occur [X]

Conditions To Avoid - Hazardous Polymerization

No data available.

11. Toxicological Information

Toxicological Information

No data available.

Carcinogenicity/Other Information

No data available.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

Ecological Information

No data available.

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13. Disposal Considerations

Waste Disposal Method

Dispose in accordance with federal, state, and local regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name

No data available.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Stoddard solvent	8052-41-3	No	No	No	No
2. 1,2,4-Trimethylbenzene	95-63-6	No	No	Yes	No
3. Raffinates (petroleum), sorption process	64741-85-1	No	No	No	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Stoddard solvent	8052-41-3	No	No	No	No
2. 1,2,4-Trimethylbenzene	95-63-6	No	No	No	No
3. Raffinates (petroleum), sorption process	64741-85-1	No	No	No	No

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

- Sec.302: EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.
- Sec.304: EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.
- Sec.313: EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.
- Sec.110: EPA SARA 110 Superfund Site Priority Contaminant List

TSCA (Toxic Substances Control Act) Lists:

- 5A(2): Chemical Subject to Significant New Rules (SNURS)
- 6A: Commercial Chemical Control Rules
- 8A: Toxic Substances Subject To Information Rules on Production
- 8A CAIR: Comprehensive Assessment Information Rules - (CAIR)
- 8A PAIR: Preliminary Assessment Information Rules - (PAIR)
- 8C: Records of Allegations of Significant Adverse Reactions
- 8D: Health and Safety Data Reporting Rules
- 8D TERM: Health and Safety Data Reporting Rule Terminations

Other Important Lists:

- CWA NPDES: EPA Clean Water Act NPDES Permit Chemical
- CAA HAP: EPA Clean Air Act Hazardous Air Pollutant
- CAA ODC: EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)
- CA PROP 65: California Proposition 65

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

- Yes No Acute (immediate) Health Hazard
- Yes No Chronic (delayed) Health Hazard
- Yes No Fire Hazard
- Yes No Reactive Hazard

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Yes No Sudden Release of Pressure Hazard

16. Other Information

Company Policy or Disclaimer

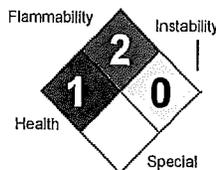
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MINERAL SPIRITS

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PPE	G



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Revision: 06/20/2005

Date Created: 06/14/2005

1. Product and Company Identification

Product Code: GKSP94214
Product Name: MINERAL SPIRITS
Reference #: 1631.1

Manufacturer Information

Company Name: W. M. Barr
 2105 Channel Avenue
 Memphis, TN 38113

Phone Number: (901)775-0100

Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346

Information: W.M. Barr Customer Service (800)398-3892

Web site address: www.wmbarr.com

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Percentage	OSHA PEL	ACGIH TLV	Other Limits
1. Stoddard solvent	8052-41-3	95.0 -100.0 %	500 ppm	100 ppm	No data.
Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Stoddard solvent	WJ8925000	No data.	No data.	No data.	No data.

3. Hazards Identification

Emergency Overview

Caution! Combustible! Keep away from heat, sparks, flame and all other sources of ignition. Vapors may cause fire. Vapors may travel long distances to other areas and rooms away from work site. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition anywhere in the structure, dwelling or building during use and until all vapors are gone from work site and all areas away from the work site. Keep away from electrical outlets and switches. Beware of static electricity that may be generated by synthetic clothing and other sources.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

Health Hazards (Acute and Chronic)

Inhalation Acute Exposure Effects:

Vapor concentration may cause headache, dizziness, irritation of the respiratory tract, eye irritation, stupor, depression of the central nervous system, watering of the eyes, weakness, nausea, muscle twitches, and kidney effects. Aspiration into lungs may cause pneumonia or death. Severe overexposure may cause convulsions, unconsciousness, and death.

Skin Contact Acute Exposure Effects:

May cause irritation.

Eye Contact Acute Exposure Effects:

Liquid contact may cause irritation.

Ingestion Acute Exposure Effects:

Harmful or fatal if swallowed. May cause nausea, weakness, muscle twitches, gastrointestinal irritation, diarrhea, unconsciousness, and death.

Chronic Exposure Effects:

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MINERAL SPIRITS

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Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Repeated or prolonged skin contact may cause redness, irritation, and scaling of the skin. May cause skin irritation, anemia, bone marrow damage, liver damage, and jaundice.

Signs and Symptoms Of Exposure

Primary routes of exposure:

Inhalation, ingestion, and dermal.

Medical Conditions Generally Aggravated By Exposure

None known.

OSHA Hazard Classes:

HEALTH HAZARDS : N/E

PHYSICAL HAZARDS : N/E

TARGET ORGANS & EFFECTS: N/E

4. First Aid Measures

Emergency and First Aid Procedures

Inhalation:

If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

Skin contact:

Wash with soap and large quantities of water for at least 15 minutes. Seek medical attention if irritation from contact persists.

Eye contact:

Immediately flush eyes with water, remove any contact lens, continue flushing with water for at least 15 minutes. Get medical attention.

Ingestion:

Do not induce vomiting. Call your poison control center, hospital emergency room, or physician immediately.

Note to Physician

Call your local poison control center for further instructions.

5. Fire Fighting Measures

Flammability Classification:	OSHA Class II
Flash Pt:	> 107.00 F Method Used: TCC
Explosive Limits:	LEL: 1.0 UEL: No data.
Autoignition Pt:	No data.

Special Fire Fighting Procedures

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Unusual Fire and Explosion Hazards

No data available.

Extinguishing Media

Use carbon dioxide, dry powder, or foam.

Unsuitable Extinguishing Media

No data available.

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MINERAL SPIRITS

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6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Clean-up:

Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources, keep flares, smoking or flames out of hazard area.

Small spills:

Take up the spilled liquid with sand, earth, or other noncombustible absorbent material and place in a plastic container where applicable.

Large spills:

Dike far ahead of spill for later disposal.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.

Eye Protection

Safety glasses, chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

Other Protective Clothing

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after use. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

Ventilation

Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering -- Stop -- ventilation is inadequate. Leave area immediately.

9. Physical and Chemical Properties

Physical States: [] Gas [X] Liquid [] Solid
Melting Point: No data.

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Boiling Point: > 316.00 F
Autoignition Pt: No data.
Flash Pt: > 107.00 F Method: TCC
Explosive Limits: LEL: 1.0 UEL: No data.
Specific Gravity: No data.
Bulk Density: 6.380 LB/GA
Vapor Pressure: No data.
Vapor Density: No data.
Evaporation Rate: No data.
Solubility in Water: No data.
Percent Volatile: 100.0 % by weight.
VOC / Volume: 815.0000 G/L
Corrosion Rate: No data.
pH: No data.
Appearance and Odor
No data available.

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents.

Hazardous Decomposition Or Byproducts

Thermal decomposition may produce carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will occur [] Will not occur [X]

Conditions To Avoid - Hazardous Polymerization

No data available.

11. Toxicological Information

Toxicological Information

No data available.

Carcinogenicity/Other Information

No data available.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

Ecological Information

No data available.

13. Disposal Considerations

Waste Disposal Method

Dispose in accordance with applicable local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name

No data available.

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15. Regulatory Information

JS EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Stoddard solvent	8052-41-3	No	No	No	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Stoddard solvent	8052-41-3	No	No	No	No

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

- Sec.302: EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.
- Sec.304: EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.
- Sec.313: EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.
- Sec.110: EPA SARA 110 Superfund Site Priority Contaminant List

TSCA (Toxic Substances Control Act) Lists:

- 5A(2): Chemical Subject to Significant New Rules (SNURS)
- 6A: Commercial Chemical Control Rules
- 8A: Toxic Substances Subject To Information Rules on Production
- 8A CAIR: Comprehensive Assessment Information Rules - (CAIR)
- 8A PAIR: Preliminary Assessment Information Rules - (PAIR)
- 8C: Records of Allegations of Significant Adverse Reactions
- 8D: Health and Safety Data Reporting Rules
- 8D TERM: Health and Safety Data Reporting Rule Terminations

Other Important Lists:

- CWA NPDES: EPA Clean Water Act NPDES Permit Chemical
- CAA HAP: EPA Clean Air Act Hazardous Air Pollutant
- CAA ODC: EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)
- CA PROP 65: California Proposition 65

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

- Yes No Acute (immediate) Health Hazard
- Yes No Chronic (delayed) Health Hazard
- Yes No Fire Hazard
- Yes No Reactive Hazard
- Yes No Sudden Release of Pressure Hazard

16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

KOP-COAT, INC
 MARINE GROUP EAST
 36 PINE STREET
 ROCKAWAY
 NJ 07866

EMERGENCIES

HEALTH/SPILLS.....: 800-548-0489
 CHEMTREC ASSISTANCE: 800-424-9300
 CHEMTREC OUTSIDE US: 703-527-3887
 CANUTEC.....: 613-996-6666

KOP-COAT, INC

PRODUCT INFORMATION: 800-221-4466
 OUTSIDE USA.....: 973-625-3100

 1 PRODUCT IDENTIFICATION

PRODUCT NAME: 6981 Trailercoat
 PRODUCT USE.: Rustproof primer for boat trailers
 APPEARANCE.: Silver liquid with hydrocarbon odor
 CAS NUMBER.: Mixture
 SYNONYMS.....: None

REVISION....: 3
 DATE.....: 1/06/00
 MSDS NUMBER: 1698108

 2 HAZARDOUS INGREDIENTS

<u>HAZARDOUS COMPONENT</u>	<u>REG AGENCY</u>	<u>PPM</u>	<u>NOTES</u>	<u>MG/M3</u>	<u>NOTES</u>
Methylene diphenyl diisocyanate (MDI) CAS NUMBER:101-68-8 PERCENT BY WGT: 5 TO 10	ACGIH TWA OSHA CEILING	0.005 0.02		0.051 0.2	
Ethyl Orthoformate CAS NUMBER:122-51-0 PERCENT BY WGT: . 1 TO 5			(None established.)		
Xylene CAS NUMBER:1330-20-7 PERCENT BY WGT: 1 TO 5	ACGIH STEL ACGIH-TWA NIOSH NIOSH STEL OSHA STEL OSHA TWA	150 100 100 150 150 100		651 434 435 655 655 435	
Trimethyl benzene CAS NUMBER:25551-13-7 PERCENT BY WGT: 10 TO 15	ACGIH TLV OSHA TWA	25 25		123 125	
Petroleum distillates CAS NUMBER:64742-95-6	OSHA-PEL	100		-	

 2 HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENT	REG AGENCY	PPM	NOTES	MG/M3	NOTES
PERCENT BY WGT: 35 TO 40					
Aluminum (as metal dust)	ACGIH TWA	-		10	
CAS NUMBER:7429-90-5	OSHA TWA	-		15	1
PERCENT BY WGT: 10 TO 15	OSHA-TWA	-		5	2
Aluminum (as welding fume)	ACGIH TWA	-		5	
CAS NUMBER:7429-90-5-	OSHA TWA	-		5	
PERCENT BY WGT: 10 TO 15					

NOTES:

- 1) Total dust
- 2) Respirable fraction

 3 HAZARDS IDENTIFICATION

EYE: Direct contact with liquid or vapor causes irritation.

SKIN: Prolonged or repeated contact with the skin can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

INHALATION: Avoid breathing vapors or mists. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches). Prolonged or repeated inhalation and ingestion may cause delayed injury involving the kidneys and the blood.

INGESTION: Irritating to the nose, throat and respiratory tract. May cause vomiting. Aspiration of this product into the lung may cause chemical pneumonitis which can be fatal.

Individuals with pre-existing disease in or a history of ailments involving the skin, eye, respiratory tract, liver, kidney, central nervous system are at a greater than normal risk of developing adverse effects when exposed to this material.

 4 FIRST AID MEASURES

EYE CONTACT: Immediately flush with plenty of water for at least 15 minutes. Get medical attention.

SKIN CONTACT: Remove contaminated clothing. Wash thoroughly with soap and water. If redness, itching, burning or other symptoms develop or persist, get medical attention. Wash contaminated clothing before reuse.

4 FIRST AID MEASURES

INHALATION: If you experience difficulty in breathing, leave the area to obtain fresh air. If breathing has stopped have a trained person administer artificial respiration preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

INGESTION: If swallowed do NOT induce vomiting. Get immediate medical attention. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

NOTE TO PHYSICIAN: There is no specific antidote for effects from overexposure to this material. Treatment should be directed at the control of symptoms and the clinical condition.

5 FIRE FIGHTING MEASURES

FLASH POINT: 105 F/41C

EXTINGUISHING MEDIA: Use dry chemical, carbon dioxide, water spray or foam.

FIRE FIGHTING PROCEDURES: As in any fire, wear complete fire service protective equipment, including full-face MSHA/NIOSH approved or equivalent self-contained breathing apparatus. Use water to cool fire-exposed container/structure/protect personnel.

FIRE AND EXPLOSION HAZARDS: Can release vapors that form explosive mixtures. Vapors can travel to a source of ignition and flash back. Closed containers may explode when exposed to extreme heat (fire). Toxic vapors may be given off in a fire.

6 SPILL AND LEAK PROCEDURES

Stop spill/leak if no risk involved. Avoid breathing vapors. Eliminate ALL sources of ignition. Ventilate area. Take up carefully to avoid heat and sparks. Use an inert absorbent to complete a clean-up. This material reacts with oxidizing materials. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

7 HANDLING AND STORAGE

HANDLING: Avoid prolonged or repeated breathing of vapors, mists or fumes. Do not get on skin, in eyes or on clothing. Spray paint in accordance with OSHA 29 CFR 1910.107. Use with adequate ventilation. Wash thoroughly after handling

STORAGE: Store in areas/buildings designed to comply with OSHA 1910.106. Keep

 7 HANDLING AND STORAGE

in a closed, labeled container within a cool (well-shaded), dry, ventilated area. Protect from physical damage. Keep containers closed when material is not in use. Maintain good housekeeping.

OTHER: Keep away from heat and open flame. If post application/use processing of this product generates dust or if spray application is made, " Exposure Limits " in Section 2 apply. Do not use until manufacturer's precautions have been read/understood.

 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Ventilation is normally required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Facilities storing or utilizing this product should be equipped with an eyewash facility.

RESPIRATORS: Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved or equivalent) during and after application. Follow respirator manufacturer's directions for respirator use. Close container after each use. A respiratory protection program that meets OSHA 1910.134 and NIOSH 42 CFR 84 requirements must be followed whenever workplace conditions warrant a respirator's use.

PERSONAL PROTECTIVE EQUIPMENT: Industrial safety glasses at a minimum. As necessary for work area conditions: use side shields, goggles, or faceshield. As required, chemical resistant flexible-type gloves (heavy duty neoprene or equal). Wear industrial-type work clothing and safety footwear. Depending on working conditions, i.e., contact potential, wear resistant protective garments such as head/neck cover, aprons, jackets, pants, coveralls, boots, etc.

 9 PHYSICAL AND CHEMICAL PROPERTIES

Weight Per Gallon (lbs):	9.250	% VOL by Weight.: 44
Vapor Density.: (air=1)>1		Boiling Point...: Not determined
Vapor Pressure: Not determined		Evaporation Rate: (ether=1)<1
pH.....: Not determined		Specific Gravity: > 1
Solubility In Water: Negligible		Viscosity.....: Not determined
VOC Content.....: 467 g/L		

 10 STABILITY AND REACTIVITY DATA

 10 STABILITY AND REACTIVITY DATA

STABILITY: None
 HAZARDOUS POLYMERIZATION: None
 INCOMPATIBILITY: Avoid oxidizing agents, heat, sparks and open flames.
 HAZARDOUS DECOMPOSITION PRODUCT(S): Carbon monoxide, carbon dioxide upon thermal decomposition.

 11 TOXICOLOGICAL INFORMATION

Contact Kop-Coat for applicable information.

 12 ECOLOGICAL INFORMATION

Product has not been tested for ecotoxicity.

 13 DISPOSAL CONSIDERATIONS

This product as supplied is a USEPA defined ignitable hazardous waste. Dispose of unusable product as a hazardous waste (D001) in accordance with local, state and federal regulations.

 14 TRANSPORTATION INFORMATION

DEPARTMENT OF TRANSPORTATION REPORTABLE QUANTITIES

REPORTABLE QTY (LBS)	HAZARDOUS SUBSTANCE
100	Xylene

DOT PROPER SHIPPING NAME: None
 DOT HAZARD CLASS: None
 LABEL: Non-Hazardous
 DOT IDENTIFICATION NUMBER: None
 DOT information for domestic ground transportation.

 15 REGULATORY INFORMATION

SARA TITLE III SECTION 313 CHEMICALS

Methylene diphenyl diisocyanate (MDI)
 Xylene
 Aluminum (as metal dust)

16 OTHER INFORMATION

NOTE: The petroleum distillate (CAS# 64742-95-6) may contain approximately 7% xylene, 3% cumene and 40% trimethylbenzene.

NOTICE: While the information and recommendations set forth herein are believed to be accurate as of the date hereof, Kop-Coat, Inc. makes no warranty with respect thereto and disclaims all liability from reliance thereon.

PREPARED BY: L. Briggs Manager Environmental and Regulatory Affairs

CAS No.	Ingredient Name & %	Source	Exposure Data
000071-36-3	n-Butyl alcohol 1.0 - 10% by Weight	OSHA:	100 ppm TWA; 300 mg/m3 TWA50 ppm Ceiling; 150 mg/m3 Ceiling
		ACGIH:	20 ppm TWA
		NIOSH:	50 ppm Ceiling; 150 mg/m3 Ceiling1400 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	50 ppm CEV; 150 mg/m3 CEV
		Mexico:	50 ppm STEL; 150 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Eye and mucous membrane irritation CNS depression
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000078-93-3	Methyl ethyl ketone 1.0 - 10% by Weight	OSHA:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL
		ACGIH:	200 ppm TWA300 ppm STEL
		NIOSH:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL3000 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	200 ppm TWAEV; 590 mg/m3 TWAEV300 ppm STEV; 885 mg/m3 STEV
		Mexico:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL
		Brazil:	155 ppm TWA; 460 mg/m3 TWA
		Source	Health Data
		NIOSH:	Irritation; liver kidney
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000100-41-4	Ethyl benzene 0.10 - 1.0% by Weight	OSHA:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
		ACGIH:	100 ppm TWA125 ppm STEL
		NIOSH:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL800 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV125 ppm STEV; 540 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
		Brazil:	78 ppm TWA; 340 mg/m3 TWA
		Source	Health Data
		NIOSH:	Eye skin
		Source	Carcinogen Data

OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 Group 1: No; Group 2A: No;
 IARC: Group 2b: Yes; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
000110-80-5	ETHOXYETHANOL 1.0 - 10% by Weight	OSHA:	200 ppm TWA; 740 mg/m3 TWA
		ACGIH:	5 ppm TWA
		NIOSH:	0.5 ppm TWA; 1.8 mg/m3 TWA500 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	5 ppm TWAEV; 18 mg/m3 TWAEV
		Mexico:	50 ppm TWA; 185 mg/m3 TWA100 ppm STEL; 370 mg/m3 STEL
		Brazil:	78 ppm TWA; 290 mg/m3 TWA
		Source	Health Data
		NIOSH:	Reproductive and developmental effects; blood CNS
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No;		
	Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000123-86-4	n-Butyl acetate 1.0 - 10% by Weight	OSHA:	150 ppm TWA; 710 mg/m3 TWA200 ppm STEL; 950 mg/m3 STEL
		ACGIH:	150 ppm TWA200 ppm STEL
		NIOSH:	150 ppm TWA; 710 mg/m3 TWA200 ppm STEL; 950 mg/m3 STEL1700 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	150 ppm TWAEV; 710 mg/m3 TWAEV200 ppm STEV; 950 mg/m3 STEV
		Mexico:	150 ppm TWA; 710 mg/m3 TWA200 ppm STEL; 950 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Mucous membrane and eye irritation; high concentrations cause nervous system effects in animals
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No;		
	Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
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001317-65-3	Limestone 10 - 25% by Weight	OSHA: 15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction) ACGIH: No Data Available NIOSH: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust) Supplier: No Data Available OSHA, CAN: 10 mg/m3 TWAEV (total dust, no asbestos and less than 1% crystalline silica) Mexico: 10 mg/m3 TWA (nuisance particulate) Brazil: No Data Available Source Health Data NIOSH: Eye and skin irritation Physical irritation Source Carcinogen Data OSHA: Select Carcinogen: No NTP: Known Carcinogen: No; Suspected Carcinogen: No Group 1: No; Group 2A: No; IARC: Group 2b: No; Group 3: No; Group 4: No
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CAS No.	Ingredient Name & %	Source	Exposure Data
001330-20-7	Xylenes (o-, m-, p- isomers) 1.0 - 10% by Weight	OSHA: 100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL ACGIH: 100 ppm TWA150 ppm STEL NIOSH: No Data Available Supplier: No Data Available OSHA, CAN: 100 ppm TWAEV; 435 mg/m3 TWAEV150 ppm STEV; 650 mg/m3 STEV Mexico: 100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL Brazil: 78 ppm TWA; 340 mg/m3 TWA Source Health Data NIOSH: Central nervous system depressant; respiratory and eye irritation Source Carcinogen Data OSHA: Select Carcinogen: No NTP: Known Carcinogen: No; Suspected Carcinogen: No Group 1: No; Group 2A: No; IARC: Group 2b: No; Group 3: Yes; Group 4: No	

CAS No.	Ingredient Name & %	Source	Exposure Data
001332-58-7	Kaolin 1.0 - 10% by Weight	OSHA: 15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction) ACGIH: 2 mg/m3 TWA (respirable fraction, particulate matter containing no asbestos and < 1% crystallin NIOSH: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust) Supplier: No Data Available OSHA, CAN: 2 mg/m3 TWAEV (total dust, no asbestos and less than 1% crystalline silica) Mexico: 10 mg/m3 TWA (nuisance particulate)20 mg/m3 STEL Brazil: No Data Available Source Health Data NIOSH: Skin and mucous membrane injury respiratory effects Source Carcinogen Data OSHA: Select Carcinogen: No NTP: Known Carcinogen: No; Suspected Carcinogen: No	

IARC: Known Carcinogen: No, Suspected Carcinogen: No
 Group 1: No; Group 2A: No;
 Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
001333-86-4	Carbon black 0.10 - 1.0% by Weight	OSHA:	3.5 mg/m3 TWA
		ACGIH:	3.5 mg/m3 TWA
		NIOSH:	3.5 mg/m3 TWA; 0.1 mg/m3 TWA (as PAH, carbon black in presence of polycyclic aromatic hydrocarb1750 mg/m3 IDLH
		Supplier:	No Data Available
		OHSA, CAN:	3.5 mg/m3 TWAEV
		Mexico:	3.5 mg/m3 TWA7 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Lung cardiovascular
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: Yes; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
007779-90-0	Trizinc diphosphate 1.0 - 10% by Weight	OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	No Data Available
		Supplier:	No Data Available
		OHSA, CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	No Data Available
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
013463-67-7	Titanium dioxide 1.0 - 10% by Weight	OSHA:	15 mg/m3 TWA (total dust)
		ACGIH:	10 mg/m3 TWA
		NIOSH:	5000 mg/m3 IDLH
		Supplier:	No Data Available
		OHSA, CAN:	10 mg/m3 TWAEV (total dust)
		Mexico:	10 mg/m3 TWA (nuisance particulate)20 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Lung tumors in animals

Source **Carcinogen Data**
 OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No;
 Group 2b: No; Group 3: Yes; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
014808-60-7	Quartz 0.10 - 1.0% by Weight	OSHA:	No Data Available
		ACGIH:	0.05 mg/m3 TWA (respirable fraction)
		NIOSH:	0.05 mg/m3 TWA (respirable dust)50 mg/m3 IDLH (respirable dust)
		Supplier:	No Data Available
		OHSA, CAN:	0.10 mg/m3 TWAEV0.10 mg/m3 TWEAV; (See Ontario Reg. 845 for full information)
		Mexico:	10 mg/m3 TWA
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Chronic lung disease (silicosis)
		Source	Carcinogen Data
OSHA:	Select Carcinogen: Yes		
NTP:	Known Carcinogen: Yes; Suspected Carcinogen: No		
IARC:	Group 1: Yes; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
068410-23-1	Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines 10 - 25% by Weight	OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	No Data Available
		Supplier:	No Data Available
		OHSA, CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	No Data Available
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
14807 06 6*	Talc (*non-asbestiform)	OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	No Data Available
		Supplier:	No Data Available
		OHSA, CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available

10 - 25% by Weight

Source**Health Data**

NIOSH: No Data Available

Source**Carcinogen Data**

OSHA: Select Carcinogen: No

NTP: Known Carcinogen: No; Suspected Carcinogen: No
Group 1: No; Group 2A: No;

IARC: Group 2b: No; Group 3: No; Group 4: No

3. HAZARD IDENTIFICATION

Overview:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing. Contains an ingredient which may cause reproductive disorders based on animal data (See Section 2 and Section 15 for each ingredient).
Inhalation:	May be harmful or fatal if inhaled. Causes lung irritation. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.
Eyes:	Causes severe eye irritation. Do not get in eyes.
Skin:	Causes skin irritation. May be harmful if absorbed through the skin.
Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.
Chronic Effects:	Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient). Cancer hazard. Contains an ingredient which can cause cancer (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.
HMIS Rating:	Health: Unknown Flammability: Unknown Reactivity: Unknown

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes:	Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin/Hand:	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls:	Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
Other Work Practices:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of

soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:	F: 20 C: -7
Lower Explosive Limit (LEL):	1 (%vol in air) at Normal Atmospheric Temp and Pressure
Fire and Explosion Hazards:	Extremely flammable liquid and vapor. Vapors may cause flash fire. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.
Fire Fighting Procedures:	CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. SMALL FIRES: Use dry chemical, CO ₂ , water spray or alcohol-resistant foam. LARGE FIRES: Use water spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material. Also Reference Emergency Response Guide Number: 127

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
pH:	Not Determined
Specific Gravity:	1.471893
Boiling Point (F):	175
Vapor Density:	Heavier than air
VOC Content (lbs):	Refer to the Technical Data Sheet for this product.
Evaporation Rate:	Slower than ether

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:	Store between 32 and 120 F
Handling and Storage Precautions:	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.
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11. ECOLOGICAL DATA

General: No additional information provided for this product. See Section 2 for chemical specific data.

12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures:

ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.

Public Safety:

CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).

Also, Reference Emergency Response Guide Number: 127

13. DISPOSAL CONSIDERATION

Waste Disposal:

Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	PAINT	IMDG Proper Shipping Name:	PAINT
DOT Hazard Class:	3	IMDG Hazard Class:	3.2 - Intermediate flashpoint flammable liquids
UN / NA Number:	UN 1263	UN Number:	UN 1263
DOT Packing Group:	II	IMDG Packing Group:	II
CERCLA/DOT RQ:	538 gal. / 6596 lbs.	System Reference Code:	2

15. REGULATORY INFORMATION

Regulatory Overview:

The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification:

Not Determined

Regulatory List

Product Ingredients on List

DOT Marine Pollutants (10%):

(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):

(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs

(>.1%):

000110-80-5
000100-41-4
000078-93-3
000123-86-4
000071-36-3
001330-20-7

ETHOXYETHANOL : 1000 lb final RQ; 454 kg final RQ
Ethyl benzene : 1000 lb final RQ; 454 kg final RQ
Methyl ethyl ketone : 5000 lb final RQ; 2270 kg final RQ
n-Butyl acetate : 5000 lb final RQ; 2270 kg final RQ
n-Butyl alcohol : 5000 lb final RQ; 2270 kg final RQ
Xylenes (o-, m-, p- isomers) : 100 lb final RQ; 45.4 kg final RQ

EPCRA 302 Extremely Hazardous (>.1%)

(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals (>.1%) :

000110-80-5	ETHOXYETHANOL
000100-41-4	Ethyl benzene
000067-63-0	Isopropyl alcohol
000078-93-3	Methyl ethyl ketone
000071-36-3	n-Butyl alcohol
001330-20-7	Xylenes (o-, m-, p- isomers)

Mass RTK Substances (>1%) :

000110-80-5	ETHOXYETHANOL
000067-63-0	Isopropyl alcohol
001332-58-7	Kaolin
001317-65-3	Limestone
000078-93-3	Methyl ethyl ketone
000123-86-4	n-Butyl acetate
000071-36-3	n-Butyl alcohol
013463-67-7	Titanium dioxide
001330-20-7	Xylenes (o-, m-, p- isomers)

Mass Extraordinarily Haz Sub (>.01%) :

014808-60-7	Quartz
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Penn RTK Substances (>1%) :

000110-80-5	ETHOXYETHANOL
000067-63-0	Isopropyl alcohol
001332-58-7	Kaolin
001317-65-3	Limestone
000078-93-3	Methyl ethyl ketone
000123-86-4	n-Butyl acetate
000071-36-3	n-Butyl alcohol
013463-67-7	Titanium dioxide
001330-20-7	Xylenes (o-, m-, p- isomers)

Penn Special Hazardous Substances

(>.01%) :

001333-86-4	Carbon black
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Rhode Island Hazardous Substances

>.1%) :

001333-86-4	Carbon black
000110-80-5	ETHOXYETHANOL
000100-41-4	Ethyl benzene
000067-63-0	Isopropyl alcohol
001332-58-7	Kaolin
001317-65-3	Limestone
000078-93-3	Methyl ethyl ketone
000123-86-4	n-Butyl acetate
000071-36-3	n-Butyl alcohol
014808-60-7	Quartz
013463-67-7	Titanium dioxide
001330-20-7	Xylenes (o-, m-, p- isomers)

RCRA Status (>.01%) :

000078-93-3	Methyl ethyl ketone : 200.0 mg/L regulatory level; waste number D035
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N.J. RTK Substances (>1%) :

000110-80-5	ETHOXYETHANOL
000067-63-0	Isopropyl alcohol
000078-93-3	Methyl ethyl ketone
000123-86-4	n-Butyl acetate
000071-36-3	n-Butyl alcohol
013463-67-7	Titanium dioxide
001330-20-7	Xylenes (o-, m-, p- isomers)

N.J. Special Hazardous Substances

(>.01%) :

000100-41-4	Ethyl benzene
000067-63-0	Isopropyl alcohol
000078-93-3	Methyl ethyl ketone
000123-86-4	n-Butyl acetate
000071-36-3	n-Butyl alcohol
000112-24-3	Triethylene tetramine
001330-20-7	Xylenes (o-, m-, p- isomers)

N.J. Env. Hazardous Substances (>.1%) :

000110-80-5	ETHOXYETHANOL
000100-41-4	Ethyl benzene
000067-63-0	Isopropyl alcohol

000078-93-3	Methyl ethyl ketone
000071-36-3	n-Butyl alcohol
001330-20-7	Xylenes (o-, m-, p- isomers)
Proposition 65 - Carcinogens (>0%):	
001333-86-4	Carbon black
014808-60-7	Quartz
Proposition 65 - Female Repro Toxins (>0%):	
(No Product Ingredients Listed)	
Proposition 65 - Male Repro Toxins (>0%):	
000110-80-5	ETHOXYETHANOL
Proposition 65 - Developmental Toxins (>0%):	
000110-80-5	ETHOXYETHANOL

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

MATERIAL SAFETY DATA SHEET
G3010 AWL-CAT #2 SPRAY CONVERTER



International Paint LLC
6001 Antoine Drive
Houston, Texas 77091

Sales Order: (SalesOrd)
MSDS Revision No: A3-3
MSDS Revision Date: 01/11/2008
EMERGENCY NUMBERS:
(800) 424-9300 CHEMTREC (USA)
(703) 527-3887 CHEMTREC (Intl)
(800) 854-6813 Poison Control Center
CUSTOMER SERVICE: (Non-Emergency)
(800) 589-1267 International Paint
(800) 631-7481 Interlux

1. GENERAL INFORMATION

Product Identity: G3010 AWL-CAT #2 SPRAY CONVERTER
Bulk Sales Reference No: OG3010

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000100-41-4	Ethyl benzene 0.10 - 1.0% by Weight	OSHA:	125 ppm STEL; 545 mg/m3 STEL
		ACGIH:	100 ppm TWA 125 ppm STEL
		NIOSH:	100 ppm TWA; 435 mg/m3 TWA 125 ppm STEL; 545 mg/m3 STEL
		Supplier:	No Established Limit
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV 125 ppm STEV; 540 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA 125 ppm STEL; 545 mg/m3 STEL
		Brazil:	78 ppm TWA; 340 mg/m3 TWA
		Source	Health Data
		NIOSH:	Eye skin
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: Yes; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000108-88-3	Toluene 10 - 25% by Weight	OSHA:	150 ppm STEL; 560 mg/m3 STEL
		ACGIH:	50 ppm TWA
		NIOSH:	100 ppm TWA; 375 mg/m3 TWA 150 ppm STEL; 560 mg/m3 STEL
		Supplier:	No Established Limit
		OHSA, CAN:	50 ppm TWAEV; 376 mg/m3 TWAEV
		Mexico:	100 ppm TWA; 375 mg/m3 TWA
		Brazil:	78 ppm TWA; 290 mg/m3 TWA
		Source	Health Data
		NIOSH:	Central nervous system depressant
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		

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IARC: Group 1: No; Group 2A: No;
Group 2b: No; Group 3: Yes; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
000141-78-6	Ethylacetate 10 - 25% by Weight	OSHA:	No Established Limit
		ACGIH:	400 ppm TWA
		NIOSH:	400 ppm TWA; 1400 mg/m3 TWA
		Supplier:	No Established Limit
		OHSA, CAN:	400 ppm TWAEV; 1440 mg/m3 TWAEV
		Mexico:	400 ppm TWA; 1400 mg/m3 TWA
		Brazil:	310 ppm TWA; 1090 mg/m3 TWA
		Source	Health Data
		NIOSH:	Eye and respiratory irritation
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
001330-20-7	Xylenes (o-, m-, p- isomers) 1.0 - 10% by Weight	OSHA:	150 ppm STEL; 655 mg/m3 STEL
		ACGIH:	100 ppm TWA; 150 ppm STEL
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV; 150 ppm STEV; 650 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA; 150 ppm STEL; 655 mg/m3 STEL
		Brazil:	78 ppm TWA; 340 mg/m3 TWA
		Source	Health Data
		NIOSH:	Central nervous system depressant; respiratory and eye irritation
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
028182-81-2	Hexamethylene diisocyanate homopolymer 25 - 50% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
		OSHA:	No Established Limit
		ACGIH:	No Established Limit

148462-57-1 2-Propanol, 1-methoxy-,
propanoate
10 - 25% by Weight

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NIOSH:	No Established Limit
Supplier:	No Established Limit
OHSA, CAN:	No Established Limit
Mexico:	No Established Limit
Brazil:	No Established Limit
Source:	Health Data
NIOSH:	No Established Limit
Source:	Carcinogen Data
OSHA:	Select Carcinogen: No
NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

3. HAZARD IDENTIFICATION

Overview:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.		
Inhalation:	May be harmful or fatal if inhaled. May cause lung injury. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.		
Eyes:	Causes severe eye irritation. Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific condition of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.		
Skin:	Causes skin irritation. May cause allergic skin reaction. May be harmful if absorbed through the skin.		
Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.		
Chronic Effects:	Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient).		
HMIS Rating:	Health: Unknown	Flammability: Unknown	Reactivity: Unknown

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet. INDIVIDUALS WITH LUNG OR BREATHING PROBLEMS OR PRIOR REACTION TO ISOCYANATES MUST NOT BE EXPOSED TO VAPOR OR SPRAY MIST. Do not breathe vapor or spray mist. Wear an appropriate, properly fitted respirator (NIOSH approved) during and after application unless air monitoring demonstrates vapor/mist levels are below applicable limits. A supplied air respirator (either positive pressure or continuous flow type) is required. Follow manufacturer's directions for respirator use and observe requirements specified in 29 CFR 1910.134.
Eyes:	Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific condition of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use. Protective equipment should be selected to provide protection from exposure to the

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chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.

Skin/Hand:	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls:	Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
Other Work Practices:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:	F: 45 C: 7
Lower Explosive Limit (LEL):	1 (%vol in air) at Normal Atmospheric Temp and Pressure
Fire and Explosion Hazards:	Flammable liquid and vapor. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated. CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. SMALL FIRES: Use dry chemical, CO ₂ , water spray or alcohol-resistant foam. LARGE FIRES: Use water spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material.
Fire Fighting Procedures:	Also Reference Emergency Response Guide Number: 127

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
pH:	No Established Limit
Specific Gravity:	0.990293
Boiling Point (F):	171
Vapor Density:	Heavier than air
VOC Content (lbs):	Refer to the Technical Data Sheet for this product.
Evaporation Rate:	Slower than ether

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur. Not sensitive to mechanical impact. Excessive heat and fumes generation can occur if improperly handled.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:	Store between 40–100F (4–38C).
Handling and Storage Precautions:	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.

11. ECOLOGICAL DATA

General: No additional information provided for this product. See Section 2 for chemical specific data.

12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures: ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material. CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).
Public Safety: Also, Reference Emergency Response Guide Number: 127

13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	PAINT	IMDG Proper Shipping Name:	PAINT
DOT Hazard Class:	3	IMDG Hazard Class:	3.2 - Intermediate flashpoint flammable liquids
UN / NA Number:	UN 1263	UN Number:	UN 1263
DOT Packing Group:	II	IMDG Packing Group:	II
CERCLA/DOT RQ:	443 gal. / 3653 lbs.	System Reference Code:	1

15. REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification: No Established Limit
Regulatory List: Product Ingredients on List
DOT Marine Pollutants (10%):
(No Product Ingredients Listed)
DOT Severe Marine Pollutants (1%):
(No Product Ingredients Listed)
EPCRA 311/312 Chemicals and

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RQs (>.1%) :
 (No Product Ingredients Listed)
 EPCRA 302 Extremely Hazardous (>.1%) :
 (No Product Ingredients Listed)
 EPCRA 313 Toxic Chemicals (>.1%) :
 000100-41-4 Ethyl benzene
 000822-06-0 Hexamethylene diisocyanate
 000108-88-3 Toluene
 001330-20-7 Xylenes (o-, m-, p- isomers)
 Mass RTK Substances (>1%) :
 000141-78-6 Ethylacetate
 000108-88-3 Toluene
 001330-20-7 Xylenes (o-, m-, p- isomers)
 Mass Extraordinarily Haz Sub (>.01%) :
 (No Product Ingredients Listed)
 Penn RTK Substances (>1%) :
 000141-78-6 Ethylacetate
 000108-88-3 Toluene
 001330-20-7 Xylenes (o-, m-, p- isomers)
 Penn Special Hazardous Substances (>.01%) :
 000108-88-3 Toluene
 Rhode Island Hazardous Substances (>.1%) :
 000108-88-3 Toluene
 RCRA Status (>.01%) :
 (No Product Ingredients Listed)
 N.J. RTK Substances (>1%) :
 (No Product Ingredients Listed)
 N.J. Special Hazardous Substances (>.01%) :
 000100-41-4 Ethyl benzene
 000141-78-6 Ethylacetate
 000108-88-3 Toluene
 001330-20-7 Xylenes (o-, m-, p- isomers)
 N.J. Env. Hazardous Substances (>.1%) :
 000100-41-4 Ethyl benzene
 000822-06-0 Hexamethylene diisocyanate
 000108-88-3 Toluene
 001330-20-7 Xylenes (o-, m-, p- isomers)
 Proposition 65 - Carcinogens (>0%):
 000100-41-4 Ethyl benzene
 Proposition 65 - Female Repro Toxins (>0%):
 (No Product Ingredients Listed)
 Proposition 65 - Male Repro Toxins (>0%):
 (No Product Ingredients Listed)
 Proposition 65 - Developmental Toxins (>0%):
 (No Product Ingredients Listed)

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The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

FOR PROFESSIONAL USE ONLY

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

Brand names mentioned in this data sheet are trademarks of or are licensed to Akzo Nobel.

Head Office

International Paint, LLC, 6001 Antoine Drive, Houston, Texas 77091. <http://www.international-pc.com> or <http://www.international-marine.com>

End Of Document

MATERIAL SAFETY DATA SHEET

Sales Order: {SalesOrd}

D8001 545 EPOXY PRIMER

MSDS Revision No: E2 -0
MSDS Revision Date: 08/27/2004



Akzo Nobel Coatings
Awlgrip North America
2270 Morris Avenue
P. O. Box 386
Union, NJ 07083

EMERGENCY NUMBERS:
(800) 424-9300 CHEMTREC (USA)
(703) 527-3887 CHEMTREC (Intl)
(800) 854-6813 Poison Control Center
CUSTOMER SERVICE: (Non-Emergency)
(888) 355-3090 AWLGRIP (Phone)
(908) 686-1752 AWLGRIP (Fax)

1. GENERAL INFORMATION

Product Identity: D8001 545 EPOXY PRIMER

Bulk Sales Reference No: OD8001

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000067-63-0	Isopropyl alcohol 1.0 - 10% by Weight	OSHA:	400 ppm TWA; 980 mg/m3 TWA500 ppm STEL; 1225 mg/m3 STEL
		ACGIH:	200 ppm TWA400 ppm STEL
		NIOSH:	400 ppm TWA; 980 mg/m3 TWA500 ppm STEL; 1225 mg/m3 STEL2000 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	400 ppm TWAEV; 980 mg/m3 TWAEV500 ppm STEV; 1225 mg/m3 STEV
		Mexico:	400 ppm TWA; 980 mg/m3 TWA500 ppm STEL; 1225 mg/m3 STEL
		Brazil:	310 ppm TWA; 765 mg/m3 TWA
		Source	Health Data
		NIOSH:	Mucous membrane irritation; possible carcinogenic effects
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000071-36-3	n-Butyl alcohol 1.0 - 10% by Weight	OSHA:	100 ppm TWA; 300 mg/m3 TWA50 ppm Ceiling; 150 mg/m3 Ceiling
		ACGIH:	20 ppm TWA
		NIOSH:	50 ppm Ceiling; 150 mg/m3 Ceiling1400 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	50 ppm CEV; 150 mg/m3 CEV
		Mexico:	50 ppm STEL; 150 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Eye and mucous membrane irritation CNS depression
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000078-93-3	Methyl ethyl ketone 1.0 - 10% by Weight	OSHA:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL
		ACGIH:	200 ppm TWA300 ppm STEL
		NIOSH:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL3000 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	200 ppm TWAEV; 590 mg/m3 TWAEV300 ppm STEV; 885 mg/m3 STEV
		Mexico:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL
		Brazil:	155 ppm TWA; 460 mg/m3 TWA
		Source	Health Data
		NIOSH:	Irritation; liver kidney
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000100-41-4	Ethyl benzene 0.10 - 1.0% by Weight	OSHA:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
		ACGIH:	100 ppm TWA125 ppm STEL
		NIOSH:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL800 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV125 ppm STEV; 540 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
		Brazil:	78 ppm TWA; 340 mg/m3 TWA
		Source	Health Data
		NIOSH:	Eye skin
		Source	Carcinogen Data

OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No; Group 2b: Yes; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
000110-80-5	ETHOXYETHANOL 1.0 - 10% by Weight	OSHA:	200 ppm TWA; 740 mg/m3 TWA
		ACGIH:	5 ppm TWA
		NIOSH:	0.5 ppm TWA; 1.8 mg/m3 TWA500 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	5 ppm TWAEV; 18 mg/m3 TWAEV
		Mexico:	50 ppm TWA; 185 mg/m3 TWA100 ppm STEL; 370 mg/m3 STEL
		Brazil:	78 ppm TWA; 290 mg/m3 TWA
		Source	Health Data
		NIOSH:	Reproductive and developmental effects; blood CNS
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000123-86-4	n-Butyl acetate 1.0 - 10% by Weight	OSHA:	150 ppm TWA; 710 mg/m3 TWA200 ppm STEL; 950 mg/m3 STEL
		ACGIH:	150 ppm TWA200 ppm STEL
		NIOSH:	150 ppm TWA; 710 mg/m3 TWA200 ppm STEL; 950 mg/m3 STEL1700 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	150 ppm TWAEV; 710 mg/m3 TWAEV200 ppm STEV; 950 mg/m3 STEV
		Mexico:	150 ppm TWA; 710 mg/m3 TWA200 ppm STEL; 950 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Mucous membrane and eye irritation; high concentrations cause nervous system effects in animals
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
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001317-65-3	Limestone 10 - 25% by Weight	OSHA:	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
		ACGIH:	No Data Available
		NIOSH:	10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)
		Supplier:	No Data Available
		OHSA, CAN:	10 mg/m3 TWAEV (total dust, no asbestos and less than 1% crystalline silica)
		Mexico:	10 mg/m3 TWA (nuisance particulate)
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Eye and skin irritation Physical irritation
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
001330-20-7	Xylenes (o-, m-, p- isomers) 1.0 - 10% by Weight	OSHA:	100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
		ACGIH:	100 ppm TWA150 ppm STEL
		NIOSH:	No Data Available
		Supplier:	No Data Available
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV150 ppm STEV; 650 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
		Brazil:	78 ppm TWA; 340 mg/m3 TWA
		Source	Health Data
		NIOSH:	Central nervous system depressant; respiratory and eye irritation
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
001332-58-7	Kaolin 1.0 - 10% by Weight	OSHA:	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
		ACGIH:	2 mg/m3 TWA (respirable fraction, particulate matter containing no asbestos and < 1% crystallin
		NIOSH:	10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)
		Supplier:	No Data Available
		OHSA, CAN:	2 mg/m3 TWAEV (total dust, no asbestos and less than 1% crystalline silica)
		Mexico:	10 mg/m3 TWA (nuisance particulate)20 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Skin and mucous membrane injury respiratory effects
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No

KNOWN Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No;
 Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
007779-90-0	Trizinc diphosphate 1.0 - 10% by Weight	OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	No Data Available
		Supplier:	No Data Available
		OHSA, CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	No Data Available
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
013463-67-7	Titanium dioxide 1.0 - 10% by Weight	OSHA:	15 mg/m3 TWA (total dust)
		ACGIH:	10 mg/m3 TWA
		NIOSH:	5000 mg/m3 IDLH
		Supplier:	No Data Available
		OHSA, CAN:	10 mg/m3 TWAEV (total dust)
		Mexico:	10 mg/m3 TWA (nuisance particulate)20 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Lung tumors in animals
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
J14808-60-7	Quartz 0.10 - 1.0% by Weight	OSHA:	No Data Available
		ACGIH:	0.05 mg/m3 TWA (respirable fraction)
		NIOSH:	0.05 mg/m3 TWA (respirable dust)50 mg/m3 IDLH (respirable dust)
		Supplier:	No Data Available
		OHSA, CAN:	0.10 mg/m3 TWAEV0.10 mg/m3 TWEAV; (See Ontario Reg. 845 for full information)
		Mexico:	10 mg/m3 TWA
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Chronic lung disease (silicosis)

Source	Carcinogen Data
OSHA:	Select Carcinogen: Yes
NTP:	Known Carcinogen: Yes; Suspected Carcinogen: No
IARC:	Group 1: Yes; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
068410-23-1	Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines 10 - 25% by Weight	OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	No Data Available
		Supplier:	No Data Available
		OHSA, CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	No Data Available
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
14807-96-6*	Talc (*non-asbestiform) 10 - 25% by Weight	OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	No Data Available
		Supplier:	No Data Available
		OHSA, CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	No Data Available
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

3. HAZARD IDENTIFICATION

Overview: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing. Contains an ingredient which may cause reproductive disorders based on animal data (See Section 2 and Section 15 for each ingredient).

Inhalation: May be harmful or fatal if inhaled. Causes lung irritation. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.

Eyes: Causes severe eye irritation. Do not get in eyes.

Skin: Causes skin irritation. May be harmful if absorbed through the skin.

Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.		
Chronic Effects:	Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient). Cancer hazard. Contains an ingredient which can cause cancer (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.		
HMIS Rating:	Health: Unknown	Flammability: Unknown	Reactivity: Unknown

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes:	Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin/Hand:	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls:	Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
Other Work Practices:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:	F: 20 C: -7
Lower Explosive Limit (LEL):	1 (%vol in air) at Normal Atmospheric Temp and Pressure
Fire and Explosion Hazards:	Extremely flammable liquid and vapor. Vapors may cause flash fire. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated. CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. SMALL FIRES: Use dry chemical, CO2, water spray or alcohol-resistant foam. LARGE FIRES: Use water spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material.
Fire Fighting Procedures:	Also Reference Emergency Response Guide Number: 127

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
pH:	Not Determined
Specific Gravity:	1.481312
Boiling Point (F):	175
Vapor Density:	Heavier than air
VOC Content (lbs):	Refer to the Technical Data Sheet for this product.
Evaporation Rate:	Slower than ether

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:	Store between 32 and 120 F
Handling and Storage Precautions:	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.
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11. ECOLOGICAL DATA

General:	No additional information provided for this product. See Section 2 for chemical specific data.
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12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures:	ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.
Public Safety:	CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet). Also, Reference Emergency Response Guide Number: 127

13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:		IMDG Proper Shipping Name:	
PAINT		PAINT	
DOT Hazard Class:	3	IMDG Hazard Class:	3.2 - Intermediate flashpoint flammable liquids
UN / NA Number:	UN 1263	UN Number:	UN 1263
DOT Packing Group:	II	IMDG Packing Group:	II
CERCLA/DOT RQ:	523 gal. / 6456 lbs.	System Reference Code:	2

15. REGULATORY INFORMATION

The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.
Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

Regulatory Overview:

WHMIS Classification: Not Determined

Regulatory List

DOT Marine Pollutants (10%):

(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):

(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs

(>.1%):

000110-80-5

000100-41-4

000078-93-3

000123-86-4

000071-36-3

001330-20-7

ETHOXYETHANOL : 1000 lb final RQ; 454 kg final RQ

Ethyl benzene : 1000 lb final RQ; 454 kg final RQ

Methyl ethyl ketone : 5000 lb final RQ; 2270 kg final RQ

n-Butyl acetate : 5000 lb final RQ; 2270 kg final RQ

n-Butyl alcohol : 5000 lb final RQ; 2270 kg final RQ

Xylenes (o-, m-, p- isomers) : 100 lb final RQ; 45.4 kg final RQ

EPCRA 302 Extremely Hazardous (>.1%)

:

(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals (>.1%):

000110-80-5

000100-41-4

000067-63-0

000078-93-3

000071-36-3

001330-20-7

ETHOXYETHANOL

Ethyl benzene

Isopropyl alcohol

Methyl ethyl ketone

n-Butyl alcohol

Xylenes (o-, m-, p- isomers)

Mass RTK Substances (>1%):

000110-80-5

000067-63-0

001332-58-7

001317-65-3

000078-93-3

000123-86-4

000071-36-3

013463-67-7

001330-20-7

ETHOXYETHANOL

Isopropyl alcohol

Kaolin

Limestone

Methyl ethyl ketone

n-Butyl acetate

n-Butyl alcohol

Titanium dioxide

Xylenes (o-, m-, p- isomers)

Mass Extraordinarily Haz Sub (>.01%):

014808-60-7

Quartz

Penn RTK Substances (>1%) :

000110-80-5	ETHOXYETHANOL
000067-63-0	Isopropyl alcohol
001332-58-7	Kaolin
001317-65-3	Limestone
000078-93-3	Methyl ethyl ketone
000123-86-4	n-Butyl acetate
000071-36-3	n-Butyl alcohol
013463-67-7	Titanium dioxide
001330-20-7	Xylenes (o-, m-, p- isomers)

Penn Special Hazardous Substances

(>.01%) :

(No Product Ingredients Listed)

Rhode Island Hazardous Substances

(>.1%) :

000110-80-5	ETHOXYETHANOL
000100-41-4	Ethyl benzene
000067-63-0	Isopropyl alcohol
001332-58-7	Kaolin
001317-65-3	Limestone
000078-93-3	Methyl ethyl ketone
000123-86-4	n-Butyl acetate
000071-36-3	n-Butyl alcohol
014808-60-7	Quartz
013463-67-7	Titanium dioxide
001330-20-7	Xylenes (o-, m-, p- isomers)

RCRA Status (>.01%) :

000078-93-3 Methyl ethyl ketone : 200.0 mg/L regulatory level; waste number D035

N.J. RTK Substances (>1%) :

000110-80-5	ETHOXYETHANOL
000067-63-0	Isopropyl alcohol
000078-93-3	Methyl ethyl ketone
000123-86-4	n-Butyl acetate
000071-36-3	n-Butyl alcohol
013463-67-7	Titanium dioxide
001330-20-7	Xylenes (o-, m-, p- isomers)

N.J. Special Hazardous Substances

(>.01%) :

000100-41-4	Ethyl benzene
000067-63-0	Isopropyl alcohol
000078-93-3	Methyl ethyl ketone
000123-86-4	n-Butyl acetate
000071-36-3	n-Butyl alcohol
000112-24-3	Triethylene tetramine
001330-20-7	Xylenes (o-, m-, p- isomers)

N.J. Env. Hazardous Substances (>.1%) :

000110-80-5	ETHOXYETHANOL
000100-41-4	Ethyl benzene
000067-63-0	Isopropyl alcohol
000078-93-3	Methyl ethyl ketone
000071-36-3	n-Butyl alcohol
001330-20-7	Xylenes (o-, m-, p- isomers)

Proposition 65 - Carcinogens (>0%):

014808-60-7 Quartz

Proposition 65 - Female Repro Toxins

(>0%):

(No Product Ingredients Listed)

Proposition 65 - Male Repro Toxins

(>0%):

000110-80-5 ETHOXYETHANOL

Proposition 65 - Developmental Toxins

(>0%):

000110-80-5 ETHOXYETHANOL

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

MATERIAL SAFETY DATA SHEET

D8020 AWLFAIR LW

Akzo Nobel Coatings

Awlgrip North America

2270 Morris Avenue

P. O. Box 386

Union, NJ 07083

Sales Order: (SalesOrd)

MSDS Revision No: E1 -4
MSDS Revision Date: 10/14/2005

EMERGENCY NUMBERS:

(800) 424-9300	CHEMTREC (USA)
(703) 527-3887	CHEMTREC (Intl)
(800) 854-6813	Poison Control Center
CUSTOMER SERVICE:	(Non-Emergency)
(888) 355-3090	AWLGRIP (Phone)
(908) 686-1752	AWLGRIP (Fax)

AWLGRIP

1. GENERAL INFORMATION

Product Identity: D8020 AWLFAIR LW

Bulk Sales Reference No: OD8020

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
013463-67-7	Titanium dioxide 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	10 mg/m3 TWA
		NIOSH:	5000 mg/m3 IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	10 mg/m3 TWAEV (total dust)
		Mexico:	10 mg/m3 TWA (nuisance particulate)20 mg/m3 STEL
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	Lung tumors in animals
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
025085-99-8	OXIRANE, 2,2'-4-BUTYLIDENE BISPHENYLENE OXYMETHYLENE 25 - 50% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:			

Group 1: No; Group 2A: No;
Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
028064-14-4	PHENOL, POLYMER WITH FORMALDEHYDE, GLYCIDYL ETHER 10 – 25% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
065997-17-3	Glass, oxide, chemicals 1.0 – 10% by Weight	OSHA:	No Established Limit
		ACGIH:	2 mg/m3 TWA (as Sn, except tin hydride)
		NIOSH:	2 mg/m3 TWA (as Sn, except oxides) 100 mg/m3 IDLH (as Sn, except oxides)
		Supplier:	No Established Limit
		OHSA, CAN:	2 mg/m3 TWAEV (except stannane, as Sn)
		Mexico:	2 mg/m3 TWA 4 mg/m3 STEL (as Sn)
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: Yes; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
14807-96-6*	Talc (*non-asbestiform) 10 – 25% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

3. HAZARD IDENTIFICATION

Overview: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be

OD8020_E1

Inhalation:	harmful or fatal. Avoid contact with eyes, skin and clothing. Harmful if inhaled. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.		
Eyes:	Causes severe eye irritation. Do not get in eyes.		
Skin:	Causes skin irritation. May be harmful if absorbed through the skin.		
Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.		
Chronic Effects:	Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient). Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.		
HMIS Rating:	Health: Unknown	Flammability: Unknown	Reactivity: Unknown

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes:	Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin/Hand:	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls:	Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
Other Work Practices:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:	F: 200 C: 93
Lower Explosive Limit (LEL):	No Established Limit (%vol in air) at Normal Atmospheric Temp and Pressure
Fire and Explosion Hazards:	FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.
Fire Fighting Procedures:	Also Reference Emergency Response Guide Number: Not Determined

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
pH:	No Established Limit
Specific Gravity:	1.012917
Boiling Point (F):	400
Vapor Density:	Heavier than air
VOC Content (lbs):	Refer to the Technical Data Sheet for this product.
Evaporation Rate:	Slower than ether

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:	Store between 32 and 120 F
Handling and Storage Precautions:	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.
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11. ECOLOGICAL DATA

General:	No additional information provided for this product. See Section 2 for chemical specific data.
----------	--

12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures:	ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material. CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).
Public Safety:	Also, Reference Emergency Response Guide Number: Not Determined

13. DISPOSAL CONSIDERATION

Waste Disposal:	Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).
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14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	Environmentally Hazardous Substance, Solid, N.O.S	IMDG Proper Shipping Name:	Environmentally Hazardous Substance, Solid, N.O.S
DOT Hazard Class:	MISC9	IMDG Hazard Class:	Miscellaneous, 9
UN / NA Number:	UN3077	UN Number:	UN3077
DOT Packing Group:	III	IMDG Packing Group:	III
CERCLA/DOT RQ:	Not Applicable gal. / Not Applicable lbs.	System Reference Code:	192

15. REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification: No Established Limit

Regulatory List Product Ingredients on List

DOT Marine Pollutants (10%):
(No Product Ingredients

Listed)

DOT Severe Marine Pollutants
(1%):

(No Product Ingredients

Listed)

EPCRA 311/312 Chemicals and
RQs (>.1%) :

(No Product Ingredients

Listed)

EPCRA 302 Extremely
Hazardous (>.1%) :

(No Product Ingredients

Listed)

EPCRA 313 Toxic Chemicals
(>.1%) :

Mass RTK Substances (>1%) :
013463-67-7

Titanium dioxide

Mass Extraordinarily Haz Sub
(>.01%) :

(No Product Ingredients

Listed)

Penn RTK Substances (>1%) :
013463-67-7

Titanium dioxide

Penn Special Hazardous
Substances (>.01%) :

(No Product Ingredients

Listed)

Rhode Island Hazardous
Substances (>.1%) :

RCRA Status (>.01%) :

(No Product Ingredients

Listed)

N.J. RTK Substances (>1%) :
N.J. Special Hazardous

Substances (>.01%) :

(No Product Ingredients

Listed)

N.J. Env. Hazardous Substances
(>.1%) :

Proposition 65 - Carcinogens
(>0%):

(No Product Ingredients
Listed)

Proposition 65 – Female Repro

Toxins (>0%):

(No Product Ingredients
Listed)

Proposition 65 – Male Repro

Toxins (>0%):

(No Product Ingredients
Listed)

Proposition 65 – Developmental

Toxins (>0%):

(No Product Ingredients
Listed)

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

-0

MATERIAL SAFETY DATA SHEET

Sales Order: {SalesOrd}

GRIPTEX 73237

MSDS Revision No:

MSDS Revision Date: 09/20/2004

AWLGRIP

Akzo Nobel Coatings

Awlgrip North America

2270 Morris Avenue

P. O. Box 386

Union, NJ 07083

**EMERGENCY
NUMBERS:**

(800) 424-9300

(703) 527-3887

(800) 854-6813

CUSTOMER SERVICE:

(888) 355-3090

(908) 686-1752

CHEMTREC (USA)

CHEMTREC (Intl)
Poison Control
Center

(Non-Emergency)

AWLGRIP (Phone)

AWLGRIP (Fax)

1. GENERAL INFORMATION**Product Identity:** GRIPTEX 73237**Bulk Sales Reference No:** 073237

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
		OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	No Data Available

009003-07-0

Polypropylene
100% by Weight

Supplier: No Data Available
 OSHA,
 CAN: No Data Available
 Mexico: No Data Available
 Brazil: No Data Available

Source**Health Data**

NIOSH: No Data Available

Source**Carcinogen Data**

OSHA: Select Carcinogen: No

NTP: Known Carcinogen: No; Suspected Carcinogen: No

IARC: Group 1: No; Group 2A: No;
Group 2b: No; Group 3: Yes; Group 4: No**3. HAZARD IDENTIFICATION**

Overview: Avoid contact with eyes, skin and clothing.

Inhalation: May be harmful or fatal if inhaled. Causes nose and throat irritation.

Eyes: Causes severe eye irritation. Avoid contact with eyes.

Skin: Causes skin irritation. May be harmful if absorbed through the skin.

Ingestion: Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.

Chronic Effects: Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient).

HMIS Rating: Health: Unknown Flammability: Unknown Reactivity: Unknown

4. FIRST AID MEASURES

General: Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin: In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.

Ingestion: If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Avoid breathing dust. Use a NIOSH approved respirator in accordance with 29CFR 1910.134 to remove particulates (and vapors if there is overexposure to vapors generated during the processing of this product). FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes:	Avoid contact with eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin/Hand:	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls:	Depending on the site-specific conditions of use, provide adequate ventilation.
Other Work Practices:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water. Avoid contact with eyes and clothing. Avoid prolonged or repeated contact with skin.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:	F: Not Determined C: Not Determined
Lower Explosive Limit (LEL):	? (%vol in air) at Normal Atmospheric Temp and Pressure
Fire and Explosion Hazards:	Material may burn but does not ignite readily. Fire may produce irritating, corrosive and/or toxic gases. Containers may explode when heated. SMALL FIRES: Use dry chemical, CO ₂ , water spray or foam. LARGE FIRES: Use water spray, fog, or foam. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material.
Fire Fighting Procedures:	Also Reference Emergency Response Guide Number: 159

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid
pH:	Not Determined
Specific Gravity:	N/D
Boiling Point (F):	?
Vapor Density:	Not Applicable
VOC Content (lbs):	Refer to the Technical Data Sheet for this product.
Evaporation Rate:	Not Applicable

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:	Store between 32 and 120 F
Handling and Storage Precautions:	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Finely divided powders are potentially explosive when suspended in air. Isolate from heat, sparks, electrical equipment and open flame. Avoid contact with eyes, skin and clothing. Do not breathe dust. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:	No additional information provided for this product. See Section 2 for chemical specific data.
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11. ECOLOGICAL DATA

General:	No additional information provided for this product. See Section 2 for chemical specific data.
-----------------	--

12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures:	ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. LARGE SPILLS: Dike far ahead of liquid spill to contain released material and runoff from fire control.
Public Safety:	CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. Also, Reference Emergency Response Guide Number: 159

13. DISPOSAL CONSIDERATION

Waste Disposal:	Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).
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14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	PAINT OR PAINT RELATED MATERIAL, NMFC 149980	IMDG Proper Shipping Name:	PAINT OR PAINT RELATED MATERIAL, NMFC 149980
DOT Hazard Class:	NR	IMDG Hazard Class:	Not Regulated
UN / NA Number:	Not Regulated	UN Number:	Not Regulated
DOT Packing Group:	Not Regulated	IMDG Packing Group:	Not Regulated
CERCLA/DOT RQ:	Not Applicable gal. / Not Applicable lbs.	System Reference Code:	9

15. REGULATORY INFORMATION

The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

Regulatory Overview:

WHMIS Classification: Not Determined

Regulatory List

Product Ingredients on List

DOT Marine Pollutants (10%):

(No Product

Ingredients Listed)

DOT Severe Marine Pollutants (1%):

(No Product

Ingredients Listed)

EPCRA 311/312

Chemicals and RQs

(>.1%) :

(No Product

Ingredients Listed)

EPCRA 302 Extremely

Hazardous (>.1%) :

(No Product

Ingredients Listed)

EPCRA 313 Toxic

Chemicals (>.1%) :

(No Product

Ingredients Listed)

Mass RTK Substances

(>1%) :

(No Product

Ingredients Listed)

Mass Extraordinarily

Haz Sub (>.01%) :

(No Product

Ingredients Listed)

Penn RTK Substances

(>1%) :

(No Product

Ingredients Listed)

Penn Special Hazardous

Substances (>.01%) :

(No Product

Ingredients Listed)

Rhode Island Hazardous

Substances (>.1%) :

(No Product

Ingredients Listed)

RCRA Status (>.01%) :

(No Product

Ingredients Listed)

RTK Substances

(No Product

Ingredients Listed)

N.J. Special Hazardous

Substances (>.01%) :

(No Product

Ingredients Listed)

N.J. Env. Hazardous

Substances (>.1%) :

(No Product

Ingredients Listed)

Proposition 65 -

Carcinogens (>0%):

(No Product

Ingredients Listed)

Proposition 65 - Female

Repro Toxins (>0%):

(No Product

Ingredients Listed)

Proposition 65 - Male

Repro Toxins (>0%):

(No Product

Ingredients Listed)

Proposition 65 -

Developmental Toxins

(>0%):

(No Product

Ingredients Listed)

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document



DURA TECHNOLOGIES, INC.

2720 SOUTH WILLOW AVE. ♠ BLOOMINGTON, CA 92316 ♠ 909-877-8477

DURATEC COATING VOC 904-001 HI GLOSS ADDITIVE

The Composites Fabricators Association in association with the EPA conducted a study of styrene emissions from open mold composite manufacturing. Styrene monomer is a volatile liquid that will react to form a non-volatile copolymer with unsaturated polyester resins. The value to determine is thus the amount of material lost prior to the completion of the reaction. The data gathered in this study is the actual measurement of emissions based on the percent styrene in the coating and the application method chosen. It was shown that the non-atomizing applications (such as brushing or roll coating) emit much less than the atomizing application (spraying). Using the data from this study, a Unified Emissions Factor (UEF) table was prepared.

Dura Technologies, Inc. considers this to be the best available science for calculating the emissions of coatings containing styrene monomer. We will therefore report three distinct VOC numbers. The VOC reported in section III of the MSDS is based on 100% evaporation of the styrene. This attachment will report the VOC calculated using the UEF factors for atomized application and non-atomized application.

ATOMIZED APPLICATION

**COATING VOC: 2.55 LB/GAL (305.3 GR/LITER)
MATERIAL VOC: 2.55 LB/GAL (305.3 GR/LITER)**

NON-ATOMIZED APPLICATION

**COATING VOC: 2.08 LB/GAL (249.2 GR/LITER)
MATERIAL VOC: 2.08 LB/GAL (249.2 GR/LITER)**

For some applications, this product may not be compliant if applied using atomizing techniques. Please consult the AQMD rule that applies to you operation and determine which application method will comply.

**Richard Stewart
Technical Director
Dura Technologies, Inc.**

M A T E R I A L S A F E T Y D A T A S H E E T

CONDITIONS TO AVOID

AVOID HEAT, Sparks or open flames. Never allow the PROMOTER/ACCELERATOR to come in direct contact with the CATALYST (When mixed in an undiluted form, cobalt and peroxide will react violently and cause an explosion). Do not use plastic or non-conducting containers to store and handle flammable liquids. These containers can not be properly grounded and static charge may build up in the flammable liquid.

INCOMPATIBILITY (MATERIALS TO AVOID)

Avoid contact with strong acids, oxidizers (bleaches), and strong bases (caustic soda).

HAZARDOUS DECOMPOSITION OR BYPRODUCTS

If ignited this product will release carbon dioxide, carbon monoxide, and some organic acids. Do not breath fumes.

HAZARDOUS POLYMERIZATION: MAY OCCUR

===== SECTION VI - HEALTH HAZARD DATA =====

INHALATION HEALTH RISKS AND SYMPTOMS OF OVEREXPOSURE

WARNING: Based on studies of components similar to the ones used in this coating, it has been shown that Acrolein (TLV:0.1) and Acetaldehyde (TLV: 100 PPM) can be released during the curing of the product. The excessive inhalation of vapors may cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, and headaches. The symptoms of inhalation exposure are very similar to common complaints caused by colds and other minor medical problems and must be monitored scrupulously to detect the appearance of overexposure.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF OVEREXPOSURE

EYE CONTACT: This material can be irritating to the eyes. The symptoms of this are tearing, redness, and discomfort. SKIN CONTACT: This material may cause severe skin irritation. Symptoms include redness, burning drying and cracking.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF OVEREXPOSURE

Exposure by skin contact can cause severe skin irritation. Prolonged or repeated exposure may induce redness, burning, and cracking of the skin. Skin absorption is possible but no adverse effects are expected from this route of exposure under normal conditions of handling and use.

INGESTION HEALTH RISKS AND SYMPTOMS OF OVEREXPOSURE

Swallowing can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration of the liquid material can cause pneumonitis which can be FATAL. Care should be taken that such aspiration DOES NOT OCCUR SHOULD THE VICTIM VOMIT.

HEALTH HAZARDS (ACUTE AND CHRONIC)

Reports have associated repeated or prolonged occupational exposure to solvents with permanent brain and nervous system damage, and liver or kidney atrophy. Intentional misuse by concentrating and inhaling the vapors can be fatal. This material has not been tested as a whole for health effects. WARNING! Although all intentional PROP 65 chemicals will be listed, THERE MAY BE DETECTABLE LEVELS OF UNINTENTIONAL CHEMICALS WHICH ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR OTHER REPRODUCTIVE HARM PRESENT IN THIS PRODUCT.

TARGET ORGAN INFORMATION:

Overexposure to this material has been suggested as a cause of the following effects in laboratory animals, and may aggravate pre-existing disorders of these organs in humans: mild, reversible kidney effects, effects on hearing respiratory tract damage, testis damage, and liver damage. Overexposure to this material has been suggested as a cause of the following effects in humans and may aggravate pre-existing disorders of these organs: central nervous system effects, effects on hearing, respiratory tract damage.

CARCINOGENICITY:

NTP CARCINOGEN: No IARC MONOGRAPHS: 2B OSHA REGULATED: YES

PROPOSITION 65: YES

WARNING! THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER STATES THAT STYRENE IS 'POSSIBLY CARCINOGENIC TO HUMANS' (GROUP 2B) BASED ON 'INADEQUATE EVIDENCE' IN HUMANS, 'LIMITED EVIDENCE' IN ANIMALS, AND OTHER 'RELEVANT DATA'.

THIS MATERIAL CONTAINS OSHA REGULATED HAZARDOUS MATERIALS.

M A T E R I A L S A F E T Y D A T A S H E E T

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

Respiratory problems such as asthma; Skin disorders such as dermatitis; eye disorders or overly sensitive eyes.

EMERGENCY AND FIRST AID PROCEDURES

FOR ANY OVEREXPOSURE MOVE VICTIM TO FRESH AIR AND SEEK MEDICAL AID. EYE CONTACT: Immediately flush eyes with warm clean water. If symptoms persists seek medical attention. SKIN CONTACT: Immediately flush contaminated skin with water using mild soap if necessary. Remove all contaminated clothing and do not reuse clothes until thoroughly clean. INHALATION OVEREXPOSURE: Where breathing has stopped give artificial respiration. If breathing is difficult have qualified persons give medical oxygen. INGESTION: Give victim water to dilute chemical. NEVER induce vomiting in an unconscious or convulsing victim. aspiration of this material may occur during vomiting and can lead to lung damage or death. Seek immediate medical help

===== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE =====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Evacuate personnel, remove sources of ignition, provide ventilation, equip cleanup crew with safety equipment, contain the spill with dikes, then use an absorbent or vacuum equipment to remove material. Store waste in a sealed container. Use only nonsparking tools during clean up. Do not allow this material to flow into the environment. If the spill exceeds the reportable quantity notify EPA and DOT officials.

WASTE DISPOSAL METHOD

Dispose of in accordance with Local, State and Federal regulations. Closed containers may explode if incinerated and all wastes should be incinerated in approved facilities only. In it's uncatalyzed liquid state this material is a hazardous waste due to it's flammability and should not be released into the environment. The preferred waste management option is to send material that has been declared waste to a licensed or permitted recycler, reclaimer, or incinerator. Use proper waste manifests and permitted haulers for transportation of and material which has been declared a waste. Waste disposal and characterization are the responsibility of the waste generator.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Do not store above 120 deg. F. Store large quantities in buildings designed to comply with Osha, EPA, and local fire department regulations. KEEP AWAY FROM HEAT, SPARKS AND FLAMES. Keep containers closed and upright when not in use to prevent the escape of fumes and liquid into the work or storage area. Inspect containers frequently to detect any possible damage or deterioration which might cause release of the material to the environment. Polymerization of this coating during storage may cause the container to burst explosively. STORE IN COOL DRY AREA.

OTHER PRECAUTIONS

Containers should be grounded when the material is being transferred/mixed to prevent static build up. Empty containers retain all of the hazardous characteristics of the material itself and should be handled carefully until they are thoroughly clean or destroyed. Large quantities of this material should be stored only in buildings which conform to OSHA standards. If any materials (such as catalysts, colorants, or thinners)_ are added to this product read all relevant MSDS as the mixture will retain ALL of the hazardous characteristics of the chemicals added.

===== SECTION VIII - CONTROL MEASURES =====

RESPIRATORY PROTECTION

M A T E R I A L S A F E T Y D A T A S H E E T

During the application of this product or at any time vapors escape into the

work space, exposed persons should use appropriate cartridge respirators (NIOSH/MSHA approved) or in instances of high concentrations, air provided breathing apparatus. Refer to OSHA regulations to maintain workspace safety. If respirators are required, employees must be trained to use the respirators, the fit of the respirator must be tested, and the employee's lung capacity must be tested for ability to use the respirator. Respiratory protection should be used during the curing, cutting, sanding, or polishing of this product. If Respirators are required they must be carefully selected according to the conditions present at customers location.

VENTILATION

Clean air dilution and local exhaust may be used to maintain the vapor concentration below current exposure limits and 20% below the LEL, except in confined areas where forced ventilation may be necessary. Refer to OSHA guidelines for handling these types of materials.

PROTECTIVE GLOVES

Solvent impermeable gloves should be worn to prevent physical contact with the product.

EYE PROTECTION

To protect your eyes, wear safety glasses with side shields, chemical goggles, or face shields.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

Solvent impermeable, protective clothing should be worn to minimize skin contact with this product. Emergency showers and eye wash stations should be provided in the work space. Wear steel toed shoes when handling heavy objects.

WORK/HYGIENIC PRACTICES

Inspect Fire extinguishers at regular intervals. Keep work space clean. Retain safety features on all equipment.

===== SECTION IX - OTHER REGULATORY INFORMATION =====

WHMIS INFO.: CLASS B DIVISION 2

The intentional components of this coating are listed in the **Canadian DSL** (Domestic Substance List).

The **HAPS** (Hazardous Air Pollutants) content of this coating is 33.81 wt%.

The total volatile content of this coating is 47.99 wt%

The total non-exempt volatile content of this coating is 47.99 wt%

The intentional components of this coating are listed in the **TSCA** (Toxic Substances Control Act) inventory.

===== SECTION X - DISCLAIMER =====

To the best of our knowledge this MSDS is accurate. To the extent allowed by law, this statement is made in lieu of any other warranties, expressed or implied including but not limited to any implied warranty of merchantability or fitness for a particular purpose and is in lieu of any other obligations or liability on the part of DURA TECHNOLOGIES, INC.



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name Starbrite Bilge Cleaner
Version # 01
Revision date 02-02-2011
Product code 805XX
Product use Cleaner
Manufacturer/Supplier Star brite Distributing, Inc.
4041 SW 47th Avenue
Fort Lauderdale, FL 33314 US
General Information: (954) 587-6280
Contact Person: Vincent Waclawek
Emergency 24-Hour Emergency: CHEMTREC: (703) 527-3887
or (800) 424-9300

2. Hazards Identification

Physical state Liquid.
Appearance Blue liquid.
Emergency overview WARNING

Causes skin and eye irritation. Mist or vapor irritating to eyes and respiratory tract.

OSHA regulatory status This product is hazardous according to OSHA 29 CFR 1910.1200.

Potential health effects

Routes of exposure Inhalation. Eye contact. Skin contact.

Eyes Irritating to eyes.

Skin Irritating to skin.

Inhalation Irritating to respiratory system.

Ingestion No harmful effects expected in amounts likely to be ingested by accident.

Potential environmental effects Not expected to be harmful to aquatic organisms.

3. Composition / Information on Ingredients

Components	CAS #	Percent
2-Propanol	67-63-0	<5
Alcohols, C9-11, ethoxylated	68439-46-3	<5
Dipropylene glycol methyl ether	34590-94-8	1
Sodium metasilicate	6834-92-0	<2

Composition comments The full text for all R-phrases is displayed in Section 16 of the MSDS. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

First aid procedures

Eye contact Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention. In case of irritation from airborne exposure, move to fresh air. Get medical attention if symptoms persist.

Skin contact Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Inhalation If symptomatic, move to fresh air. Get medical attention if symptoms persist.

Ingestion Seek medical advice.

5. Fire Fighting Measures

Flammable properties	No unusual fire or explosion hazards noted.
Extinguishing media	
Suitable extinguishing media	Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Fire fighting equipment/instructions	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Hazardous combustion products	Carbon oxides. Silicon oxides. Sodium oxides.

6. Accidental Release Measures

Personal precautions	Ensure adequate ventilation. Wear suitable protective clothing. See Section 8 of the MSDS for Personal Protective Equipment.
Environmental precautions	Collect and dispose of spillage as indicated in Section 13 of the MSDS.
Methods for containment	Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas.
Methods for cleaning up	Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Never return spills to original containers for re-use. Following product recovery, flush area with water. Clean surface thoroughly to remove residual contamination.
Other information	Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling	Avoid breathing mists or vapors. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash thoroughly after handling. Observe good industrial hygiene practices.
Storage	Keep container tightly closed and in a well-ventilated place. Store in closed original container at room temperature. Store away from incompatible materials.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
2-Propanol (67-63-0)	STEL	400 ppm
	TWA	200 ppm
Dipropylene glycol methyl ether (34590-94-8)	STEL	150 ppm
	TWA	100 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
2-Propanol (67-63-0)	PEL	980 mg/m ³ 400 ppm
	PEL	600 mg/m ³ 100 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
2-Propanol (67-63-0)	STEL	984 mg/m ³ 400 ppm
	TWA	200 ppm 492 mg/m ³
	STEL	150 ppm
Dipropylene glycol methyl ether (34590-94-8)		909 mg/m ³

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
	TWA	606 mg/m ³ 100 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
2-Propanol (67-63-0)	STEL	400 ppm
	TWA	200 ppm
Dipropylene glycol methyl ether (34590-94-8)	STEL	150 ppm
	TWA	100 ppm

Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
2-Propanol (67-63-0)	STEL	400 ppm
	TWA	200 ppm
Dipropylene glycol methyl ether (34590-94-8)	STEL	910 mg/m ³
		150 ppm
	TWA	100 ppm 605 mg/m ³

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
2-Propanol (67-63-0)	STEL	1230 mg/m ³ 500 ppm
	TWA	400 ppm 983 mg/m ³
Dipropylene glycol methyl ether (34590-94-8)	STEL	150 ppm
		909 mg/m ³
	TWA	606 mg/m ³ 100 ppm

Mexico. Occupational Exposure Limit Values

Components	Type	Value
2-Propanol (67-63-0)	STEL	1225 mg/m ³ 500 ppm
	TWA	400 ppm 980 mg/m ³
Dipropylene glycol methyl ether (34590-94-8)	STEL	150 ppm
		900 mg/m ³
	TWA	600 mg/m ³ 100 ppm

Engineering controls

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment**Eye / face protection**

Wear safety glasses with side shields (or goggles). Wear a full-face respirator, if needed.

Skin protection

Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure. Contact glove manufacturer for specific information.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical & Chemical Properties

Appearance	Blue liquid.
Color	Blue.
Odor	Pleasant.
Odor threshold	Not available.
Physical state	Liquid.
Form	Liquid.
pH	9.5
Melting point	Not available.
Freezing point	Not available.
Boiling point	212 °F (100 °C)
Flash point	Not available.
Evaporation rate	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not available.
Vapor density	1.003 (20°C)
Specific gravity	Not available.
Solubility (water)	Complete.
Partition coefficient (n-octanol/water)	No data available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Bases.
Hazardous decomposition products	No hazardous decomposition products are known.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Toxicological data

Components

Test Results

Dipropylene glycol methyl ether (34590-94-8)	Acute Dermal LD50 Rabbit: 9.5 g/kg
2-Propanol (67-63-0)	Acute Oral LD50 Rat: 5.35 g/kg Acute Dermal LD50 Rabbit: 12800 mg/kg Acute Oral LD50 Rat: 4.7 g/kg

Acute effects Causes skin and eye irritation. Mist or vapor irritating to eyes and respiratory tract.

Local effects

US ACGIH Threshold Limit Values: Skin designation

Dipropylene glycol methyl ether (CAS 34590-94-8) Can be absorbed through the skin.

Sensitization This material has a low potential to cause allergic skin reactions; however, cases of human skin sensitization have been reported.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

ACGIH Carcinogens

2-Propanol (CAS 67-63-0) A4 Not classifiable as a human carcinogen.

12. Ecological Information

Ecotoxicological data

Product	Test Results
Starbrite Bilge Cleaner	EC50 Daphnia: 128 mg/l 48 hours estimated
Components	Test Results
2-Propanol (67-63-0)	LC50 Bluegill (Lepomis macrochirus): > 1400 mg/l 96 hours
Sodium metasilicate (6834-92-0)	EC50 Water flea (Ceriodaphnia dubia): 0.28 - 0.57 mg/l 48 hours LC50 Western mosquitofish (Gambusia affinis): 1800 mg/l 96 hours
Alcohols, C9-11, ethoxylated (68439-46-3)	EC50 Water flea (Daphnia magna): 2.9 - 8.5 mg/l 48 hours LC50 Fathead minnow (Pimephales promelas): 6 - 12 mg/l 96 hours
Ecotoxicity	Not expected to be harmful to aquatic organisms.
Persistence and degradability	The product is expected to be biodegradable.
Bioaccumulation / Accumulation	The product is not expected to bioaccumulate.
Partition coefficient (n-octanol/water)	No data available.
Mobility in environmental media	No data available.

13. Disposal Considerations

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations. When this product as supplied is to be discarded as waste, it does not meet the definition of a RCRA waste under 40 CFR 261.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

TDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is hazardous according to OSHA 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

US TSCA Section 12(b) Export Notification: Export Notification requirement/De minimis concentration

Dipropylene glycol methyl ether (CAS 34590-94-8) 1.0 % One-Time Export Notification only.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

2-Propanol (CAS 67-63-0) 1.0 %

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

2-Propanol (CAS 67-63-0) Listed.

CERCLA (Superfund) reportable quantity (lbs)

2-Propanol 100

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
 Delayed Hazard - No
 Fire Hazard - No
 Pressure Hazard - No
 Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

Drug Enforcement Administration (DEA) (21 CFR 1308.11-15) Not controlled

Canadian regulations This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status Controlled

WHMIS classification D2B - Other Toxic Effects-TOXIC

WHMIS labeling

**Inventory status**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Hazardous Substances (Director's): Listed substance

2-Propanol (CAS 67-63-0) Listed.
 Dipropylene glycol methyl ether (CAS 34590-94-8) Listed.

US - Massachusetts RTK - Substance: Listed substance

2-Propanol (CAS 67-63-0) Listed.
 Dipropylene glycol methyl ether (CAS 34590-94-8) Listed.

US - New Jersey Community RTK (EHS Survey): Reportable threshold

2-Propanol (CAS 67-63-0) 500 LBS

US - New Jersey RTK - Substances: Listed substance

Dipropylene glycol methyl ether (CAS 34590-94-8) Listed.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

2-Propanol (CAS 67-63-0) Listed.
 Dipropylene glycol methyl ether (CAS 34590-94-8) Listed.

16. Other Information

HMIS® ratings

Health: 2
Flammability: 1
Physical hazard: 0

NFPA ratings

Health: 2
Flammability: 1
Instability: 0

Disclaimer

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Star brite assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Star brite assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

Issue date

02-02-2011

Product Code: 776-1
Product Name: PRE-STAIN (1 GAL)

GEMINI INDUSTRIES, INC., 2300 HOLLOWAY DRIVE, EL RENO, OK 73036
24-Hour Emergency (Spill, Leak, Exposure or Accident): INFOTRAC 800-535-5053 Outside USA, Call Collect 1-352-323-3500
24-Hour Emergency HAZMAT Response and MSDS help: EMI 800-510-8510

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

(SEE TOP OF PAGE)

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT/EXPOSURE LIMITS	CAS#
DISPERSANT 848	MIXTURE
BUTANOL; TWA:100 ppm; 300 mg/m3, ACGIH 50 ppm, 152 mg/m3	
MINERAL SPIRITS	8052-41-3
LONG OIL LINSEED ALKYD	PROPRIETARY
SC150	64742-94-5
ROSIN BASED RESIN 25	68038-41-5
NAPHTHALENE	91-20-3
TRIMETHYLBENZENE	95-63-6
XYLENE	1330-20-7
OSHA: 100 PPM PEL-TWA	
NIOSH: 100 PPM PEL-TWA	
ETHYLBENZENE	100-41-4

3. HAZARDS IDENTIFICATION

Combustible in a liquid state
 Vapor causes eye burns and skin irritation.

POTENTIAL HEALTH EFFECTS

SKIN:

Widespread contact with skin for several hours can cause harmful amounts of material to be absorbed.

INGESTION:

Excessive inhalation of vapors can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, headache, possible unconsciousness and even asphyxiation.

INHALATION:

High vapor concentrations or prolonged breathing of lower concentrations may result in damage to the liver, kidneys, lungs and blood forming organs.

4. FIRST AID MEASURES

EYES:

Product Code: 776-1
Product Name: PRE-STAIN (1 GAL)

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Flush with luke warm water for a minimum of 15 minutes. Seek medical attention immediately.

SKIN:

Remove contaminated clothing, wash area immediately with soap and water. See physician if irritation persists.

INGESTION:

Rinse mouth immediately. Drink 1 or 2 glasses of water to dilute. Do NOT induce vomiting. Contact physician or poison control center immediately.

INHALATION:

Remove exposed individual to fresh air and assist breathing if necessary. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

FLAMMABLE CLASSIFICATION:

LOWEST FLASH POINT: 108F

METHOD:

FLAMMABLE LIMITS:

LOWER FLAMMABLE LIMIT: 0

UPPER FLAMMABLE LIMIT: 11.2

EXTINGUISHING MEDIA: Alcohol Foam, CO2, Dry Chemical

The National Fire Protection Association Class B extinguisher is designed to extinguish NFPA Class 1B flammable liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Closed containers may explode when exposed to extreme heat. Do not apply to hot surfaces. Never use welding or cutting torch on or near container (even empty) because product (even residue) may ignite explosively. Liquid and vapor states of this substance are dangerous fire hazards and moderate explosion hazards when exposed to heat or flame.

FIREFIGHTING INSTRUCTIONS:

Clear fire area of unprotected personnel. Do not enter confined space without helmet, face shield, bunker coat, gloves, rubber boots and a positive pressure NIOSH-approved self-contained breathing apparatus. A water stream can scatter flames. A spray of water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

6. ACCIDENTAL RELEASE MEASURES

Stay upwind and away from spill or leak unless wearing appropriate protective equipment. Stop and/or contain discharge if it may be done safely. Keep all sources of ignition away. Ventilate area of spill. Use non-sparking tools for clean up. Cover with inert material to reduce fumes. Keep out of drains, sewer or waterways. If large spill occurs, alert spill response teams. Contact fire authorities. Notify local health and pollution control agencies.

7. HANDLING AND STORAGE

HANDLING:

Bond and ground metal containers when transferring liquid. Avoid free fall of liquid in excess of a few inches. Personnel should avoid inhalation of vapors. Personal contact with the product should be

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avoided. Should contact be made, remove saturated clothing and flush affected skin areas with water. Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid and/or solid), all hazard precautions given in this sheet must be observed.

Rags, steel wool, and paper towels soaked with this product may spontaneously catch fire if improperly stored and/or discarded. Immediately after each use place rags, steel wool and paper towels in a sealed water-filled container to prevent spontaneous combustion.

STORAGE:

Keep product containers cool, dry and away from sources of ignition. Use and store this product with adequate ventilation. DO NOT SMOKE in or near storage areas

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**RESPIRATORY PROTECTION:**

PRIMARY ROUTES OF ENTRY: inhalation, skin contact, eyes, ingestion.

Use local exhaust as required to control vapor concentrations. Avoid prolonged or repeated breathing of vapors. If exposure exceeds TLV, use NIOSH-approved respirator to prevent overexposure.

SKIN PROTECTION:

Required for prolonged or repeated contact. Wear resistant gloves such as natural rubber, neoprene, buna N or nitrile. An apron should be worn to avoid skin contact.

EYE PROTECTION:

Wear splashproof goggles and face shield if there is a likelihood of contact with eyes.

HYGIENIC PRACTICES:

Wash hands thoroughly before eating or using restroom. Remove contaminated clothing immediately and do not wear again until it has been properly laundered.

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 244 F

MELTING POINT: N/A

VAPOR PRESSURE: N/A

VAPOR DENSITY: Heavier Than Air

SOLUBILITY IN WATER: N/A

SPECIFIC GRAVITY: .922

COATING VOC LB/GL: 4.5369 lb/gl

COATING VOC GM/LTR: 544 g/l

MATERIAL VOC LB/GL: 4.5369 lb/gl

MATERIAL VOC GM/LTR: 544 g/l

% VOLATILE BY VOLUME: 64.674%

EVAPORATION RATE: Faster than Butyl Acetate.

WEIGHT PER GALLON: 7.679 lb/gl

PH: N/A

ODOR: N/A

APPEARANCE: Colored Liquid

10. STABILITY AND REACTIVITY**CHEMICAL STABILITY:**

Stable Conditions To Avoid: high heat, sparks, flames

INCOMPATIBILITY

Product Code: 776-1
Product Name: PRE-STAIN (1 GAL)

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24-Hour Emergency HAZMAT Response and MSDS help: EMI 800-510-8510

Materials to Avoid: Strong oxidizing agents, strong alkalines, strong mineral acids

HAZARDOUS DECOMPOSITION PRODUCTS:
 Oxidation may produce carbon and nitrogen oxides.

HAZARDOUS POLYMERIZATION:
 Will not occur.

11. TOXICOLOGICAL INFORMATION

CANCER INFORMATION:
 This product contains no reported carcinogens or suspected carcinogens.

TERATOLOGY (BIRTH DEFECT) INFORMATION:
 This product contains no reported or suspected teratogens.

REPRODUCTION INFORMATION:
 This product contains a chemical known to the State of California to cause cancer.

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION:
 Uncontrolled release of the product may result in contamination of air, ground, waterways and/or sewers.

13. DISPOSAL CONSIDERATIONS

Do not flush to sewer, watershed or waterway. Dispose of product in accordance with applicable local, county, state and federal regulations.

14. TRANSPORT INFORMATION

DOT NUMBER: UN1263

15. REGULATORY INFORMATION

HMIS HAZARD INDEX: 4=SEVERE, 3=SERIOUS, 2=MODERATE, 1=SLIGHT, 0=LEAST HEALTH: 2

FLAMMABILITY: 2

REACTIVITY: 0

PERSONAL PROTECTION: I

SECTION 313:

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372 (Chemicals listed below constitute the specific percentage of product by weight. Chemicals that do not have a listed percentage comprise less than 1% of total product weight):

	% BY WT
* NAPHTHALENE	91-20-3
* XYLENE	1330-20-7
* ETHYLBENZENE	100-41-4

16. DISCLAIMER:

The following supercedes any provision contained in the forms, letters and papers of your company. This product is designed and intended for professional application only. All products should be thoroughly tested under application conditions prior to use. The information contained herin is believed to be reliable. HOWEVER, GEMINI MAKES NO WARRANTY CONCERNING THIS PRODUCT, WHETHER EXPRESS OR IMPLIED. INCLUDING THE WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

UNDER NO CIRCUMSTANCES SHALL GEMINI BE LIABLE FOR SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR ANY OTHER DAMAGES FROM ALLEGED NEGLIGENCE, BREACH OF WARRANTY, STRICT LIABILITY, OR ANY OTHER LEGAL THEORY, ARISING OUT OF THE USE OR HANDLING OF THIS PRODUCT. THE SOLE REMEDY OF THE BUYER AND THE SOLE LIABILITY OF GEMINI FOR ANY CLAIMS SHALL BE LIMITED TO THE BUYER'S PURCHASE PRICE OF THE PRODUCT WHICH IS THE SUBJECT OF THE CLAIM OR THE AMOUNT ACTUALLY PAID FOR SUCH PRODUCT, WHICHEVER IS LESS.

TECHNICAL ADVICE FURNISHED BY GEMINI SHALL NOT CONSTITUTE AN EXPRESS WARRANTY, WHICH IS EXPRESSLY

M A T E R I A L S A F E T Y D A T A S H E E T

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Product Code: 776-1
Product Name: PRE-STAIN (1 GAL)

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DISCLAIMED. ALL TECHNICAL ADVICE GIVEN IS ACCEPTED AT THE RISK OF THE BUYER.

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND MANUFACTURER'S INFORMATION						
NFPA Rating: Health-2; Flammability-3; Reactivity-0; Special-B		HMIS Rating: Health-2; Flammability-3; Reactivity-0; Personal Protection-B				
Manufactured By: AMREP, INC. Address: 990 Industrial Park Drive Marietta, GA 30062 Distributed By: Tacoma Screw Products, Inc. Address: Tacoma, WA 98409 Phone: 800-562-8192		DOT Hazard Classification: ORM-D / LIMITED QUANTITY Identity (trade name as used on label): BRAKE AND PARTS CLEANER II NON-CHLORINATED - HEAVY DUTY Catalog No. 659-808				
Information Calls: (770)422-2071		MSDS Number: A00734		Revision- 14a		
24 hr D.O.T. EMERGENCY RESPONSE NUMBER: ChemTel: 1(800)255-3924		Date Prepared: 01/07/11		Prepared By: TR/IB		
NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA						
SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION						
COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)		CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
HEPTANE		142-82-5	No	500	400	d
ALCOHOL:						
ETHANOL or		64-17-5	No	1000	1000	d
ISOPROPANOL		67-63-0	No	400	400	d
CARBON DIOXIDE		124-38-9	No	5000	5000	d
WARNING: This product contains a chemical or chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.						
SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS						
Boiling Point: N/A		Specific Gravity (H2O=1): Concentrate Only = 0.70				
Vapor Pressure: PSIG @ 70°F (Aerosols): 80-100		Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A				
Vapor Density (Air = 1): N/E		Evaporation Rate (= 1): N/E				
Solubility in Water:None		Water Reactive: No				
Appearance and Odor: Clear forceful spray with aliphatic solvent odor.		Flash point: liquid concentrate only (indirect TCC): approx.: 15°F (-9°C)				
SECTION 3 - FIRE AND EXPLOSION HAZARD DATA						
FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) EXTREMELY FLAMMABLE		Auto Ignition Temperature N/E		Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E		
Flash point: liquid concentrate of aerosol only (indirect TCC): approx.: 15°F (-9°C)		EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide.				
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.						
Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 120°F or the container may rupture.						
SECTION 4 - REACTIVITY HAZARD DATA						
STABILITY [X] STABLE [] UNSTABLE		HAZARDOUS POLYMERIZATION [] WILL [X] WILL NOT OCCUR				
Incompatibility (Mat. to avoid): Strong oxidizing agents.		Conditions to Avoid: Open flame, welding arcs, heat, sparks.				
Hazardous Decomposition Products: Carbon dioxide, carbon monoxide.						
SECTION 5 - HEALTH HAZARD DATA						
PRIMARY ROUTES OF ENTRY: [X] INHALATION [] INGESTION [X] SKIN ABSORPTION [] EYE [] NOT HAZARDOUS						
ACUTE EFFECTS						
Inhalation: Excessive inhalation of vapors can cause nasal & respiratory irritation, dizziness, weakness, nausea, headache, possible unconsciousness or asphyxiation.						
Eye Contact: May cause irritation.		Skin Contact: Slight irritation due to defatting of skin.				
Ingestion: Irritation of mucosal membranes. Volatility can result in inhalation symptoms and chemical pneumonitis.						
CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) Excessive inhalation may result in central nervous system effects. Product contains trace quantities of chemicals know to the state of California to cause cancer, birth defects or other reproductive harm.						
Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.						
EMERGENCY FIRST AID PROCEDURES						
Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.						
Skin Contact: Wash with soap and water. If irritated, seek medical attention.						
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.						
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.						
SECTION 6 - CONTROL AND PROTECTIVE MEASURES						
Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by NIOSH approved for organic vapor.						
Protective Gloves: Neoprene		Eye Protection: Safety glasses recommended.				
Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.						
Other Protective Clothing & Equipment: None						
Hygienic Work Practices: Wash with soap and water before handling food.						
SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE						
Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations. DO NOT FLUSH TO SEWER.						
Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.						
Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 120°F.						
Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination.						

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -99 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 ° F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Isolate from heat, electrical equipment, sparks and open flame. Keep containers tightly closed. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Perforation of the pressurized container may cause bursting of the can.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust.

Section 7 - Handling And Storage

Handling: Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Use only in a well-ventilated area. Avoid breathing vapor or mist. Wash thoroughly after handling. Wash hands before eating.

Storage: Contents under pressure. Do not expose to heat or store above 120 ° F. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.

Respiratory Protection: A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Liquid	Evaporation Rate:	Faster than Ether
Solubility in H ₂ O:	Miscible	Freeze Point:	N.D.
Specific Gravity:	0.745	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid all possible sources of ignition. Avoid temperatures above 120 ° F.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Ethanol	90 mL/kg (Rat, Oral)	N.E.
Acetone	5800 mg/kg (Rat)	50100 mg/m ³ (Rat, 8Hr)
Liquified Petroleum Gas	N.E.	N.E.
n-Butanol	2500 mg/kg (Rat)	>8000 ppm (Rat, Inhalation, 4Hr)
Isopropyl Alcohol	5800 mg/kg (Rat)	12000 ppm (Rat, 8Hr)

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
n-Butanol	71-36-3
Isopropyl Alcohol	67-63-0

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Shellac	9000-59-3

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name

Shellac

CAS Number

9000-59-3

International Regulations: As follows -**CANADIAN WHMIS:**

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information**HMIS Ratings:**

Health: 2

Flammability: 4

Physical Hazard: 0

Personal Protection: X

NFPA Ratings:

Health: 2

Flammability: 4

Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 605

REASON FOR REVISION:

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

MATERIAL SAFETY DATA SHEET

Sales Order: {SalesOrd}

INTERLUX BRUSHING LIQUID

MSDS Revision No: A1 -5
MSDS Revision Date: 10/18/2005



International Paint LLC

6001 Antoine Drive

Houston, Texas 77091

EMERGENCY NUMBERS:

(800) 424-9300 CHEMTREC (USA)
(703) 527-3887 CHEMTREC (Intl)
(800) 854-6813 Poison Control Center
CUSTOMER SERVICE: (Non-Emergency)
(800) 589-1267 International Paint
(800) 631-7481 Interlux

1. GENERAL INFORMATION

Product Identity: INTERLUX BRUSHING LIQUID

Bulk Sales Reference No: Y333

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
008008-20-6	Kerosene 50 - 75% by Weight	OSHA:	No Established Limit
		ACGIH:	200 mg/m3 TWA (application restricted to conditions in which there are negligible aerosol expos
		NIOSH:	100 mg/m3 TWA
		Supplier:	No Established Limit
		OHSA, CAN:	35 ppm TWAEV; 250 mg/m3 TWAEV
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	Eye nose
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
064742-88-7	Solvent naphtha (petroleum), medium aliphatic 50 - 75% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

3. HAZARD IDENTIFICATION

Overview:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.		
Inhalation:	Harmful if inhaled. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.		
Eyes:	Causes severe eye irritation. Do not get in eyes.		
Skin:	Causes skin irritation. May be harmful if absorbed through the skin.		
Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.		
Chronic Effects:	Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.		
HMIS Rating:	Health: Unknown	Flammability: Unknown	Reactivity: Unknown

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes:	Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin/Hand:	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls:	Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
Other Work Practices:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:	F: 149 C: 65
Lower Explosive Limit (LEL):	1 (%vol in air) at Normal Atmospheric Temp and Pressure
Fire and Explosion Hazards:	Combustible liquid and vapor. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.
Fire Fighting Procedures:	

Also Reference Emergency Response Guide Number: Not Determined

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
pH:	No Established Limit
Specific Gravity:	0.799
Boiling Point (F):	371
Vapor Density:	Heavier than air
VOC Content (lbs):	Refer to the Technical Data Sheet for this product.
Evaporation Rate:	Slower than ether

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:	Store between 32 and 120 F
Handling and Storage Precautions:	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.
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11. ECOLOGICAL DATA

General:	No additional information provided for this product. See Section 2 for chemical specific data.
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12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures:	ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.
Public Safety:	CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet). Also, Reference Emergency Response Guide Number: Not Determined

13. DISPOSAL CONSIDERATION

Waste Disposal:	
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Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	CONSUMER COMMODITY, ORM-D	IMDG Proper Shipping Name:	PAINT RELATED MATERIAL
DOT Hazard Class:	NR	IMDG Hazard Class:	Flammable Liquid, 3
UN / NA Number:	Not Regulated	UN Number:	UN 1263
DOT Packing Group:	Not Regulated	IMDG Packing Group:	III
CERCLA/DOT RQ:	Not Applicable gal. / Not Applicable lbs.	System Reference Code:	186

15. REGULATORY INFORMATION

Regulatory Overview:	<p>The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.</p> <p>Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.</p>
WHMIS Classification:	No Established Limit
Regulatory List	Product Ingredients on List
DOT Marine Pollutants (10%): (No Product Ingredients Listed)	
DOT Severe Marine Pollutants (1%): (No Product Ingredients Listed)	
EPCRA 311/312 Chemicals and RQs (>.1%) :	
(No Product Ingredients Listed)	
EPCRA 302 Extremely Hazardous (>.1%) :	
(No Product Ingredients Listed)	
EPCRA 313 Toxic Chemicals (>.1%) :	
(No Product Ingredients Listed)	
Mass RTK Substances (>1%) :	
008008-20-6	Kerosene
Mass Extraordinarily Haz Sub (>.01%) :	
(No Product Ingredients Listed)	
Penn RTK Substances (>1%) :	
008008-20-6	Kerosene
Penn Special Hazardous Substances (>.01%) :	
(No Product Ingredients Listed)	
Rhode Island Hazardous Substances (>.1%) :	
008008-20-6	Kerosene
RCRA Status (>.01%) :	
(No Product Ingredients Listed)	
N.J. RTK Substances (>1%) :	

008008-20-6 Kerosene
N.J. Special Hazardous
Substances (>.01%) :
 (No Product Ingredients
Listed)
N.J. Env. Hazardous Substances
(>.1%) :
 008008-20-6 Kerosene
Proposition 65 – Carcinogens
(>0%):
 (No Product Ingredients
Listed)
Proposition 65 – Female Repro
Toxins (>0%):
 (No Product Ingredients
Listed)
Proposition 65 – Male Repro
Toxins (>0%):
 (No Product Ingredients
Listed)
Proposition 65 – Developmental
Toxins (>0%):
 (No Product Ingredients
Listed)

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

MATERIAL SAFETY DATA SHEET

Product Description: INTERSTRIP 299E REMOVER
Manufacturer's Code: Y299E/MSDS

Revision Date 11/23/1998
Initial Issue Date 08/12/98
11/23/1998

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Description INTERSTRIP 299E REMOVER
Product Description Continued

Manufacturer's Code: Y299E/MSDS

Manufacturer:
International Paint Inc. International Paint Inc.
International Interlux
6001 Antoine Drive 2270 Morris Avenue
Houston, TX 77091 Union, NJ 07083-0386

WHMIS Classification: Not Regulated

International Info 8AM-5PM CST: 713-684-1244

Interlux Info 8AM-5PM EST: 908-964-2206

Emergency Telephone Number: 800-854-6813

CHEMTREC #: 800-424-9300

2. OSHA REPORTABLE HAZARDOUS COMPONENTS (20 CFR1910.1200)

Component	Wt %	CAS Registry #
Acetone	15-25	000067-64-1
Methanol	15-25	000067-56-1
Methyl Ethyl Ketone	15-25	000078-93-3
Methyl Isobutyl Ketone	15-25	000108-10-1
Toluene	15-25	000108-88-3

EXPOSURE LIMITS (ppm)

MATERIAL SAFETY DATA SHEET

Product Description: INTERSTRIP 299E REMOVER
 Manufacturer's Code: Y299E/MSDS

Component	ACGIH TLVs		OSHA PELs		
	TWA	STEL	TWA	STEL	
Acetone	750	1000	1000	1000	S
Methanol	200	250	200	S+ 250	
Methyl Ethyl Ketone	200	300	200	300	
Methyl Isobutyl Ketone	50	75	100	75	S
Toluene	50	N/E	100	150	S+

(M) Maximum Exposure Limit

(S) Occupational Exposure Standard

(R) Supplier's Recommended Limit

(+) There is a risk of absorption through unbroken skin.

3. HAZARDS IDENTIFICATION

INHALATION:

Causes nose and throat irritation.

EYE CONTACT:

Causes eye irritation.

SKIN CONTACT:

Causes skin irritation.

INGESTION:

May be fatal or cause blindness if swallowed. Cannot be made non-poisonous.

Contains an ingredient listed as known or suspected carcinogen?

NTP: No OSHA: No IARC: No

MATERIAL SAFETY DATA SHEET

Product Description: INTERSTRIP 299E REMOVER
Manufacturer's Code: Y299E/MSDS

4. FIRST AID MEASURES

GENERAL:

In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

INHALATION:

Remove to fresh air. If discomfort is present or breathing is absent get medical attention immediately.

EYE CONTACT:

Flush immediately with plenty of water for 15 minutes until irritation subsides. If irritation persists, get medical attention.

SKIN CONTACT:

Flush with large amounts of water. Use soap if available. Remove severely contaminated clothing (including shoes) and wash before reuse. If irritation persists, get medical attention.

INGESTION:

If swallowed, immediately give 1 or 2 glasses of water and call a physician, hospital emergency room or poison control center for way to induce vomiting.

5. FIRE AND EXPLOSION DATA

Flashpoint: 50 F 10 C
OSHA Classification: Flammable Liquid - Class IC
LEL: 1.5

FIRE AND EXPLOSION HAZARDS:

Isolate from heat, sparks, electrical equipment and open flame. Closed containers may explode when exposed to extreme heat. In the absence of electricity, a water spray (a fog nozzle is preferred) may be used to cool containers. Decomposition and combustion products may be toxic.

EXTINGUISHING MEDIA:

Foam, Carbon Dioxide, Dry Chemical

MATERIAL SAFETY DATA SHEET

Product Description:
Manufacturer's Code:

INTERSTRIP 299E REMOVER
Y299E/MSDS

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Absorb spill with an inert material (e.g., dry sand or earth), then place in a chemical waste container.

7. HANDLING AND STORAGE

GENERAL:

Keep container closed. Loosen closure cautiously before opening. Store in a cool, well ventilated place away from incompatible materials. (See Stability and Reactivity Section 10.) Keep away from heat, sparks and flames. Protect material from direct sunlight. Ground and bond containers when transferring materials. Empty containers may retain hazardous properties. Follow all MSDS/label warnings, even after the container is emptied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

- Provide sufficient ventilation, in volume and pattern, to:
- keep the TLV of the hazardous ingredients below the limits specified in Section Two.
 - remove volatiles produced during cure and decomposition products produced during welding or cutting on surfaces coated with this product.

PERSONAL PROTECTION:

RESPIRATOR:

Do not breathe vapors or spray mist. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacture's directions for respirator use.

MATERIAL SAFETY DATA SHEET

Product Description: INTERSTRIP 299E REMOVER
Manufacturer's Code: Y299E/MSDS

PROTECTIVE EQUIPMENT:

CLOTHING: As needed, use body protection to avoid contact with product.

EYE: Safety glasses, chemical goggles and/or a face shield should be worn to prevent eye contact.

GLOVES: Wear chemical resistant gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific Gravity: 0.814
Boiling Point: 132 F 55.55 C
Physical State: Viscous Liquid
Evaporation Rate: 8.5
Vapour Density: 2.5

10. STABILITY AND REACTIVITY

GENERAL:

This product is stable and hazardous polymerization will not occur.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Strong oxidizing agents.

HAZARDOUS DECOMPOSITION:

May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

MATERIAL SAFETY DATA SHEET

Product Description:
Manufacturer's Code:

INTERSTRIP 299E REMOVER
Y299E/MSDS

11. TOXICOLOGICAL INFORMATION

There is no data available on the product itself.

12. ECOLOGICAL INFORMATION

There is no data available on the product itself.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state and federal regulations.
Do not incinerate unopened containers.

14. TRANSPORT INFORMATION

DOT (Department of Transportation):
Proper Shipping Name: Paint Related Material
Hazard Class: Flammable Liquid, 3
UN Number: 1263
Packing Group: Packing Group II

15. REGULATORY INFORMATION

TSCA (Toxic Substance Control Act):
Components of this product are listed on the TSCA Inventory.

CERCLA (Comprehensive Response Compensation, and Liability Act):
We recommend you contact local authorities to determine if there
may be other local reporting requirements.

SARA TITLE III (Superfund Amendments and Reauthorization Act):

MATERIAL SAFETY DATA SHEET

Product Description:
Manufacturer's Code:

INTERSTRIP 299E REMOVER
Y299E/MSDS

None known unless chemicals are specified below.

Section 302 Reportable Ingredients

313 Reportable Ingredients

000067-56-1	Methanol
000067-64-1	Acetone
000078-93-3	Butanone
000108-10-1	Methyl Isobutyl Ketone
000108-88-3	Toluene

CALIFORNIA PROPOSITION 65:

Warning: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

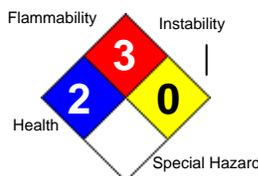
End of Document

MATERIAL SAFETY DATA SHEET

AFTER WASH



HEALTH	*	2	
FLAMMABILITY		3	
PHYSICAL		0	
PPE	G		



Printed: 11/26/2012
Revision: 07/20/2011
Supersedes Revision: 06/17/2005

1. Product and Company Identification

Product Code: 207.6
Product Name: AFTER WASH
Manufacturer Information
Company Name: W. M. Barr
 2105 Channel Avenue
 Memphis, TN 38113
Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892
Web site address: www.wmbarr.com

Synonyms

QKSW94341

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA TWA	ACGIH TWA	Other Limits
1. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	10.0 -30.0 %	200 ppm	200 ppm	No data.
2. Xylene (mixed isomers) {Benzene, dimethyl-}	1330-20-7	20.0 -40.0 %	100 ppm	100 ppm	No data.
3. Acetone {2-Propanone}	67-64-1	40.0 -60.0 %	1000 ppm	500 ppm	No data.
4. Ethylbenzene {Ethylbenzol; Phenylethane}	100-41-4	5.0 -10.0 %	100 ppm	100 ppm	No data.
Hazardous Components (Chemical Name)	CAS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	No data.	No data.	250 ppm	No data.
2. Xylene (mixed isomers) {Benzene, dimethyl-}	1330-20-7	500 ppm/(10min)	300 ppm	150 ppm	No data.
3. Acetone {2-Propanone}	67-64-1	No data.	No data.	750 ppm	No data.
4. Ethylbenzene {Ethylbenzol; Phenylethane}	100-41-4	No data.	No data.	125 ppm	No data.

3. Hazards Identification

Emergency Overview

Danger! Extremely flammable. Keep away from heat, sparks, flame and all other sources of ignition. Vapors may cause flash fire or ignite explosively. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition during use and until all vapors are gone. Beware of static electricity that may be generated by synthetic clothing and other sources.

Health Hazards (Acute and Chronic)

Inhalation Acute Exposure Effects:

Vapor harmful. May cause dizziness; headache; watering of eyes; irritation of respiratory tract; weakness; drowsiness; nausea; numbness in fingers, arms and legs; depression of central nervous system; loss of appetite; fatigue; hallucinations; light headedness; visual disturbances; giddiness and intoxication; sleepiness; cough and dyspnea; cold, clammy extremities; diarrhea; vomiting; dilation of pupils; spotted vision. Severe overexposure may cause convulsions; unconsciousness; coma; and death. Intentional misuse of this product by deliberately concentrating and inhaling can be harmful or fatal.

Skin Contact Acute Exposure Effects:

May be absorbed through the skin. May cause irritation; numbness in the fingers and arms; drying of skin; and

MATERIAL SAFETY DATA SHEET

AFTER WASH

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dermatitis. May cause increased severity of symptoms listed under inhalation.

Eye Contact Acute Exposure Effects:

This material is an eye irritant. May cause irritation; burns; conjunctivitis of eyes; and corneal ulcerations of the eye. Vapors may irritate eyes.

Ingestion Acute Exposure Effects:

Poison. Cannot be made non-poisonous. May be fatal or cause blindness. May cause dizziness; headache; nausea; vomiting; burning sensation in mouth, throat, and stomach; loss of coordination; depression of the central nervous system; narcosis; stupor; gastrointestinal irritation; liver, kidney, and heart damage; diarrhea; loss of appetite; coma and death. May produce symptoms listed under inhalation.

Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged or repeated contact may cause dermatitis. Prolonged skin contact may result in absorption of a harmful amount of this material. May cause conjunctivitis; gastric disturbances; insomnia; dizziness; headache; weakness; fatigue; nausea; heart palpitations; skin irritation; numbness in hands and feet; permanent central nervous system changes; some loss of memory; pancreatic damage; giddiness; visual impairment or blindness; kidney or liver damage; and death. May cause symptoms listed under inhalation.

Signs and Symptoms Of Exposure

Primary Routes of Exposure:

Inhalation, ingestion and dermal.

Medical Conditions Generally Aggravated By Exposure

Diseases of the skin, eyes, liver, kidneys, central nervous system, cardiovascular system, and respiratory system.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

4. First Aid Measures

Emergency and First Aid Procedures

Inhalation:

If user experiences breathing difficulty, move to air free of vapors, Administer oxygen or artificial medical assistance can be rendered.

Skin Contact:

Wash with soap and large quantities of water and seek medical attention if irritation from contact persists.

Eye Contact:

Flush with large quantities of water for at least 15 minutes and seek immediate medical attention.

Ingestion:

Call your local poison control center, hospital emergency room or physician immediately for instructions to induce vomiting.

Note to Physician

Poison. This product contains methanol. Methanol is metabolized to formaldehyde and formic acid. These metabolites may cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used as an antidote. Methanol is effectively removed by hemodialysis. Call your local poison control center for further information.

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5. Fire Fighting Measures

Flammability Classification: Class IB
Flash Pt: 20 F Method Used: Unknown
Explosive Limits: LEL: 1.00 UEL: No data.
Autoignition Pt: No data available.

Special Fire Fighting Procedures

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Unusual Fire and Explosion Hazards

No data available.

Hazardous Combustion Products

No data available.

Extinguishing Media

Use carbon dioxide, dry powder, or foam.

Unsuitable Extinguishing Media

No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Clean up:

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area.

Small spills:

Take up with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large spills:

Dike far ahead of spill for later disposal.

Waste Disposal:

Dispose in accordance with applicable local, state and federal regulations.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.

Eye Protection

Safety glasses, goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

Other Protective Clothing

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after use. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

Ventilation

Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering - Stop - ventilation is inadequate. Leave area immediately.

Work/Hygienic/Maintenance Practices

No data available.

9. Physical and Chemical Properties

Physical States:	[] Gas [X] Liquid [] Solid
Melting Point:	No data.
Boiling Point:	No data.
Autoignition Pt:	No data.
Flash Pt:	20 F Method Used: Unknown
Explosive Limits:	LEL: 1.00 UEL:
Specific Gravity (Water = 1):	No data.
Density:	8.1 - 8.15 LB/GL at 7.7 F
Bulk density:	6.738 LB/GA
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Evaporation Rate:	No data.
Solubility in Water:	No data.
Percent Volatile:	100 % by weight.
VOC / Volume:	880 G/L
HAP / Volume:	50 % WT

Appearance and Odor

Clear, water white, thin liquid

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10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents, strong acids, avoid contact with reactive metals such as aluminum and magnesium.

Hazardous Decomposition Or Byproducts

Decomposition may produce carbon monoxide, carbon dioxide, and other asphyxiants.

Hazardous Polymerization: Will occur [] Will not occur [X]

Conditions To Avoid - Hazardous Polymerization

No data available.

11. Toxicological Information

Toxicological Information

This product has not been tested as a whole. Information below will be for individual ingredients.

Methanol:

LD50 Rat oral 5628 mg/kg

LC50 Rat inhalation 87.5 mg/L/6 hr

NEUROTOXICITY: Overexposure to methanol has been suggested as causing central nervous system damage in laboratory animals.

DEVELOPMENTAL/REPRODUCTIVE: The inhalation of methanol by pregnant rodents throughout the period of embryogenesis induces a wide range of concentration-dependent teratogenic and embryolethal effects.

Methanol has caused birth defects in laboratory animals, but only when inhaled at extremely high vapor concentrations. The relevance of this finding to humans is uncertain.

Acetone:

LD50 Rat oral 10.7 mL/kg (=8450 mg/kg bw); acetone given by gastric intubation to groups of five non-fasted Carworth-Wistar female rats

LD50 Rat oral 9800 mg/kg/ bw

LC50 Rat inhalation exposure 76 mg/L/4 hr

LD50 Rabbit dermal 20 mg/kg bw

Xylene:

LD50 Rat oral 4.3 g/kg

LD50 Rat oral 10 mL/kg /Xylene/

LC50 Rat inhalation 6,350 ppm/4 hr

LD50 Rabbit dermal > 5 ml/kg (43 g/kg). /Mixed Xylenes

Ethylbenzene:

ACUTE TOXICITY:

LD50 Rat oral 3,500 mg/kg

LD50 Rabbit skin 17,800 mg/kg

Ethylbenzene has low acute and chronic toxicity for both animals and humans.

NEUROTOXICITY: It is toxic to the central nervous system.

CARCINOGEN STATUS: IARC 2B - Possibly Carcinogenic to Humans; ACGIH A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

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Chronic Toxicological Effects

See above

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	n.a.	n.a.	n.a.	n.a.
2. Xylene (mixed isomers) {Benzene, dimethyl-}	1330-20-7	n.a.	3	A4	n.a.
3. Acetone {2-Propanone}	67-64-1	n.a.	n.a.	A4	n.a.
4. Ethylbenzene {Ethylbenzol; Phenylethane}	100-41-4	n.a.	2B	A3	n.a.

12. Ecological Information

General Ecological Information

No information available for this product as a whole.

Methanol:

Methanol is of low toxicity to aquatic organisms.

LC50 Pimephales promelas (fathead minnows) 29.4 g/L/96 hr, (28-29 days old),

Acetone:

LC50 Rainbow trout 5,540 mg/L 96 hr

LC50 Rainbow trout 6100 mg/L for 24 hr

LC50 Fathead minnow 8,120 mg/L/ 96 h

Xylene:

LD50 Goldfish 13 mg/l 24 hr

LC50 Rainbow trout 13.5 mg/l 96 hr

LC50 Fathead minnow 46 mg/l/1 hr; 42 mg/l 24-96 hr

Ethylbenzene:

LC50 Lepomis macrochirus 32 mg/l 96 hr

LC50 Carassius auratus 94.44 mg/l 96 hr

LC50 fathead minnow 12.1 mg/l 96 hr

13. Disposal Considerations

Waste Disposal Method

Dispose in accordance with local, state, and federal regulations.

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AFTER WASH

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14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name Paint related material [including paint thinning, drying, removing, or reducing compound]

DOT Hazard Class: 3

DOT Hazard Label: FLAMMABLE LIQUID

UN/NA Number: UN1263

Packing Group: I

Additional Transport Information

No data available.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	No	Yes 5000 LB	Yes	No
2. Xylene (mixed isomers) {Benzene, dimethyl-}	1330-20-7	No	Yes 100 LB	Yes	Yes
3. Acetone {2-Propanone}	67-64-1	No	Yes 5000 LB	No	Yes
4. Ethylbenzene {Ethylbenzol; Phenylethane}	100-41-4	No	Yes 1000 LB	Yes	Yes

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	HAP, ODC ()	No	Inventory	Yes
2. Xylene (mixed isomers) {Benzene, dimethyl-}	1330-20-7	HAP, ODC ()	Yes	Inventory	No
3. Acetone {2-Propanone}	67-64-1	HAP, ODC ()	No	Inventory, 4 Test	No
4. Ethylbenzene {Ethylbenzol; Phenylethane}	100-41-4	HAP, ODC ()	Yes	Inventory, 4 Test	Yes

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

Yes No Acute (immediate) Health Hazard

Yes No Chronic (delayed) Health Hazard

Yes No Fire Hazard

Yes No Sudden Release of Pressure Hazard

Yes No Reactive Hazard

Regulatory Information Statement

All components of this material are listed on the TSCA Inventory or are exempt.

16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

MATERIAL SAFETY DATA SHEET

Jasco / Bix Varnish & Stain Remover

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HEALTH		3
FLAMMABILITY		3
PHYSICAL HAZ.		0
PPE		



Printed: 09/16/2008

Revision: 08/25/2008

Date Created: 08/25/2008

1. Product and Company Identification

Product Code: 104D
Product Name: Jasco / Bix Varnish & Stain Remover
Manufacturer Information
Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113
Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892
Web site address: www.wmbarr.com
Preparer Name: W.M. Barr EHS Dept (901)775-0100

Synonyms

PJBV01011, QJBV00102, GJBV00103

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA TWA	ACGIH TWA	Other Limits
1. Toluene {Benzene, Methyl-; Toluol}	108-88-3	10.0 -20.0 %	200 ppm	50 ppm	No data.
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	30.0 -50.0 %	200 ppm	200 ppm	No data.
3. Dichloromethane {Methylene chloride}	75-09-2	25.0 -40.0 %	25 ppm	50 ppm	No data.
4. Acetone	67-64-1	10.0 -25.0 %	1000 ppm	500 ppm	No data.
5. Oleic acid {9-Octadecenoic acid (Z)-}	112-80-1	0.5 -1.5 %	No data.	No data.	No data.
6. Potassium hydroxide	1310-58-3	1.0 -5.0 %	No data.	No data.	No data.
Hazardous Components (Chemical Name)	CAS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Toluene {Benzene, Methyl-; Toluol}	108-88-3	500 ppm/(10min)	300 ppm	No data.	No data.
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	No data.	No data.	250 ppm	No data.
3. Dichloromethane {Methylene chloride}	75-09-2	125 ppm (15 min)	No data.	No data.	No data.
4. Acetone	67-64-1	No data.	No data.	750 ppm	No data.
5. Oleic acid {9-Octadecenoic acid (Z)-}	112-80-1	No data.	No data.	No data.	No data.
6. Potassium hydroxide	1310-58-3	No data.	No data.	No data.	2 mg/m3

3. Hazards Identification

Emergency Overview

Danger! Poison! Flammable liquid and vapor. Vapor harmful. May be fatal or cause blindness if swallowed. Harmful if inhaled or absorbed through the skin. Causes eye burns. Causes skin and respiratory tract irritation.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic)

Potential Acute Health Effects:

EYE: Vapors can cause eye irritation. Contact can produce redness, inflammation, pain and temporal eye damage.

SKIN: Causes irritation, redness, pain, drying and cracking of the skin. Prolonged contact can cause burns. May be absorbed through skin.

INGESTION: May cause irritation of the gastrointestinal tract and/or abdominal spasms. Symptoms parallel inhalation.

Aspiration of material into the lungs can cause chemical pneumonitis.

INHALATION: Causes irritation to the respiratory tract. Causes formation of carbon monoxide in blood which affects cardiovascular system and central nervous symptoms. Symptoms of overexposure may include skin sensations (e.g. pins and needles), fatigue, confusion, headaches, dizziness and drowsiness. Very high concentrations or continued exposure may cause increased light-headedness, vomiting, blurred vision, blindness, staggering, unconsciousness, comas, and even death.

CHRONIC EXPOSURE: Methylene Chloride may cause headache, mental confusion, depression, liver effects, kidney effects, bronchitis, loss of appetite, nausea, lack of balance, and visual disturbances. Prolonged and/or repeated skin contact can cause severe irritation or dermatitis. Methylene chloride may cause cancer in humans. Toluene may affect the developing fetus. Toluene chronic poisoning describe anemia, decreased blood cell count and bone marrow hypoplasia. Methanol report impaired vision.

Target Organs: eyes, skin, respiratory system, liver, kidneys, pancreas, heart, lungs, brain, central nervous system

Signs and Symptoms Of Exposure

See Potential Health Effects.

Medical Conditions Generally Aggravated By Exposure

Those of the skin, eye, and lungs/respiratory system. This may include dermatitis; asthma and other breathing disorders; chronic lung disease; coronary artery disease; anemia;

4. First Aid Measures

Emergency and First Aid Procedures

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and seek medical attention immediately.

SKIN: Immediately wash with mild soap and water for 15 minutes, while removing contaminated clothing and shoes.

Wash clothing before reuse. Get medical attention.

EYE: Immediately flush with water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

INGESTION: Aspiration hazard. Do not take internally. If swallowed, **DO NOT INDUCE VOMITING**. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately. If vomiting occurs, keep head below hips to prevent aspiration into lungs.

Note to Physician

This product contains methanol which can cause intoxication and central nervous system depression. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used to prevent methanol metabolism. Ethanol administration is indicated in symptomatic patients or at blood methanol concentrations above 20 ug/dl. Methanol is effectively removed by hemodialysis.

5. Fire Fighting Measures

Flammability Classification: IB
Flash Pt: 26.00 F Method Used: Pensky-Marten Closed Cup
Explosive Limits: LEL: No data. UEL: No data.

Fire Fighting Instructions

Evacuate personnel to a safe area. Keep containers cool with water spray.
Avoid breathing decomposition products. Firefighters should wear NIOSH approved self-contained breathing apparatus and full body protection. Vapors can flow along surfaces to distant ignition source and flash back.

Flammable Properties and Hazards

Flammable Liquid and Vapor!
Dangerous fire hazard when exposed to heat or flame. Vapors can flow along surfaces to distant ignition source and flash back.

Hazardous Combustion Products

Carbon monoxide and carbon dioxide, hydrogen chloride, and trace amounts of phosgene, chlorine.

Extinguishing Media

Use alcohol foam, carbon dioxide, and dry chemical. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures.

Unsuitable Extinguishing Media

None known.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Ventillate area of leak or spill. Remove all sources of ignition. Use non-sparking tools and equipment. Clean up remaining materials from spill with suitable absorbent. Small spills may be absorbed with nonreactive absorbent (sand) and placed in suitable, covered, labeled containers. For large spills provide diking or other appropriate containment to keep material from spreading. Prevent large spills from entering sewers or waterways. If diked material can be pumped, store recovered material in compatible drums for recovery or disposal. Observe all personal protection equipment recommendations.

7. Handling and Storage

Precautions To Be Taken in Handling

No smoking or eating. Keep container closed when not in use. Keep away from heat, sparks, open flames and other sources of ignition. Containers of this material may be hazardous when empty since they retain product residues. Separate from incompatibles. This material may corrode plastic and rubber. **KEEP OUT OF REACH OF CHILDREN.**

Precautions To Be Taken in Storing

Store in a cool, dry well-ventilated location. Protect against physical damage.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

Avoid breathing vapor. Use NIOSH approved pressure demand or other positive pressure SCBA or airline respirators.

Eye Protection

Use chemical goggles or glasses with side shields. A faceshield in combination with safety glasses or chemical goggles is recommended when the potential exists for spraying or splashing of liquid to the face.

Protective Gloves

Use chemical resistant gloves based on chemical compatibility and job task.

Other Protective Clothing

Full Protective Clothing.

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure.

Engineering Controls (Ventilation etc.)

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Use only with adequate ventilation to prevent buildup of vapors. Do not use in areas where vapors can accumulate and concentrate, such as basements, bathrooms or small enclosed areas. Whenever possible, use outdoors in an open air area. If using indoors open all windows and doors and maintain a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea or eye-watering -- STOP -- ventilation is inadequate. Leave area immediately and move to fresh air.

Work/Hygienic/Maintenance Practices

Have an eyewash and safety shower available.

The usual precaution for the handling of chemicals must be observed.

Wash hands thoroughly after use and before eating, drinking, or smoking. Do not eat, drink, or smoke in the work area. Discard any clothing or other protective equipment that cannot be decontaminated.

9. Physical and Chemical Properties

Physical States:	[] Gas	[X] Liquid	[] Solid
Melting Point:	No data.		
Boiling Point:	132.80 F - 140.00 F		
Autoignition Pt:	No data.		
Flash Pt:	26.00 F Method Used: Pensky-Marten Closed Cup		
Explosive Limits:	LEL: No data.		UEL: No data.
Specific Gravity (Water = 1):	0.92 - 0.93		
Density:	7.746 LB/GL		
Vapor Pressure (vs. Air or mm Hg):	> 134 MM HG		
Vapor Density (vs. Air = 1):	< 2		
Evaporation Rate (vs Butyl Acetate=1):	> 1		
Solubility in Water:	Slight		

Percent Volatile: 97.0 % by weight.
VOC / Volume: 463.0000 G/L
Viscosity: 2000 CPS
Corrosion Rate: No data.
pH: 6.0 - 7.0

Appearance and Odor

Viscous, opaque white or clear liquid with aromatic ether like odor.

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

Strong oxidizers, strong caustics, acids, water + heat, and chemically active metals. May attack some forms of plastics, rubber, and coatings.

Moisture, heat, flame, ignition sources and incompatibles.

Hazardous Decomposition Or Byproducts

Carbon monoxide, carbon dioxide, formaldehyde, hydrochloric acid and toxic gas phosgene.

Hazardous Polymerization: Will occur [] Will not occur [X]

Conditions To Avoid - Hazardous Polymerization

No data available.

11. Toxicological Information

There is no data available for the product.

The following are known component data:

Toluene (108-88-3):

Inhalation LC50 Rat: 12.5 mg/L/4H;

Inhalation LC50 Rat: > 26700 ppm/1H;

Oral LD50 Rat: 636 mg/kg;

Dermal LD50 Rabbit: 8390 mg/kg;

Dermal LD50 Rat: 12124 mg/kg

Methanol (67-56-1):

Inhalation LC50 Rat: 83.2 mg/L/4H;

Inhalation LC50 Rat: 64000 ppm/4H;

Oral LD50 Rat: 5628 mg/kg;

Dermal LD50 Rabbit: 15800 mg/kg

Methylene Chloride (75-09-2):

Oral LD50 Rat: >2000 mg/kg;

Inhalation LC50 Rat: 76000 mg/m³/4H

Acetone (67-64-1):

Oral LD50 Rat: 5800 mg/kg

Oleic Acid (112-80-1):

Oral LD50 Rat: 25 g/kg

Potassium Hydroxide (1310-58-3):

Oral LD50 Rat: 214 mg/kg

Carcinogenicity/Other Information

Methylene Chloride has been shown to increase the incidence of malignant tumors in mice and benign tumors in rats. Other animal studies, as well as several human epidemiology studies, failed to show a tumorigenic response.

-Methylene Chloride (Dichloromethane) (CAS 75-09-2) is on the IARC list as a Group 2B: Possibly Carcinogenic to Humans, and on the NTP list as Reasonably anticipated to be a human carcinogen.

-Toluene (CAS 108-88-3) is on the IARC list as a Group 3: Not Classifiable as to Carcinogenicity in Humans.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Toluene {Benzene, Methyl-, Toluol}	108-88-3	No	3	A4	No
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	n.a.	n.a.	n.a.	n.a.
3. Dichloromethane {Methylene chloride}	75-09-2	Possible	2B	A3	Yes
4. Acetone	67-64-1	n.a.	n.a.	A4	n.a.
5. Oleic acid {9-Octadecenoic acid (Z)-}	112-80-1	n.a.	n.a.	n.a.	n.a.
6. Potassium hydroxide	1310-58-3	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

ENVIRONMENTAL TOXICITY:

No environmental toxicity studies have been conducted on the product. The following are known component data:

Toluene (108-88-3): Freshwater Algae Data = 96 Hr EC50 Selenastrum capricornutum: >433 mg/L; Freshwater Fish

Species Data = 96 Hr LC50 Pimephales promelas: 25 mg/L [flow-through] (1 day old); 96 Hr LC50 Oncorhynchus

mykiss: 24.0 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 24.0 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 13 mg/L [static]; Microtox Data = 30 min EC50 Photobacterium phosphoreum: 19.7 mg/L; 48 Hr EC50

Water Flea Data: 11.3 mg/L; 48 Hr EC50 water flea: 310 mg/L; 48 Hr EC50 Daphnia magna: 11.3 mg/L

Methanol (67-56-1): Freshwater Fish Species Data = 96 Hr LC50 Pimephales promelas: 28100 mg/L [flow-through]; 96

Hr LC50 Oncorhynchus mykiss: 13200 mg/L; Microtox Data = 5 min EC50 Photobacterium phosphoreum: 43000 mg/L;

15 min EC50 Photobacterium phosphoreum: 40000 mg/L; 25 min EC50 Photobacterium phosphoreum: 39000 mg/L

Methylene Chloride (75-09-2): Freshwater Algae Data = 96 Hr EC50 Selenastrum capricornutum: >660 mg/L; Freshwater Fish Species Data = 96 Hr LC50 Pimephales promelas: 193 mg/L [flow-through]; 96 Hr LC50

Pimephales promelas: 310 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 10.95 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 193 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 193 mg/L [flow-through]; Microtox Data = 24

Hr EC50 Nitrosomonas: 1 mg/L; 15 min EC50 Photobacterium phosphoreum: 2.88 mg/L; Water flea data = 48 Hr EC50 water flea:

140mg/L [Static]

Acetone (67-64-1): Freshwater Fish Species Data = 96 Hr LC50 Oncorhynchus mykiss: 5540 mg/L [static]; 96 Hr

LC50

Pimephales promelas: 6210 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 8300 mg/L [static];

Microtox Data =

15 min EC50 Photobacterium phosphoreum: 14500 mg/L; Water flea data = 48 Hr EC50 water flea: 0.0039 mg/L;
48 Hr

EC50 Water flea: 12700 mg/L [Static]; 48 Hr EC50 Daphnia magna: 12600 mg/L

Oleic Acid (112-80-1): Freshwater Fish Species Data = 96 Hr LC50 Pimephales promelas: 205 mg/L [Static]

Potassium Hydroxide (1310-58-3): Freshwater Fish Species Data = 24 Hr LC50 Gambusia affinis: 80.0 mg/L

ENVIRONMENTAL FATE:

No data available.

13. Disposal Considerations

Waste Disposal Method

Dispose of in accordance with all applicable local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name Land, Air, Rail, and Water:

Paint related material

Packing Group II

DOT Hazard Class: 3

DOT Hazard Label: FLAMMABLE LIQUID

UN/NA Number: UN1263

Packing Group: II

Additional Transport Information

For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

Flammable material products shipped in containers less than 1L (0.3 gallons) in volume: Per 49 CFR 173.150, Limited Quantities of flammable liquids (Class 3), Packing Group II that are shipped in packaging not over 1.0 L net

capacity packed in strong outer packaging are exempted from labeling requirements and specification packaging requirements, unless offered for transportation by aircraft. Limited quantities are not subject to Subpart F (Placarding).

Each package must be packed in strong outer packaging and can not exceed 30 kg (66 lbs).

Consumer commodities (per 173.150): A limited quantity that conforms to the paragraph above and is a consumer commodity (per 49 CFR 171.8) can be renamed "Consumer commodity" and reclassified as an ORM-D Material. In

addition to the exceptions for labeling and placarding provided by paragraph 173.150, shipments of ORM-D Material are

not subject to the shipping paper requirements of subpart C of part 172 of this subchapter, unless the material meets the

definition of a hazardous substance, hazardous waste, marine pollutant, or are offered for transportation and transported

by aircraft. Additional exceptions, as provided in §173.156 may also apply.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Toluene {Benzene, Methyl-, Toluol}	108-88-3	No	Yes 1000 LB	Yes	Yes
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	No	Yes 5000 LB	Yes	No
3. Dichloromethane {Methylene chloride}	75-09-2	No	Yes 1000 LB	Yes	Yes
4. Acetone	67-64-1	No	Yes 5000 LB	No	Yes
5. Oleic acid {9-Octadecenoic acid (Z)-}	112-80-1	No	No	No	No
6. Potassium hydroxide	1310-58-3	No	Yes 1000 LB	No	No

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

- Sec.302:** EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.
- Sec.304:** EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.
- Sec.313:** EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.
- Sec.110:** EPA SARA 110 Superfund Site Priority Contaminant List

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

- Yes [] No Acute (immediate) Health Hazard
- Yes [] No Chronic (delayed) Health Hazard
- Yes [] No Fire Hazard
- [] Yes No Sudden Release of Pressure Hazard
- [] Yes No Reactive Hazard

16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: ZAR OIL BASED WOOD STAIN (ALL COLORS & TINT BASES)
FORMERLY: ZAR WOOD STAIN & SEALER (ALL COLORS)
PRODUCT CODE: 109-110-111-113-114-115-116-117-118-119-120- 121-122-123
124-125-126-127-128-129-135-137-138-139- 140-145

HMS CODES: H F R P
1 2 0

SECTION I – MANUFACTURER IDENTIFICATION

MANUFACTURE'S NAME: UNITED GILSONITE LABORATORIES
ADDRESS: 1396 JEFFERSON AVENUE
SCRANTON, PA 18509

EMERGENCY PHONE: (800) 424-9300
INFORMATION PHONE: (570) 344-1202
NAME OF PREPARER: R. BARAKO

DATE REVISED: APRIL 2012
SUPERSEDES: JANUARY 2010

SECTION II – HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OCCUPATIONAL EXPOSURE LIMITS			VAPOR PRESSURE mmHg@TEMP	WEIGHT PERCENT
		OSHA PEL	ACGIH TLV	OTHER		
MALEINIZED LINSEED OIL	67922-98-9	15 MG/M ³	10 MG/M ³	NOT ESTAB	N/A	40
SOLVENT NAPHTHA (PETROLEUM)						
MEDIUM ALIPHATIC	64742-88-7	500 PPM	100 PPM	100 PPM	0.50 (68F)	40-50
KEROSENE	8008-20-6	NOT ESTAB	200 MG/M ³ (TWA)	NOT ESTAB	1.0 (70F)	5

SEE SECTION IX FOR LIST OF ADDITIONAL INGREDIENTS

SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE: 308-396 (F)
VAPOR DENSITY: HEAVIER THAN AIR
COATING V.O.C.: DOES NOT EXCEED MAXIMUM VOC 550 G/L (VOS 4.60 LB/GAL)
SOLUBILITY IN WATER: INSOLUBLE
APPEARANCE AND ODOR: COLORS SPECIFIC TO PRODUCT. TYPICAL MINERAL SPIRITS ODOR

SPECIFIC GRAVITY (H₂O = 1): 0.9
EVAPORATION RATE: SLOWER THAN ETHER

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 104 (F)
FLAMMABLE LIMITS IN AIR BY VOLUME:
EXTINGUISHING MEDIA: FOAM, ALCOHOL FOAM, CO₂, DRY CHEMICAL, WATER FOG
SPECIAL FIRE FIGHTING PROCEDURES:

METHOD USED: TCC
LOWER: 0.7% **UPPER:** 7.0%

WATER SPRAY MAY BE INEFFECTIVE. IF WATER IS USED, FOG NOZZLES ARE PREFERRED. WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTO-IGNITION OR EXPLOSION WHEN CONTAINERS ARE EXPOSED TO EXTREME HEAT.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, SPARKS, ELECTRICAL EQUIPMENT AND OPEN FLAME. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT.

SECTION V – REACTIVITY DATA

STABILITY: PRODUCT IS STABLE

CONDITIONS TO AVOID: HEAT, SPARKS, OPEN FLAMES, HIGH TEMPERATURES.

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZING AGENTS

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: FUMES, SMOKE, CARBON DIOXIDE, ALDEHYDES AND OTHER DECOMPOSITION PRODUCTS, IN CASE OF INCOMPLETE COMBUSTION.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION VI – HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: EXCESSIVE EXPOSURE TO VAPORS OR SPRAY MISTS CAN RESULT IN HEADACHE, DIZZINESS, INCOORDINATION, NAUSEA AND LOSS OF CONSCIOUSNESS.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE: THIS MATERIAL MAY BE AN EYE IRRITANT.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: THIS MATERIAL MAY CAUSE DEFATTING AND IRRITATION OF SKIN. PROLONGED OR REPEATED CONTACT MAY CAUSE DERMATITIS.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: MAY PRODUCE SIGNS OF INTOXICATION CHARACTERIZED BY INCOORDINATION, DIZZINESS, HEADACHE, NAUSEA, MENTAL CONFUSION, SLURRED SPEECH DEPENDING ON THE QUANTITY OF MATERIAL INGESTED.

HEALTH HAZARDS (ACUTE AND CHRONIC) REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND CENTRAL NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

CARCINOGENICITY: NTP? NO IARC MONOGRAPHS? YES OSHA REGULATED? NO
TITANIUM DIOXIDE HAS BEEN CHARACTERIZED BY IARC AS POSSIBLY CARCINOGENIC TO HUMANS (GROUP 2B) THROUGH INHALATION (NOT INGESTION). THIS CLASSIFICATION IS BASED UPON ANIMAL INHALATION STUDIES. EPIDEMIOLOGY STUDIES DO NOT SUGGEST AN INCREASED RISK OF CANCER IN HUMANS FROM OCCUPATIONAL EXPOSURE TO TITANIUM DIOXIDE.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
KIDNEY DISEASES, RESPIRATORY ILLNESSES, SKIN ALLERGIES.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. CONSULT A PHYSICIAN IF IRRITATION PERSISTS.
SKIN: WASH AFFECTED AREA WITH SOAP AND WATER. CONSULT A PHYSICIAN IF IRRITATION PERSISTS
INGESTION: GIVE ONE OR TWO GLASSES OF WATER. IF INDIVIDUAL IS DROWSY OR UNCONSCIOUS DO NOT GIVE ANYTHING BY MOUTH. CONSULT A PHYSICIAN, MEDICAL FACILITY OR POISON CONTROL CENTER FOR ADVISE ABOUT WHETHER TO INDUCE VOMITING . TREAT SYMTOMATICALLY.
INHALATION: REMOVE VICTIM TO FRESH AIR TREAT SYMTOMATICALLY. CONSULT PHYSICIAN.

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

REMOVE ANY SOURCES OF IGNITION. PROVIDE ADEQUATE VENTILATION AND / OR SELF-CONTAINED BREATHING APPARATUS. DIKE SPILL. APPLY ABSORBENT MATERIAL. USING NON-SPARKING TOOLS, SCRAPE UP AND STORE IN A CLOSED METAL CONTAINER. AVOID BREATHING VAPORS.

WASTE DISPOSAL METHOD: DISPOSE OF IN APPROVED SITES ACCORDING TO LOCAL, STATE AND FEDERAL REGULATIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

AVOID BREATHING SANDING DUST. AVOID STORAGE AT TEMPERATURES GREATER THAN 90 DEGREES (F) OR NEAR HEAT, SPARKS, ELECTRICAL EQUIPMENT OR OPEN FLAMES.

OTHER PRECAUTIONS:

AVOID PROLONGED BREATHING OF VAPORS OR CONTACT WITH SKIN. PREVENT PROLONGED OR REPEATED BREATHING OF VAPOR OR SPRAY MIST. TO AVOID SPONTANEOUS COMBUSTION DURING TEMPORARY STORAGE, SOAK SOILED RAGS AND WASTE IMMEDIATELY AFTER USE, IN A WATER FILLED, CLOSED METAL CONTAINER.

SECTIONS VIII – CONTROL MEASURES

RESPIRATORY PROTECTION:

WEAR NIOSH-APPROVED RESPIRATOR WITH ORGANIC VAPOR AND SOLID PARTICLE FILTER CARTRIDGES.

VENTILATION:

USE ADEQUATE VENTILATION IN VOLUME AND PATTERN TO MAINTAIN LEVELS BELOW THAT LISTED IN SECTION II & IX

PROTECTIVE GLOVES:

USE NEOPRENE RUBBER GLOVES TO PREVENT SKIN CONTACT.

EYE PROTECTION:

USE SAFETY EYEWEAR WITH SPLASH GUARDS OR SIDE SHIELDS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

REMOVE AND WASH CONTAMINATED CLOTHING BEFORE REUSE.

WORK / HYGIENIC PRACTICES: WASH HANDS BEFORE EATING, SMOKING OR USING THE BATHROOM.

SECTION IX – ADDITIONAL INGREDIENTS

PRODUCT	INGREDIENT	CAS NO.	OCCUPATIONAL EXPOSURE LIMITS		WEIGHT PERCENT
			PEL	TLV	
(109) COLONIAL PINE	RAW UMBER	12713-03-0	NOT ESTAB	10 MG/M ³	<5
	VAN DYKE BROWN	1317-34-6	NOT ESTAB	10 MG/M ³	5-10
(110) SALEM MAPLE	BURNT UMBER	1304-37-1	NOT ESTAB	10 MG/M ³	<5
	BURNT SIENNA	1309-37-1	10 MG/M ³	10 MG/M ³	<5
	NEPHELINE SYENITE	37244-96-5	15 MG/M ³	NOT ESTAB	<5
(111) WALNUT	RAW UMBER	12713-03-0	NOT ESTAB	10 MG/M ³	<5
	YELLOW OXIDE	51274-00-1	NOT ESTAB	10 MG/M ³	<5
(113) FRUITWOOD	RAW UMBER	12713-03-0	NOT ESTAB	10 MG/M ³	<5
	BURNT UMBER MIXTURE		NOT ESTAB	5 MG/M ³	5
	TITANIUM DIOXIDE	13463-67-1	10 MG/M ³	15 MG/M ³	<5
(114) PROVINCIAL	BURNT UMBER MIXTURE		NOT ESTAB	5 MG/M ³	5
	IRON OXIDE	1309-37-1	10 MG/M ³	5 MG/M ³	<5
	YELLOW OXIDE	51274-00-1	NOT ESTAB	10 MG/M ³	<5
(115) MODERN WALNUT	RAW UMBER	12713-03-0	NOT ESTAB	10 MG/M ³	5
	BURNT UMBER MIXTURE		NOT ESTAB	5 MG/M ³	<5
	IRON OXIDE	1309-37-1	10 MG/M ³	5 MG/M ³	<5
(116) CHERRY	IRON OXIDE	1309-37-1	10 MG/M ³	5 MG/M ³	5
	BURNT UMBER MIXTURE		NOT ESTAB	5 MG/M ³	<5
(117) HONEY MAPLE	NEPHELINE SYENITE	37244-96-5	15 MG/M	NOT ESTAB	<5
(118) DARK MAHOGANY	IRON OXIDE	1309-37-1	10 MG/M ³	5 MG/M ³	10
	BURNT UMBER MIXTURE		NOT ESTAB	5 MG/M ³	5
(119) MOCHA	RAW UMBER	12713-03-0	NOT ESTAB	10 MG/M ³	5
	BURNT UMBER MIXTURE		NOT ESTAB	5 MG/M ³	5
	IRON OXIDE	1309-37-1	10 MG/M ³	5 MG/M ³	5
(120) TEAK NATURAL	RAW UMBER	12713-03-0	NOT ESTAB	10 MG/M ³	10
	IRON OXIDE	1309-37-1	10 MG/M ³	10 MG/M ³	<5
(121) BLACK ONYX	BLACK IRON OXIDE	1317-61-9	NOT ESTAB	NOT ESTAB	10-15
	NEPHELINE SYENITE	37244-96-5	15 MG/M	NOT ESTAB	3-5
(122) MEDITERRANEAN	RAW UMBER	12713-03-0	NOT ESTAB	10 MG/M ³	5
	BURNT UMBER MIXTURE		NOT ESTAB	5 MG/M ³	<5
	TITANIUM DIOXIDE	13463-67-1	10 MG/M ³	15 MG/M ³	<5
(123) MOORISH TEAK	IRON OXIDE	1309-37-1	10 MG/M ³	5 MG/M ³	15
	MINERAL SPIRITS	64742-88-7	500 PPM	100 PPM	<5
(124) ROSEWOOD	IRON OXIDE	1309-37-1	10 MG/M ³	5 MG/M ³	5
	BURNT UMBER MIXTURE		NOT ESTAB	5 MG/M ³	<5
	MINERAL SPIRITS	64742-88-7	500 PPM	100 PPM	<5
(125) BLACK WALNUT	IRON OXIDE	1309-37-1	10 MG/M ³	5 MG/M ³	5
	BURNT UMBER MIXTURE		NOT ESTAB	5 MG/M ³	5
	RAW UMBER	12713-03-0	NOT ESTAB	10 MG/M ³	<5

(OVER)

SECTION IX – ADDITIONAL INGREDIENTS (CON'T)

PRODUCT	INGREDIENT	CAS NO.	OCCUPATIONAL EXPOSURE LIMITS		WEIGHT PERCENT
			PEL	TLV	
(126) CHESTNUT	YELLOW OXIDE IRON OXIDE BLACK IRON OXIDE	51274-00-1 1332-37-2 1317-61-9	NOT ESTAB 10 PPM (STEL) 10 PPM (STEL)	10 MG/M ³ 5 MG/M ³ 5 MG/M ³	8 <5 <5
(127) GOLDEN OAK	INORGANIC OXIDE	51274-00-1	NOT ESTAB	NOT ESTAB	<5
(128) EARLY AMERICAN	BURNT SIENNA BURNT UMBER YELLOW IRON OXIDE	1309-31-1 1309-31-1 51274-00-1	10 MG/M ³ 10 MG/M ³ 15 MG/M ³	5 MG/M ³ 5 MG/M ³ 10 MG/M ³	5 <5 <5
(129) AMBER VARNISH	YELLOW IRON OXIDE	51274-00-1	NOT ESTAB	5 MG/M ³	5
(135) CHARCOAL	IRON OXIDE CARBON BLACK MINERAL SPIRITS	1309-37-1 1333-86-4 64742-88-7	10 MG/M ³ 3.5 MG/M ³ 500 PPM	5 MG/M ³ 3.5 MG/M ³ 100 PPM	5 <5 <5
(137) WHITE OAK	NEPHELINE SYENITE PIGMENT DISPERSION	37244-96-5 NOT ESTAB	15 MG/M ³ NOT ESTAB	NOT ESTAB NOT ESTAB	<5 <5
(138) SPANISH OAK	YELLOW OXIDE	51274-00-1	NOT ESTAB	10 MG/M ³	<5
(139) COASTAL BOARDS	TITANIUM DIOXIDE	13463-67-1	10 MG/M ³	15 MG/M ³	15-20
(140) MERLOT	RED IRON OXIDE NEPHELINE SYENITE	1309-37-1 37244-96-5	10 MG/M ³ 15 MG/M ³	5 MG/M ³ NOT ESTAB	10-15 3-5
(145) TINT BASE	MALEINIZED LINSEED OIL STODDARD SOLVENT KEROSENE	67922-98-9 8052-41-3 8008-20-6	NOT ESTAB 100 PPM 100 PPM	NOT ESTAB 100 PPM 500 PPM	40 55 5

SECTION X – DISCLAIMER

This information is furnished without warranty, representation, inducement or license of any kind, except that it is accurate to the best of UGL's knowledge, or obtained from sources believed by UGL to be accurate, and UGL does not assume any legal responsibility for use or reliance upon same. Before using any product, read the label.



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Fastbond(TM) Contact Adhesive 30-NF, Neutral

MANUFACTURER: 3M

DIVISION: Industrial Adhesives and Tapes Division

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 08/16/10

Supercedes Date: 08/03/10

Document Group: 10-2980-0

Product Use:

Specific Use: water based contact adhesive

Intended Use: Industrial use

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
Water	7732-18-5	40 - 50
Polychloroprene	9010-98-4	30 - 40
Glycerol Esters of Rosin Acids	8050-31-5	5 - 10
Rosin, polymer with phenol	68083-03-4	3 - 7
Toluene	108-88-3	1 - 3
Methyl Alcohol	67-56-1	1 - 2.5
Zinc Oxide	1314-13-2	1 - 2
2,2'-Methylenebis[6-tert-Butyl-p-Cresol]	119-47-1	0.1 - < 1
Rosin	8050-09-7	< 0.75
Potassium Hydroxide	1310-58-3	< 0.5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: White, slight odor of ammonia.

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: May cause allergic skin reaction. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

May be absorbed through skin and cause target organ effects.

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Prolonged or repeated exposure may cause:

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

May cause blindness.

Prolonged or repeated exposure may cause:

Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision.

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Olfactory Effects: Signs/symptoms may include decreased ability to detect odors and/or complete loss of smell.

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	<i>No Data Available</i>
Flash Point	<i>Not Applicable</i>
Flammable Limits - LEL	<i>Not Applicable</i>
Flammable Limits - UEL	<i>Not Applicable</i>

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may be used to blanket the fire. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: No unusual fire or explosion hazards are anticipated.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Cover, but do not seal for 48 hours.

Environmental procedures

For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Clean-up methods

Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Clean up residue with detergent and water.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Contents may be under pressure, open carefully. Avoid breathing of vapors, mists or spray. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Do not breathe vapors.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area. Keep container tightly closed.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Provide appropriate local exhaust ventilation on open containers. Use in an enclosed process area is recommended. Use with functioning spray booth or local exhaust. If exhaust ventilation is not available, use appropriate respiratory protection. Do not use in a confined area or areas with little or no air movement. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Safety Glasses with side shields
Indirect Vented Goggles

8.2.2 Skin Protection

Not applicable. Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Nitrile Rubber
Polyethylene/Ethylene Vinyl Alcohol

8.2.3 Respiratory Protection

Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection. Avoid breathing of vapors, mists or spray. Do not breathe vapors.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges

. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
Methyl Alcohol	ACGIH	TWA	200 ppm	Skin Notation*
Methyl Alcohol	ACGIH	STEL	250 ppm	Skin Notation*
Methyl Alcohol	OSHA	TWA	260 mg/m3	
Potassium Hydroxide	ACGIH	CEIL	2 mg/m3	
Toluene	ACGIH	TWA	20 ppm	
Toluene	CMRG	STEL	75 ppm	Skin Notation*
Toluene	OSHA	TWA	200 ppm	
Toluene	OSHA	CEIL	300 ppm	
Zinc Oxide	ACGIH	TWA, respirable fraction	2 mg/m3	
Zinc Oxide	ACGIH	STEL, respirable fraction	10 mg/m3	
Zinc Oxide	OSHA	TWA, as fume	5 mg/m3	
Zinc Oxide	OSHA	TWA, respirable fraction	5 mg/m3	
Zinc Oxide	OSHA	TWA, as total dust	15 mg/m3	

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color, Grade:

White, slight odor of ammonia.

General Physical Form:

Liquid

Autoignition temperature

No Data Available

Flash Point	Not Applicable
Flammable Limits - LEL	Not Applicable
Flammable Limits - UEL	Not Applicable
Boiling point	>=64 °C
Density	1.1 g/ml
Vapor Density	1.1 [Ref Std: AIR=1]
Vapor Pressure	<=38 mmHg [@ 68 °F]
Specific Gravity	1.1 [Ref Std: WATER=1]
pH	10 - 11
Melting point	Not Applicable
Solubility in Water	Complete
Evaporation rate	1.0 [Ref Std: ETHER=1]
Hazardous Air Pollutants	<=4.7 % weight [Test Method: Calculated]
Volatile Organic Compounds	37 g/l [Test Method: tested per EPA method 24] [Details: EU VOC content]
Kow - Oct/Water partition coef	No Data Available
Percent volatile	45 - 55 % weight
VOC Less H2O & Exempt Solvents	37 g/l [Test Method: tested per EPA method 24]
VOC Less H2O & Exempt Solvents	0.31 lb/gal [Test Method: tested per EPA method 24]
VOC Less H2O & Exempt Solvents	3.4 % [Test Method: tested per EPA method 24]
Viscosity	200 - 750 centipoise [@ 73.4 °F]
Solids Content	42.7 - 57.0 %

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

Sparks and/or flames

10.2 Materials to avoid

Strong acids

Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

Substance

Formaldehyde
Carbon monoxide
Carbon dioxide

Condition

During Combustion
During Combustion
During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in an industrial or commercial facility in the presence of a combustible material. Combustion products will include HCl. Facility must be capable of handling halogenated materials.

As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

62-4274-6530-7, 62-4274-6535-6, 62-4274-7530-6, 62-4274-7535-5, 62-4274-8530-5, 62-4274-8535-4, 62-4274-9530-4, 62-4274-9538-7, 62-4274-9932-2

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Toluene	108-88-3	1 - 3
Methyl Alcohol	67-56-1	1 - 2.5

Zinc Oxide (ZINC COMPOUNDS)

1314-13-2

1 - 2

STATE REGULATIONS

Contact 3M for more information.

CALIFORNIA PROPOSITION 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
Toluene	108-88-3	*Developmental Toxin

* WARNING: contains a chemical or chemicals which can cause birth defects or other reproductive harm.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

WHMIS: Hazardous

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 0 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Section 14: Transportation legal text was modified.

Section 9: Property description for optional properties was modified.

Section 2: Ingredient table was modified.

Section 15: EPCRA 313 information was modified.

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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3M MSDSs are available at www.3M.com

CONDITIONS TO AVOID

Avoid all sources of ignition

INCOMPATIBILITY (MATERIALS TO AVOID)

Strong oxidizing materials

HAZARDOUS DECOMPOSITION OR BYPRODUCTS

May produce hazardous fumes when heated to decomposition. Fumes may contain Carbon Monoxide and Carbon Dioxide.

HAZARDOUS POLYMERIZATION: Will not occur

===== SECTION VI - HEALTH HAZARD DATA =====

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

May cause nose and throat irritation. Repeated and prolonged exposure to organic solvents may lead to permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness, and loss of coordination are signs that solvent levels are too high.

Individuals with breathing problems must not be exposed to this product. If affected by inhalation, remove to fresh air. If breathing difficulty persists, consult a physician.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE

May cause irritation or burning of the eyes. Repeated and prolonged skin contact may cause skin irritation or dermatitis. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes; call a physician. In case of skin contact, wash with soap and water. If irritation occurs, contact a physician.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

Gastrointestinal distress. In the unlikely event of ingestion, call a physician immediately and have the names of all ingredients available.

HEALTH HAZARDS (ACUTE AND CHRONIC)

ACUTE- Dizziness, irritation of the respiratory tract, weakness, nausea, or possible narcosis or even asphyxiation. May be accompanied by coughing or labored breathing.

CHRONIC- Reports have linked organic solvents with brain and nervous system damage. Misuse of this product by deliberately concentrating and inhaling the contents may be harmful or fatal.

CARCINOGENICITY: NTP CARCINOGEN: No IARC MONOGRAPHS: No

To the best of our knowledge this material contains no known carcinogens

OSHA REGULATED: Yes

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

Do not use this product if you have chronic lung or breathing problems.

EMERGENCY AND FIRST AID PROCEDURES

If ingestion, or any type of overexposure or symptoms of overexposure occur during the use of this product, contact a poison control center, emergency room or physician immediately; have material safety data sheet available.

===== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE =====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition (sparks, flames, and hot surfaces). Avoid breathing vapors. Ventilate area. Remove with an inert absorbent and non-sparking tools.

WASTE DISPOSAL METHOD

Dispose in accordance with state ,federal and local regulations. Do not incinerate closed containers.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Keep containers tightly closed in a cool, dry, well ventilated area away from all possible ignition sources. Store large quantities of material in buildings designed for the storage of flammable liquids.

OTHER PRECAUTIONS

Employees should be trained in safety measures that should be taken when using this product.

===== SECTION VIII - CONTROL MEASURES =====

RESPIRATORY PROTECTION

Avoid breathing vapors or spray mist. Wear a properly fitted respirator approved by NIOSH/MSHA (TC-23c) for use with paints during application and until all vapors are exhausted. In confined areas, or where continuous spray operations are typical, or proper respirator fit is not possible, wear a positive-pressure supplied air respirator (TC-19c). In all cases follow respirator manufactures directions for respirator use. Do not allow anyone without protection into the painting area.

VENTILATION

Provide sufficient ventilation to keep contaminates below applicable OSHA requirements.

PROTECTIVE GLOVES

Neoprene gloves impervious to organic solvents are recommended.

EYE PROTECTION

Use safety eyewear designed to protect against liquid splash.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

Impervious coveralls are recommended.

WORK/HYGIENIC PRACTICES

Eye wash and safety showers in the work place are recommended. Wash hands before eating and smoking.

===== SECTION IX - DISCLAIMER =====

The information contained in this material safety data sheet is information from our suppliers and other sources. It is believed to be reliable. This data is not to be taken as a warranty or representation for which this company assumes legal responsibility.

MOELLER MARINE PRODUCTS CO.
801 NORTH SPRING ST.
SPARTA; TENN.; 38583
USA

PRODUCT: 13004 ZINC CHROMATE SPRAY PAINT (YELLOW & GREEN)**Section 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

MANUFACTURER MANUFACTURED FOR:
MOELLER MARINE PRODUCTS CO.
801 NORTH SPRINGS ST
SPARTA
TENN. 38583
USA
931-738-8090

PRODUCT NAME..... 13004 ZINC CHROMATE SPRAY PAINT (YELLOW & GREEN)
CHEMICAL FAMILY..... ALKYD BASED COATING.
PRODUCT CODE(S) 6-5605,6-5606, 025421, 025472 .
MOLECULAR WEIGHT..... NOT APPLICABLE.
CHEMICAL FORMULA..... NOT APPLICABLE.
TRADE NAMES & SYNONYMS..... 13004 ZINC CHROMATE SPRAY PAINT (YELLOW & GREEN)
PRODUCT USES..... PRIMER.
FORMULA/LAB BOOK #..... F 14-520A/521A.

Section 02: COMPOSITION/INFORMATION INGREDIENTS

Hazardous Ingredients	%	Exposure Limit	C.A.S.#	LD/50, Route,Species	LC/50 Route,Species
ACETONE	15-40	750 ppm	67-64-1	>9750 mg/kg ORAL - RAT	>16,000 ppm (4 hr) INHAL - RAT
TOLUENE	7-13	50 ppm	108-88-3	5000 mg/kg ORAL - RAT	8000 ppm (4 hr) INHAL - RAT
XYLENE	1-5	100 ppm	1330-20-7	4.3 g/kg ORAL - RAT	6350 ppm (4 hr) INHAL - RAT
ETHYLBENZENE	0.1-1.0	100 ppm	100-41-4	5460 mg/kg ORAL-RAT	NOT AVAILABLE
PROPYLENE GLYCOL METHYL ETHER ACETATE	1-5	N/E	108-65-6	8500 mg/kg ORAL - RAT	>4345 ppm (6 hr) INHAL - RAT
TALC (MAGNESIUM SILICATE HYDRATE)	1-5	2 mg/m ³	14807-96-6	NOT AVAILABLE	NOT AVAILABLE
LEAD CHROMATE PIGMENT(Lead Sulphochromate Yellow)	5-10	N/A	1344-37-2	>2000mg/kg ORAL - RAT	N/A
ZINC CHROMATE	0.1-1.0	N/A	11103-86-9	640mg/kg ORAL - RAT	640mg/kg ORAL - RAT
SILICA, CRYSTALLINE	0.1-1.0	10 mg/m ³	112926-00-8	NOT AVAILABLE	NOT AVAILABLE
ISOBUTANE	5-10	1000 ppm	75-28-5	NOT APPLICABLE	142,500 ppm (4h) INHAL - RAT
PROPANE	10-30	1000 ppm	74-98-6	>5000 mg/kg DERMAL-RÄBBITS	NOT AVAILABLE

Section 03: HAZARDS IDENTIFICATION

ROUTE OF ENTRY:
INGESTION..... MAY CAUSE HEADACHE, NAUSEA, VOMITING AND WEAKNESS.
INHALATION..... INHALATION OF SOLVENTS MAY CAUSE IRRITATION. PROPELLANT IS A SIMPLE ASPHYXIANT.

EYE CONTACT..... MAY CAUSE IRRITATION.
SKIN ABSORPTION..... NO DATA AVAILABLE FOR THIS PRODUCT MIXTURE.
SKIN CONTACT..... MAY CAUSE IRRITATION.

EFFECTS OF ACUTE EXPOSURE..... DIZZINESS, NAUSEA. IRRITATION TO SKIN & EYES.
EFFECTS OF CHRONIC EXPOSURE..... SOLVENTS MAY CAUSE DEFATTING DERMATITIS
MAY CAUSE EFFECTS OF CHRONIC LEAD TOXICITY.

EXPOSURE LIMIT OF MATERIAL..... SEE SECTION 2.

Section 04: FIRST AID MEASURES

EMERGENCY FIRST AID PROCEDURE IN CASE OF EYE CONTACT, FLUSH IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION. FOR SKIN, WASH THOROUGHLY WITH SOAP AND WATER. IF AFFECTED BY INHALATION OF VAPOUR OR SPRAY MIST, REMOVE TO FRESH AIR. IF SWALLOWED; DO NOT INDUCE VOMITING, GET MEDICAL ATTENTION.

PRODUCT: 13004 ZINC CHROMATE SPRAY PAINT (YELLOW & GREEN)**Section 05: FIRE FIGHTING MEASURES**

AUTO IGNITION TEMPERATURE (°C).....	243-465.
SPECIAL PROCEDURES.....	WATER FROM FOGGING NOZZLES MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT BUILD-UP IF EXPOSED TO EXTREME TEMPERATURES. FULL PROTECTIVE EQUIPMENT INCLUDING SELF CONTAINED BREATHING APPARTATUS SHOULD BE WORN IN A FIRE INVOLVING THIS MATERIAL.
FLAMMABILITY.....	EXTREMELY FLAMMABLE.
IF YES, UNDER WHICH CONDITIONS?.....	EXCESSIVE HEAT, SPARKS AND OPEN FLAME.
EXTINGUISHING MEDIA.....	WATER, CARBON DIOXIDE, DRY CHEMICAL, FOAM.
UPPER FLAMMABLE LIMIT.....	12.6.
(% BY VOLUME)	
LOWER FLAMMABLE LIMIT.....	2.6.
(% BY VOLUME)	
EXPLOSION DATA	
SENSITIVITY TO STATIC DISCHARGE.....	NOT APPLICABLE.
SENSITIVITY TO IMPACT.....	NOT APPLICABLE.
HAZARDOUS COMBUSTION PRODUCTS.....	HYDROCARBON FUMES AND SMOKE. CARBON MONOXIDE WHERE COMBUSTION IS INCOMPLETE.
AEROSOL FLAME PROJECTION CLASSIFIED AS:.....	>15cm BUT <100cm.
FLASHBACK.....	NONE.
FLASH POINT(°C),TAG CLOSED-CUP (CONCENTRATE).....	LOWEST KNOWN VALUE IS ACETONE @-18C.

Section 06: ACCIDENTAL RELEASE MEASURES

LEAK/SPILL.....	REMOVE ALL SOURCES OF IGNITION. USE AN INERT ABSORBENT MATERIAL, AND NON-SPARKING TOOLS. VENTILATE AREA. PREVENT FROM ENTERING A WATERCOURSE.
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Section 07: HANDLING AND STORAGE

STORAGE NEEDS.....	KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAMES.
ENGINEERING CONTROLS.....	VENTILATION - LOCAL (MECHANICAL IF USED INDOORS ON A CONTINUOUS BASIS).
HANDLING PROCEDURES AND EQUIPMENT.....	STORE IN A COOL, WELL VENTILATED AREA NOT TO EXCEED 50 DEG C.
SYNERGISTIC MATERIALS.....	NONE KNOWN.

Section 08: EXPOSURE CONTROLS/PERSONAL PROTECTION

GLOVES/ TYPE.....	WEAR CHEMICAL RESISTANT GLOVES.
RESPIRATORY/TYPE.....	IF USED INDOORS ON A CONTINUOUS BASIS, USE OF A CARTRIDGE TYPE RESPIRATOR (NIOSH/MSHATC 23C OR EQUIVALENT) IS RECOMMENDED.
EYE/TYPE.....	SAFETY GLASSES WITH SIDE-SHIELDS.
FOOTWEAR/TYPE.....	NOT NORMALLY REQUIRED.
OTHER/TYPE.....	WEAR A FACE SHIELD AND, IN CASE OF INSUFFICIENT VENTILATION, AN APPROPRIATE BREATHING APPARATUS.

Section 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE.....	AEROSOL.
APPEARANCE.....	VARIOUS COLOURS.
ODOR.....	KETONE.
ODOR THRESHOLD.....	NOT AVAILABLE.
VAPOUR PRESSURE(PSIG)-AEROSOL.....	55-65.
@ 20 C	
BOILING POINT (°C)(CONC).....	57-143.
EVAPORATION RATE.....	GREATER THAN 1.
n-BUTYL ACETATE = 1	
VAPOUR DENSITY (AIR=1).....	GREATER THAN 1.
(BY WEIGHT)	
SOLUBILITY IN WATER g/L (20°C).....	NEGLIGIBLE.
pH.....	NOT APPLICABLE.
SPECIFIC GRAVITY (LIQUID).....	0.89-0.93.
COEFFICIENT OF WATER/OIL DIST.....	NOT AVAILABLE.
FREEZING POINT: (°C).....	NOT AVAILABLE.

Section 10: STABILITY AND REACTIVITY

HAZARDOUS PRODUCTS OF DECOMPOSITION.....	HYDROCARBON FUMES AND SMOKE. CARBON MONOXIDE WHERE COMBUSTION IS INCOMPLETE.
CHEMICAL STABILITY:	
YES.....	UNDER NORMAL CONDITIONS.
NO, WHICH CONDITIONS?.....	NOT APPLICABLE.
COMPATIBILITY WITH OTHER SUBSTANCES:	
NO, WHICH ONES?.....	STRONG OXIDIZING AGENTS.
REACTIVITY CONDITIONS?.....	NOT APPLICABLE.

PRODUCT: 13004 ZINC CHROMATE SPRAY PAINT (YELLOW & GREEN)**Section 11: TOXICOLOGICAL INFORMATION**

REPRODUCTIVE EFFECTS.....	TOLUENE - PROLONGED AND REPEATED EXPOSURE OF PREGNANT ANIMALS TO TOLUENE (LEVELS GREATER THAN APPROXIMATELY 1500 ppm) HAS BEEN REPORTED TO CAUSE ADVERSE FETAL DEVELOPMENTAL EFFECTS. XYLENE - HIGH EXPOSURES TO XYLENE IN SOME ANIMAL STUDIES, OFTEN AT LEVELS TOXIC TO THE MOTHER, AFFECTED EMBRYO/FETAL DEVELOPMENT. THE SIGNIFICANCE OF THIS FINDING TO HUMANS IS NOT KNOWN. LEAD CHROMATE PIGMENT CONTAIN A CHEMICAL THAT CAUSES BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.
IRRITANCY OF MATERIAL.....	SKIN/EYE IRRITANT.
SENSITIZING CAPABILITY OF MATERIAL.....	UNKNOWN.
CARCINOGENICITY/MUTAGENICITY.....	XYLENE - THIS PRODUCT CONTAINS ETHYLBENZENE (ETHYLBENZENE IS IN XYLENE). ETHYLBENZENE HAS BEEN SHOWN TO CAUSE CANCER IN LABORATORY ANIMALS. TOXICITY TESTS CARRIED OUT FOR CHRONIC EFFECTS AND MUTAGENICITY HAVE BEEN NEGATIVE. THE RELEVANCE OF THIS FINDING TO HUMANS IS UNCERTAIN. IARC HAS CLASSIFIED ETHYLBENZENE AS A POSSIBLE HUMAN CARCINOGEN.
CARCINOGENICITY OF MATERIAL.....	LEAD IS A CARCINOGEN.
TERATOGENICITY.....	NO INFORMATION IS AVAILABLE AND NO ADVERSE TERATOGENIC EFFECTS ARE ANTICIPATED.

Section 12: ECOLOGICAL CONSIDERATIONS

ENVIRONMENTAL..... NOT AVAILABLE.

Section 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL..... DO NOT PUNCTURE OR INCINERATE CONTAINERS, EVEN WHEN EMPTY. DISPOSE OF IN ACCORDANCE WITH LOCAL, PROVINCIAL AND FEDERAL REGULATIONS.

Section 14: TRANSPORTATION INFORMATION

T.D.G. CLASSIFICATION..... CONSUMER COMMODITY (AEROSOLS, UN1950, CLASS 2.1) .
D.O.T. CLASSIFICATION..... CONSUMER COMMODITY, ORM-D.

Section 15: REGULATORY INFORMATION**CANADIAN REGULATIONS:**

WHMIS CLASSIFICATION..... A,B5,D2A,D2B.
CNFC SECTION 3.3.5..... LEVEL 2.
CEPA (Canadian Environmental Protection Act) ALL SUBSTANCES IN THIS PRODUCT ARE LISTED ON THE CANADIAN DOMESTIC SUBSTANCES LIST (DSL) OR ARE NOT REQUIRED TO BE LISTED.

U.S. REGULATIONS:

HMIS RATING HEALTH..... 2 MODERATE HAZARD.
HMIS RATING FLAMMABILITY..... 4 SEVERE HAZARD.
HMIS RATING REACTIVITY..... 0 MINIMAL HAZARD.
NFPA CODE 30B..... LEVEL 2.
HMIS RATING PERSONAL PROTECTION..... B.
SARA 313 INFORMATION:..... THIS PRODUCT CONTAINS THE FOLLOWING SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372:

CAS #:	CHEMICAL NAME:
*108-88-3	TOLUENE
*1330-20-7	XYLENE
*100-41-4	ETHYL BENZENE
*1344-37-3	LEAD CHROMATE *11103-86-9
	ZINC CHROMATE

CALIFORNIA PROPOSITION 65:..... THE FOLLOWING STATEMENT IS MADE IN ORDER TO COMPLY WITH THE CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986:

WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

CAS #:	CHEMICAL NAME:
*100-41-4	ETHYL BENZENE IN XYLENE
*1344-37-3	LEAD CHROMATE

TSCA (Toxic Substances Control Act)..... ALL COMPONENT OF THIS PRODUCT ARE LISTED ON THE TSCA INVENTORY. ANY IMPURITIES PRESENT IN THIS PRODUCT ARE EXEMPT FROM LISTING.

V.O.C.(M.I.R.)..... COMPLIES WITH AVIATION AND MARINE PRIMER CATERGORY <2 g OZONE / g PRODUCT.

Section 16: OTHER INFORMATION

NOTICE FROM MOELLER MARINE INC..... THE INFORMATION ON THIS MATERIAL SAFETY DATA SHEET IS PROVIDED BY MOELLER MARINE INC. FREE OF CHARGE. WHILE BELIEVED TO BE RELIABLE, IT IS INTENDED FOR USE BY SKILLED PERSONS AT THEIR OWN RISK. MOELLER MARINE INC. ASSUMES NO RESPONSIBILITY FOR EVENTS RESULTING OR DAMAGES INCURRED FROM ITS USE. THE INFORMATION ON THIS MATERIAL SAFETY DATA SHEET RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED HEREIN AND DOES NOT RELATE TO USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY PROCESS.

PREPARED BY..... TECHNICAL SERVICES
PREPARATION DATE Jan14/11

Material Safety Data Sheet
 BRIGHTSIDE HATTERAS OFF WHITE



Bulk Sales Reference No.:
 MSDS Revision Date:
 MSDS Revision Number:

Sales
 Order: {SalesOrd}
 Y4218
 10/24/2013
 A5-2

1. Identification of the preparation and company

1.1. Product identifier

Product Identity BRIGHTSIDE HATTERAS OFF WHITE
 Bulk Sales Reference No. Y4218

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended Use See Technical Data Sheet.
 Application Method See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name Akzo Nobel Coatings
 International Paint LLC
 2270 Morris Avenue
 P. O. Box 386

Emergency

CHEMTREC (USA) (800) 424-9300
 International Paint (713) 527-3887
 Poison Control Center (800) 854-681
 Customer Service
 International Paint (800) 589-1267
 Fax No. (800) 631-7481

2. Hazard identification of the product

2.1. Classification of the substance or mixture

Flam. Liq. 3;H226 Flammable liquid and vapor.
 Aquatic Chronic 2;H411 Toxic to aquatic life with long lasting effects.

2.2. Label elements

Using the Toxicity Data listed in section 11 & 12 the product is labelled as follows.



Warning.

H226 Flammable liquid and vapor.

H411 Toxic to aquatic life with long lasting effects.

P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.

P260 Do not breathe mist / vapors / spray.

P262 Do not get in eyes, on skin, or on clothing.

P273 Avoid release to the environment.

P280 Wear protective gloves / eye protection / face protection.

P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P303+361+353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P331 Do NOT induce vomiting.

P370 In case of fire:.

P391 Collect spillage.

P403+233 Store in a well ventilated place. Keep container tightly closed.

P501 Dispose of contents / container in accordance with local / national regulations.

HMIS Rating Health: 2* Flammability: 2 Reactivity: 0

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Titanium dioxide CAS Number: 0013463-67-7	25 - 50	----	[1][2]
Stoddard solvent CAS Number: 0008052-41-3	10 - 25	Asp. Tox. 1;H304	[1][2]
Solvent naphtha (petroleum), medium aliphatic CAS Number: 0064742-88-7	10 - 25	Asp. Tox. 1;H304	[1]
SATURATED HYDROCARBON CAS Number: TS-KS6505	1.0 - 10	----	[1]
Kerosene CAS Number: 0008008-20-6	1.0 - 10	Asp. Tox. 1;H304	[1][2]
Naphtha (petroleum), heavy aromatic CAS Number: 0064742-94-5	1.0 - 10	Asp. Tox. 1;H304	[1]
Silica, amorphous CAS Number: 0007631-86-9	1.0 - 10	----	[1][2]
Aluminum hydroxide CAS Number: 0021645-51-2	1.0 - 10	Eye Irrit. 2;H319 STOT SE 3;H335	[1]
Petroleum distillates, hydrotreated light CAS Number: 0064742-47-8	1.0 - 10	Asp. Tox. 1;H304	[1]
Naphthalene CAS Number: 0000091-20-3	0.10 - 1.0	Carc. 2;H351 Acute Tox. 4;H302 Aquatic Acute 1;H400 Aquatic Chronic 1;H410	[1][2]
Methyl ethyl ketoxime CAS Number: 0000096-29-7	0.10 - 1.0	Carc. 2;H351 Acute Tox. 4;H312 Eye Dam. 1;H318 Skin Sens. 1;H317	[1]

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

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Skin	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.
4.2. Most important symptoms and effects, both acute and delayed	
Overview	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.
Inhalation	Harmful if inhaled. Causes lung irritation. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.
Eyes	Causes severe eye irritation. Avoid contact with eyes.
Skin	Causes skin irritation. May be harmful if absorbed through the skin.
Ingestion	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.
Chronic effects	Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.

5. Fire-fighting measures

5.1. Extinguishing media

CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. SMALL FIRES: Use dry chemical, CO₂, water spray or alcohol-resistant foam. LARGE FIRES: Use water spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material.

5.2. Special hazards arising from the substance or mixture

May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

5.3. Advice for fire-fighters

Cool closed containers exposed to fire by spraying them with water. Do not allow run off water and contaminants from fire fighting to enter drains or water courses.

ERG Guide No.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.

6.2. Environmental precautions

Do not allow spills to enter drains or watercourses.

6.3. Methods and material for containment and cleaning up

CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).

7. Handling and storage

7.1. Precautions for safe handling

Handling

Vapors may cause flash fire or ignite explosively.

In Storage

Keep away from heat, sparks and flame.

7.2. Conditions for safe storage, including any incompatibilities

Store between 40-100F (4-38C).

Avoid contact with eyes, skin and clothing.

Strong oxidizing agents.

Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone.

7.3. Specific end use(s)

Close container after each use.

Wash thoroughly after handling.

Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0000091-20-3	Naphthalene	OSHA	10 ppm TWA; 50 mg/m3 TWA15 ppm STEL; 75 mg/m3 STEL
		ACGIH	10 ppm TWA15 ppm STEL
		NIOSH	10 ppm TWA; 50 mg/m3 TWA15 ppm STEL; 75 mg/m3 STEL250 ppm IDLH
		Supplier	No Established Limit
		OHSA, CAN	10 ppm TWA15 ppm STEL
		Mexico	10 ppm TWA LMPE-PPT; 50 mg/m3 TWA LMPE-PPT15 ppm STEL [LMPE-CT]; 75 mg/m3 STEL [LMPE-CT]
		Brazil	No Established Limit
0000096-29-7	Methyl ethyl ketoxime	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
		OHSA, CAN	No Established Limit
		Mexico	No Established Limit
		Brazil	No Established Limit
0007631-86-9	Silica, amorphous	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	6 mg/m3 TWA3000 mg/m3 IDLH
		Supplier	No Established Limit
		OHSA, CAN	No Established Limit
		Mexico	No Established Limit
		Brazil	No Established Limit
0008008-20-6	Kerosene	OSHA	No Established Limit
		ACGIH	200 mg/m3 TWA (application restricted to conditions in which there are negligible aerosol expos
		NIOSH	100 mg/m3 TWA
		Supplier	No Established Limit
		OHSA, CAN	200 mg/m3 TWA (restricted to conditions where there is negligible aerosol exposure, as total hy
		Mexico	No Established Limit
		Brazil	No Established Limit
0008052-41-3	Stoddard solvent	OSHA	500 ppm TWA; 2900 mg/m3 TWA
		ACGIH	100 ppm TWA
		NIOSH	350 mg/m3 TWA1800 mg/m3 Ceiling (15 min)20000 mg/m3 IDLH

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		Supplier	No Established Limit
		OHSA, CAN	525 mg/m3 TWA (140C Flash aliphatic solvent)
		Mexico	100 ppm TWA LMPE-PPT; 523 mg/m3 TWA LMPE-PPT200 ppm STEL [LMPE-CT]; 1050 mg/m3 STEL [LMPE-CT]
		Brazil	No Established Limit
0013463-67-7	Titanium dioxide	OSHA	15 mg/m3 TWA (total dust)
		ACGIH	10 mg/m3 TWA
		NIOSH	5000 mg/m3 IDLH
		Supplier	No Established Limit
		OHSA, CAN	10 mg/m3 TWA
		Mexico	10 mg/m3 TWA LMPE-PPT (as Ti)20 mg/m3 STEL [LMPE-CT] (as Ti)
		Brazil	No Established Limit
0021645-51-2	Aluminum hydroxide	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
		OHSA, CAN	No Established Limit
		Mexico	No Established Limit
		Brazil	No Established Limit
0064742-47-8	Petroleum distillates, hydrotreated light	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
		OHSA, CAN	No Established Limit
		Mexico	No Established Limit
		Brazil	No Established Limit
0064742-88-7	Solvent naphtha (petroleum), medium aliphatic	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
		OHSA, CAN	No Established Limit
		Mexico	No Established Limit
		Brazil	No Established Limit
0064742-94-5	Naphtha (petroleum), heavy aromatic	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
		OHSA, CAN	No Established Limit
		Mexico	No Established Limit
		Brazil	No Established Limit
TS-KS6505	SATURATED HYDROCARBON	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
		OHSA, CAN	No Established Limit
		Mexico	No Established Limit
		Brazil	No Established Limit

Health Data

CAS No.	Ingredient	Source	Value
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0000091-20-3	Naphthalene	NIOSH	Hemolysis and eye irritation that causes cataracts
0000096-29-7	Methyl ethyl ketoxime	NIOSH	No Established Limit
0007631-86-9	Silica, amorphous	NIOSH	No Established Limit
0008008-20-6	Kerosene	NIOSH	Eye nose
0008052-41-3	Stoddard solvent	NIOSH	Eye nose
0013463-67-7	Titanium dioxide	NIOSH	Lung tumors in animals
0021645-51-2	Aluminum hydroxide	NIOSH	No Established Limit
0064742-47-8	Petroleum distillates, hydrotreated light	NIOSH	No Established Limit
0064742-88-7	Solvent naphtha (petroleum), medium aliphatic	NIOSH	No Established Limit
0064742-94-5	Naphtha (petroleum), heavy aromatic	NIOSH	No Established Limit
TS-KS6505	SATURATED HYDROCARBON	NIOSH	No Established Limit

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000091-20-3	Naphthalene	OSHA	Select Carcinogen: Yes
		NTP	Known: No; Suspected: Yes
		IARC	Group 1: No; Group 2a: No; Group 2b: Yes; Group 3: No; Group 4: No;
0000096-29-7	Methyl ethyl ketoxime	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0007631-86-9	Silica, amorphous	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No;
0008008-20-6	Kerosene	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0008052-41-3	Stoddard solvent	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0013463-67-7	Titanium dioxide	OSHA	Select Carcinogen: Yes
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: Yes; Group 3: No; Group 4: No;
0021645-51-2	Aluminum hydroxide	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0064742-47-8	Petroleum distillates, hydrotreated light	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0064742-88-7	Solvent naphtha (petroleum), medium aliphatic	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0064742-94-5	Naphtha (petroleum), heavy aromatic	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
TS-KS6505	SATURATED HYDROCARBON	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	

Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

8.2. Exposure controls

Respiratory	Select equipment to provide protection from the ingredients listed in Section 3 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes	Avoid contact with eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 3 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 3 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls	Depending on the site-specific conditions of use, provide adequate ventilation.
Other Work Practices	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

9. Physical and chemical properties

Appearance	Light Coloured Liquid
Odour threshold	Not Measured
pH	No Established Limit
Melting point / freezing point	Not Measured
Initial boiling point and boiling range	146 (C) 295 (F)
Flash Point	38 (C) 100 (F)
Evaporation rate (Ether = 1)	Not Measured
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: .5 Upper Explosive Limit: No Established Limit
vapor pressure (Pa)	Not Measured
Vapor Density	Heavier than air
Specific Gravity	1.19
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	Not Measured
Decomposition temperature	Not Measured
Viscosity (cSt)	No Established Limit
VOC %	Refer to the Technical Data Sheet or label where information is available.
VOHAP content (gm/litre of paint)	18.89 (as supplied)
VOHAP content (gm/litre of Solid Coating)	8.91 (as supplied)

9.2. Other information

No further information

10. Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

This product is stable and hazardous polymerization will not occur. Not sensitive to mechanical impact. Excessive heat and fumes generation can occur if improperly handled.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

11. Toxicological information

Acute toxicity

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr
Titanium dioxide - (13463-67-7)	10,000.00, Rat - Category: NA	10,000.00, Rabbit - Category: NA	No data available	6.82, Rat - Category: NA
Stoddard solvent - (8052-41-3)	No data available	No data available	No data available	No data available
Solvent naphtha (petroleum), medium aliphatic - (64742-88-7)	6,000.00, Rat - Category: NA	3,000.00, Rabbit - Category: 5	No data available	No data available
SATURATED HYDROCARBON - (TS-KS6505)	No data available	No data available	No data available	No data available
Kerosene - (8008-20-6)	2,835.00, Rat - Category: 5	2,000.00, Rabbit - Category: 4	No data available	No data available
Naphtha (petroleum), heavy aromatic - (64742-94-5)	5,000.00, Rat - Category: 5	2,000.00, Rabbit - Category: 4	No data available	No data available
Silica, amorphous - (7631-86-9)	5,110.00, Rat - Category: NA	5,000.00, Rabbit - Category: 5	No data available	0.139, Rat - Category: 2
Aluminum hydroxide - (21645-51-2)	5,000.00, Rat - Category: 5	No data available	No data available	No data available
Petroleum distillates, hydrotreated light - (64742-47-8)	5,000.00, Rat - Category: 5	2,000.00, Rabbit - Category: 4	No data available	No data available
Naphthalene - (91-20-3)	490.00, Rat - Category: 4	20,000.00, Rabbit - Category: NA	No data available	No data available
Methyl ethyl ketoxime - (96-29-7)	930.00, Rat - Category: 4	2,000.00, Rabbit - Category: 4	20.00, Rat - Category: 4	No data available

Item	Category	Hazard
Acute Toxicity (mouth)	Not Classified	Not Applicable
Acute Toxicity (skin)	Not Classified	Not Applicable
Acute Toxicity (inhalation)	Not Classified	Not Applicable
Skin corrosion/irritation	Not Classified	Not Applicable

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Eye damage/irritation	Not Classified	Not Applicable
Sensitization (respiratory)	Not Classified	Not Applicable
Sensitization (skin)	Not Classified	Not Applicable
Germ toxicity	Not Classified	Not Applicable
Carcinogenicity	Not Classified	Not Applicable
Reproductive Toxicity	Not Classified	Not Applicable
Specific target organ systemic toxicity (single exposure)	Not Classified	Not Applicable
Specific target organ systemic Toxicity (repeated exposure)	Not Classified	Not Applicable
Aspiration hazard	Not Classified	Not Applicable

12. Ecological information

12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Titanium dioxide - (13463-67-7)	1,000.00, Fundulus heteroclitus	5.50, Daphnia magna	5.83 (72 hr), Pseudokirchneriella subcapitata
Stoddard solvent - (8052-41-3)	Not Available	Not Available	Not Available
Solvent naphtha (petroleum), medium aliphatic - (64742-88-7)	800.00, Pimephales promelas	100.00, Daphnia magna	450.00 (96 hr), Selenastrum capricornutum
SATURATED HYDROCARBON - (TS-KS6505)	Not Available	Not Available	Not Available
Kerosene - (8008-20-6)	Not Available	Not Available	Not Available
Naphtha (petroleum), heavy aromatic - (64742-94-5)	45.00, Pimephales promelas	12.00, Daphnia magna	2.50 (72 hr), Skeletonema costatum
Silica, amorphous - (7631-86-9)	10,000.00, Danio rerio	10,000.00, Daphnia magna	10,000.00 (72 hr), Scenedesmus subspicatus
Aluminum hydroxide - (21645-51-2)	Not Available	Not Available	Not Available
Petroleum distillates, hydrotreated light - (64742-47-8)	2.20, Lepomis macrochirus	4,720.00, Dendronereides heteropoda	Not Available
Naphthalene - (91-20-3)	0.99, Oncorhynchus gorbuscha	1.60, Daphnia magna	68.21 (96 hr), Scenedesmus subspicatus
Methyl ethyl ketoxime - (96-29-7)	320.00, Leuciscus idus	500.00, Daphnia magna	83.00 (72 hr), Scenedesmus subspicatus

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available

13. Disposal considerations

13.1. Waste treatment methods

Do not allow spills to enter drains or watercourses.

Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. Transport information

14.1. UN number UN 1263

14.2. UN proper shipping name Paint

14.3. Transport hazard class(es)

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name	CONSUMER COMMODITY, ORM-D	IMDG Proper Shipping Name	Paint
DOT Hazard Class	Not Regulated	IMDG Hazard Class Sub Class	Flammable Liquid, 3 Not applicable
UN / NA Number	UN 1263	IMDG Packing Group	III
DOT Packing Group	Not Regulated	System Reference Code	181
CERCLA/DOT RQ	2179 gal. / 21529 lbs.		

14.4. Packing group III

14.5. Environmental hazards

IMDG Marine Pollutant: Yes (Titanium dioxide)

14.6. Special precautions for user

Not Applicable

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not Applicable

15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

WHMIS Classification B3

DOT Marine Pollutants (10%):
(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):
(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs (>.1%) :
Benzene, ethyl- (1000 lb final RQ; 454 kg final RQ)
Naphthalene (100 lb final RQ; 45.4 kg final RQ)
Xylenes (o-, m-, p- isomers) (100 lb final RQ; 45.4 kg final RQ)

EPCRA 302 Extremely Hazardous (>.1%) :
(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals (>.1%) :
Benzene, ethyl-
Naphthalene
Xylenes (o-, m-, p- isomers)

Mass RTK Substances (>1%) :
Kerosene

Silica, amorphous

Stoddard solvent

Titanium dioxide

Penn RTK Substances (>1%) :

Kerosene

Silica, amorphous

Stoddard solvent

Titanium dioxide

Penn Special Hazardous Substances (>.01%) :

(No Product Ingredients Listed)

RCRA Status:

(No Product Ingredients Listed)

N.J. RTK Substances (>1%) :

Kerosene

Silica, amorphous

Solvent naphtha (petroleum), medium aliphatic

Stoddard solvent

Titanium dioxide

N.J. Special Hazardous Substances (>.01%) :

Benzene, ethyl-

Naphthalene

Propylene glycol monomethyl ether

Solvent naphtha (petroleum), medium aliphatic

Xylenes (o-, m-, p- isomers)

N.J. Env. Hazardous Substances (>.1%) :

Benzene, ethyl-

Kerosene

Naphthalene

Xylenes (o-, m-, p- isomers)

Proposition 65 - Carcinogens (>0%):

Carbon black

Benzene, ethyl-

Naphthalene

Titanium dioxide

Proposition 65 - Female Repro Toxins (>0%):

(No Product Ingredients Listed)

Proposition 65 - Male Repro Toxins (>0%):

(No Product Ingredients Listed)

Proposition 65 - Developmental Toxins (>0%):

(No Product Ingredients Listed)

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

The following sections have changed since the previous revision.

End of Document

MATERIAL SAFETY DATA SHEET

Klean-Strip Brush Cleaner

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HEALTH		3
FLAMMABILITY		3
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PPE	G	

Printed: 12/12/2005
Revision: 10/21/2005

1. Product and Company Identification

Product Code: GBC12
Product Name: Klean-Strip Brush Cleaner
Reference #: 805.13
Manufacturer Information
Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113
Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892
Web site address: www.wmbarr.com
Preparer Name: W.M. Barr and Company, Inc. (901)775-0100

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Percentage	OSHA TWA	ACGIH TWA	Other Limits
1. N-Methyl-2-Pyrrolidone	872-50-4	1.0 -10.0 %	No data.	No data.	No data.
2. Dichloromethane	75-09-2	1.0 -3.0 %	25 ppm	50 ppm	No data.
3. Methanol	67-56-1	5.0 -35.0 %	200 ppm	200 ppm	No data.
4. Toluene	108-88-3	1.0 -10.0 %	200 ppm	50 ppm	No data.
5. Tall oil acids	61790-12-3	1.0 -5.0 %	No data.	No data.	No data.
6. Potassium hydroxide	1310-58-3	1.0 -5.0 %	100 ppm	5 ppm	No data.
7. Ethanol, 2-Amino-	141-43-5	1.0 -5.0 %	3 ppm	3 ppm	No data.
8. Raffinates (petroleum), sorption process	64741-85-1	20.0 -80.0 %	No data.	No data.	No data.
9. Acetone	67-64-1	15.0 -30.0 %	1000 ppm	500 ppm	No data.
Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. N-Methyl-2-Pyrrolidone	UY5790000	No data.	No data.	No data.	No data.
2. Dichloromethane	PA8050000	125 ppm (15 min)	No data.	No data.	No data.
3. Methanol	PC1400000	No data.	No data.	250 ppm	No data.
4. Toluene	XS5250000	500 ppm/(10min)	300 ppm	No data.	No data.
5. Tall oil acids	NA	No data.	No data.	No data.	No data.
6. Potassium hydroxide	TT2100000	No data.	No data.	No data.	2 mg/m3
7. Ethanol, 2-Amino-	KJ5775000	No data.	No data.	6 ppm	No data.
8. Raffinates (petroleum), sorption process	NA	No data.	No data.	No data.	No data.
9. Acetone	AL3150000	No data.	No data.	750 ppm	No data.

3. Hazards Identification

Emergency Overview

Danger! Extremely flammable. Keep away from heat, sparks, flame and all other sources of ignition. Vapors may cause flash fire or ignite explosively. Vapors may travel long distances to other areas and rooms away from work site. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition anywhere in the structure, dwelling or building during use and until all vapors are gone from the work site and all areas away from the work site. Keep away from electrical outlets and switches. Beware of static electricity that may be generated by synthetic clothing and other sources.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

Health Hazards (Acute and Chronic)

Inhalation Acute Exposure Effects:

Vapor harmful. May cause dizziness, headache, irritation of the respiratory tract, injuries to mucous membranes, watering of eyes, weakness, drowsiness, nausea, loss of coordination, numbness in fingers and arms and legs, depression of central nervous system, loss of appetite, blurred vision, fatigue, stupor, vomiting, stomach and intestinal pain, heartburn, confusion, brain damage, lower blood pressure, liver and kidney injury, hallucinations, irregular heartbeat, cold clammy extremities, diarrhea, blood disorders, spotted vision, dilation of pupils, visual disturbances, giddiness and intoxication, sleepiness, cough and dyspnea, nose tumors, hot flashes, arm leg and chest pain, rapid heartbeat, increase in carboxyhemoglobin levels which can cause stress to the cardiovascular system, convulsions, unconsciousness, coma, and death.

Elevated carboxyhemoglobin levels can be additive to the increase caused by smoking and other carbon monoxide sources.

Intentional misuse of this product by deliberately concentrating and inhaling can be harmful or fatal. May produce symptoms similar to those listed under ingestion.

Skin Contact Acute Exposure Effects:

This product may be absorbed through the skin. Harmful if absorbed through skin. May cause irritation, drying and cracking of skin, defatting of skin, dermatitis, itching, burning, redness, inflammation, swelling, tissue damage, keratitis, discomfort or pain, erythema, numbness in fingers and arms. May be absorbed readily to produce symptoms similar to those listed for ingestion. Prolonged or widespread contact may result in absorption of potentially harmful amounts of this material. May cause additional symptoms listed under inhalation.

Eye Contact Acute Exposure Effects:

This material is an eye irritant. May cause irritation and injury, redness, tearing, blurred vision, burns, conjunctivitis of eyes, corneal ulcerations of the eye. If not promptly removed, it will injure eye tissue, which may result in permanent damage.

Ingestion Acute Exposure Effects:

May be fatal or cause blindness if swallowed. May cause dizziness, headache, drowsiness, nausea, weakness, stupor, irritation to mouth throat and stomach, depression of the central nervous system, vomiting, muscle twitches, gastrointestinal irritation, diarrhea, loss of appetite, narcosis, red blood cell hemolysis, mental confusion, slurred speech, changes in white blood cells, fatigue, blindness, liver damage, kidney damage, heart damage, unconsciousness, convulsions, coma, and death.

May produce additional symptoms listed under inhalation. Liquid aspirated into lungs can cause chemical pneumonitis or pulmonary edema, which can be fatal.

Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged skin contact may result in absorption of a harmful amount of this material. Prolonged or repeated contact may cause dermatitis. May cause weakness, skin irritation, nausea, numbness in hands and feet, permanent central nervous system changes, some loss of memory, gastric disturbances, giddiness, insomnia, brain damage, bone marrow damage, liver damage, kidney damage, hallucinations, blood disorders, irregular heartbeat, jaundice, anemia, inflammation, redness, eye irritation, pancreatic damage, visual impairment or blindness.

Prolonged or repeated contact may cause drying and cracking of skin. Repeated overexposure may cause red blood cell hemolysis.

Signs and Symptoms Of Exposure

Inhalation, ingestion, and dermal.

Medical Conditions Generally Aggravated By Exposure

Diseases of the skin, eyes, liver, kidneys, lungs, cardiovascular system, respiratory system, asthma, blood, inflammatory or fibrotic pulmonary disease, alcoholism, and rhythm disorders of the heart.

OSHA Hazard Classes:

HEALTH HAZARDS : N/E

PHYSICAL HAZARDS : N/E

TARGET ORGANS & EFFECTS: N/E

4. First Aid Measures

Emergency and First Aid Procedures

Inhalation:

If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

Skin Contact:

Irritation may result. Immediately wash with soap and water. Seek medical attention if irritation from contact persists.

Eye Contact:

Immediately flush with water, remove any contact lenses, continue flushing with water for at least 15 minutes, then get medical attention.

Ingestion:

Call you local poison control center, hospital emergency room, or physician immediately for instructions.

Note to Physician

Poison. This product contains methanol.

Methanol is metabolized to formaldehyde and formic acid. These metabolites may cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used as an antidote. Methanol is effectively removed by hemodialysis.

Call your local poison control center for further information.

5. Fire Fighting Measures

Flammability Classification:	OSHA Class IB
Flash Pt:	4.00 F Method Used: TCC
Explosive Limits:	LEL: 1.00 UEL: No data.
Autoignition Pt:	No data.

Special Fire Fighting Procedures

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Unusual Fire and Explosion Hazards

No data available.

Extinguishing Media

Use carbon dioxide, dry powder, or foam.

Unsuitable Extinguishing Media

No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Cleanup:

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area.

Small Spills:

Take up liquid with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large Spills:

Dike far ahead of spill for later disposal.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users --Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provided protection against vapors.

Eye Protection

Safety glasses, chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

Other Protective Clothing

Various application methods can dictate the use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after use. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

Ventilation

Use only with adequate ventilation to prevent buildup of vapors. Do not use in areas where vapors can accumulate and concentrate such as basements, bathrooms, or small enclosed areas. Whenever possible, use outdoors in an open area. If using indoors, open all windows and doors and maintain a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea or eye-watering -- Stop -- ventilation is inadequate. Leave area immediately. If the work area is not well ventilated, then do not use this product. A dust mask does not provide protection against vapors.

9. Physical and Chemical Properties

Physical States:	[] Gas [X] Liquid [] Solid
Melting Point:	No data.
Boiling Point:	> 133.00 F
Autoignition Pt:	No data.
Flash Pt:	4.00 F Method: TCC
Explosive Limits:	LEL: 1.00 UEL: No data.
Specific Gravity:	0.000000
Bulk Density:	6.52 LB/GA
Vapor Pressure:	No data.
Vapor Density:	No data.
Evaporation Rate:	No data.
Solubility in Water:	No data.
Percent Volatile:	100.0 % by weight.
VOC / Volume:	780.0000 G/L
Corrosion Rate:	No data.
pH:	No data.

Appearance and Odor

No data available.

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents, strong caustics, acids, alkali, amines, reducing agents, aldehydes, ammonia, nitrogen peroxides and reactive metals.

Hazardous Decomposition Or Byproducts

Decomposition may produce carbon monoxide, carbon dioxide, acrid smoke, formaldehyde, oxides of nitrogen and irritating fumes, chlorine gas, small quantities of phosgene, and hydrogen chloride.

Hazardous Polymerization: Will occur [] Will not occur [X]

Conditions To Avoid - Hazardous Polymerization

No data available.

11. Toxicological Information

Toxicological Information

No data available.

Carcinogenicity/Other Information

No data available.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

Ecological Information

No data available.

13. Disposal Considerations

Waste Disposal Method

Dispose in accordance with local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name

No data available.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. N-Methyl-2-Pyrrolidone	872-50-4	No	No	Yes	No
2. Dichloromethane	75-09-2	No	Yes 1000 LB	Yes	Yes
3. Methanol	67-56-1	No	Yes 5000 LB	Yes	No
4. Toluene	108-88-3	No	Yes 1000 LB	Yes	Yes
5. Tall oil acids	61790-12-3	No	No	No	No
6. Potassium hydroxide	1310-58-3	No	Yes 1000 LB	No	No
7. Ethanol, 2-Amino-	141-43-5	No	No	No	No
8. Raffinates (petroleum), sorption process	64741-85-1	No	No	No	No
9. Acetone	67-64-1	No	Yes 5000 LB	No	Yes

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. N-Methyl-2-Pyrrolidone	872-50-4	No	No	No	Yes
2. Dichloromethane	75-09-2	HAP	Yes	8A CAIR	Yes
3. Methanol	67-56-1	HAP	No	No	No
4. Toluene	108-88-3	HAP	Yes	8A CAIR	Yes
5. Tall oil acids	61790-12-3	No	No	No	No
6. Potassium hydroxide	1310-58-3	No	No	No	No
7. Ethanol, 2-Amino-	141-43-5	No	Yes	No	No
8. Raffinates (petroleum), sorption process	64741-85-1	No	No	No	No
9. Acetone	67-64-1	No	No	No	No

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

- Sec.302:** EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.
- Sec.304:** EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.
- Sec.313:** EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.
- Sec.110:** EPA SARA 110 Superfund Site Priority Contaminant List

TSCA (Toxic Substances Control Act) Lists:

- 5A(2):** Chemical Subject to Significant New Rules (SNURS)
- 6A:** Commercial Chemical Control Rules
- 8A:** Toxic Substances Subject To Information Rules on Production
- 8A CAIR:** Comprehensive Assessment Information Rules - (CAIR)
- 8A PAIR:** Preliminary Assessment Information Rules - (PAIR)
- 8C:** Records of Allegations of Significant Adverse Reactions
- 8D:** Health and Safety Data Reporting Rules
- 8D TERM:** Health and Safety Data Reporting Rule Terminations

Other Important Lists:

- CWA NPDES:** EPA Clean Water Act NPDES Permit Chemical
- CAA HAP:** EPA Clean Air Act Hazardous Air Pollutant
- CAA ODC:** EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)

MATERIAL SAFETY DATA SHEET

Klean-Strip Brush Cleaner

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CA PROP 65:

California Proposition 65

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

- Yes No Acute (immediate) Health Hazard
- Yes No Chronic (delayed) Health Hazard
- Yes No Fire Hazard
- Yes No Reactive Hazard
- Yes No Sudden Release of Pressure Hazard

16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

FLECTO CO INC -- VARATHANE LIQUID PLASTIC, 60 -- 8010-00N019588

=====
Product Identification
=====

Product ID:VARATHANE LIQUID PLASTIC, 60

MSDS Date:03/08/1988

FSC:8010

NIIN:00N019588

MSDS Number: BLGVM

=== Responsible Party ===

Company Name:FLECTO CO INC

Address:1000 45TH ST

Box:12955

City:OAKLAND

State:CA

ZIP:94604-2955

Country:US

Info Phone Num:415-655-2470

Emergency Phone Num:415-655-2470

Preparer's Name:EDWARD M QUESADA

CAGE:58381

=== Contractor Identification ===

Company Name:FLECTO CO INC

Address:1000 45TH ST

Box:City:OAKLAND

State:CA

ZIP:94608-3314

Country:US

Phone:800-635-3286

CAGE:58381

=====
Composition/Information on Ingredients
=====

Ingred Name:STODDARD SOLVENT

CAS:8052-41-3

RTECS #:WJ8925000

Fraction by Wt: 53%

OSHA PEL:500 PPM

ACGIH TLV:100 PPM; 9293

=====
Hazards Identification
=====

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.

Routes of Entry: Inhalation:YES Skin:NO Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:ACUTE: BOTH RESPIRATORY TRACT
IRRITANT

AND A CENTRAL NERVOUS SYSTEM(CNS) DEPRESSANT. CHRONIC: UNKNOWN AT
THIS TIME. INHAL/SWALLOWED: BURNING SENSATION IN NOSE AND THROAT,
COUGH, FEELING OF DIFFICULTY IN BREATHING. ALSO, HEADACHE,
DIZZINESS, STAGGERING GAIT, CONFUSION, UNCON/COMA. CONTACT WITH
SKIN/EYES: PRIMARY IRRIT.

Explanation of Carcinogenicity:NOT RELEVANT.

Effects of Overexposure:SEE HEALTH HAZARDS.

Medical Cond Aggravated by Exposure:ANESTHESIA, RESPIRATORY TRACT
IRRITATION, DERMATITIS, NAUSEA, VOMITING.

=====
First Aid Measures
=====

First Aid:EYE: FLUSH IMMED WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15
MIN. CONSULT PHYS. SKIN: WASH AFFECTED AREA WITH SOAP AND WATER.
CONSULT PHYS IF IRRITATION PERSISTS. INHAL: REMOVE TO FRESH AIR,
RESTORE B REATHING, CONSULT PHYS. INGEST: DO NOT INDUCE VOMITING.
CALL PHYS.

=====
Fire Fighting Measures
=====

Flash Point Method:TCC

Flash Point:105F,41C

Lower Limits:1.0%

Extinguishing Media:FOAM, CARBON DIOXIDE, DRY CHEMICAL.

Fire Fighting Procedures:WEAR NIOSH/MSHA APPROVED SCBA AND FULL
PROTECTIVE EQUIPMENT . FIGHT AS VOLATILE LIQ FIRE. USE H2O TO KEEP
FIRE EXPOS CONTR COOL TO REDUCE PRESSURE.

Unusual Fire/Explosion Hazard:NONE SPECIFIED BY MANUFACTURER.

=====
Accidental Release Measures
=====

Spill Release Procedures:REMOVE ALL SOURCES OF IGNITION. AVOID
BREATHING VAPORS. VENTILATE AND REMOVE WITH INERT ABSORBENT.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

=====
Handling and Storage
=====

Handling and Storage Precautions:KEEP AWAY FROM CHILDREN. DO NOT TAKE
INTERNALLY. DO NOT GET IN EYES. DO NOT STORE OR USE NEAR HEAT,

SPARKS OR FLAME.

Other Precautions:NONE SPECIFIED BY MANUFACTURER.

=====
Exposure Controls/Personal Protection
=====

Respiratory Protection:USE NIOSH/MSHA APPROVED MASK OR RESPIRATOR FOR ORGANIC VAPORS AS NECESSARY.

Ventilation:ADEQUATE VOLUME AND PATTERN TO AVOID VAPOR CONCENTRATION IN EXCESS OF TLV OR LEL.

Protective Gloves:NEOPRENE OR RUBBER GLOVES.

Eye Protection:CHEMICAL WORKERS GOGGLES .

Other Protective Equipment:USE IMPERMEABLE APRONS AND PROTECTIVE CLOTHING.

Work Hygienic Practices:DO NOT STORE IN HIGH TEMPERATURE AREA OR NEAR FIRE OR OPEN FLAME. DO NOT TAKE INTERNALLY.

Supplemental Safety and Health
NONE SPECIFIED BY MANUFACTURER.

=====
Physical/Chemical Properties
=====

HCC:F4

Boiling Pt:B.P. Text:315F,157C

Vapor Pres:SEE INGRED

Vapor Density:>1

Evaporation Rate & Reference:<1(ETHER=1)

Solubility in Water:NEGLIGIBLE

Appearance and Odor:CLEAR AMBER APPEARANCE WITH A MILD ALIPHATIC ODOR.

Percent Volatiles by Volume:60.9

=====
Stability and Reactivity Data
=====

Stability Indicator/Materials to Avoid:YES

MAY REACT WITH STRONG OXIDIZING AGENTS.

Stability Condition to Avoid:EXCESSIVE HEAT, POOR VENTILATION, CORROSIVE ATMOSPHERES, EXCESSIVE AGING, SPARKS OR OPEN FLAME.

Hazardous Decomposition Products:NONE SPECIFIED BY MANUFACTURER.

=====
Disposal Considerations
=====

Waste Disposal Methods:NORMAL WASTE DISPOSAL METHODS. DO NOT INCINERATE

IN CLOSED CONTAINERS. DISPOSE OF ALL WASTES IN ACCORDANCE WITH

FEDERAL, STATE AND LOCAL REGULATIONS.

Disclaimer (provided with this information by the compiling agencies):

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1. Identification of the substance/mixture and of the company/undertaking

Manufacturer: Axalta Coating Systems, LLC
Two Commerce Square
2001 Market Street, Suite 3600
Philadelphia, PA 19103

Telephone: Product information: (800) 438-3876
Medical emergency: (855) 274-5698
Transportation emergency: (800) 424-9300 (CHEMTREC)

Product: **Imron® 6000 Polyurethane Enamel**

DOT Shipping Name: See DOT Addendum.

Hazardous Materials Information: See Section 10.

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2. Composition/information on ingredients

INGREDIENTS	CAS #	VAPOR PRESSURE	EXPOSURE LIMITS
1,2,4-trimethyl benzene	95-63-6	7.0@44.4 °C	A 25.0 ppm, O 25.0 ppm
2,4-pentanedione	123-54-6	9.0	A 25.0 ppm Skin, D 5.0 ppm 8 & 12 hour TWA, O None
2-ethylhexyl acetate	103-09-3	0.5	A None, O None
4-chlorobenzotrifluoride	98-56-6	7.6@25.0 °C	D 20.0 ppm 8 & 12 hour TWA, A None, O None
Acetone	67-64-1	247.0@68.0 °F	A 750.0 ppm 15 min STEL, A 500.0 ppm, O 1000.0 ppm, D 500.0 ppm 8 & 12 hour TWA
Acrylic polymer-A	Not Avail	None	A None, O None
Acrylic polymer-B	104032-39-5	None	A None, O None
Acrylic resin	Not Avail	None	A None, O None
Aliphatic polyisocyanate resin	28182-81-2	None	S 0.5 mg/m3, A None, O None
Amorphous silica	7631-86-9	None	A 3.0 mg/m3 Respirable Dust, O 20.0 mppcf, D 3.0 mg/m3, D 6.0 mg/m3
Amorphous silica - precipitated	112926-00-8	None	O 15.0 mg/kg Total Dust, O 5.0 mg/m3 TWA Respirable Dust, D 3.0 mg/m3 Respirable Dust, D 3.0 mg/m3 12 hr TWA, A None
Aromatic hydrocarbon	64742-95-6	10.0@25.0 °C	D 50.0 ppm 8 & 12 hour TWA, A None, O None
Butanedioic acid, dimethyl ester	106-65-0	None	D 10.0 mg/m3, A None, O None
Butyl acetate	123-86-4	15.0	A 200.0 ppm 15 min STEL, A 150.0 ppm, O 150.0 ppm
Dibutyl tin dilaurate	77-58-7	<10.0	A 0.2 mg/m3 15 min STEL Sn, A 0.1 mg/m3 Sn, O 0.1 mg/m3 Sn
Dimethyl glutarate	1119-40-0	0.2	D 10.0 mg/m3 8 & 12 hour TWA, A None, O None
Ethyl 3-ethoxy propionate	763-69-9	2.3	A None, O None
Ethyl acetate	141-78-6	100.0	A 400.0 ppm, O 400.0 ppm
Ethylbenzene	100-41-4	7.0	A 20.0 ppm, O 100.0 ppm, D 25.0 ppm 8 & 12 hour TWA
Ethylene glycol monobutyl ether acetate	112-07-2	0.3	A 20.0 ppm, D 20.0 ppm 8 & 12 hour TWA, O None
Heptane	142-82-5	45.0@66.0 °F	A 500.0 ppm 15 min STEL, A 400.0 ppm, O 500.0 ppm
Hydrotreated heavy naphtha (petroleum)	64742-48-9	0.3@68.0 °F	A 100.0 ppm, O 500.0 ppm, D 100.0 ppm
Isopropyl alcohol	67-63-0	48.0	A None, O None
Methyl acetate	79-20-9	179.5@68.0 °F	A 250.0 ppm 15 min STEL, A 200.0 ppm, O 200.0 ppm
Methyl amyl ketone	110-43-0	3.4	A 50.0 ppm, O 100.0 ppm
Methyl ethyl ketone	78-93-3	71.2	A 300.0 ppm 15 min STEL, A 200.0 ppm, O 200.0 ppm, D 300.0 ppm 15 min TWA, D 200.0 ppm 8 & 12 hour TWA
Methyl isoamyl ketone	110-12-3	5.3	A 20.0 ppm, O None
Polycaprolactone diol	69089-45-8	<0.0	A None, O None
Polyester resin-A	Not Avail	None	A None, O None
Polyester resin-B	129922-22-1	None	A None, O None
Polyester resin-C	68604-67-1	None	A None, O None
Polyisocyanate	28182-81-2	None	A None, O None
Propoxypropanol	1569-01-3	2.0	A None, O None
Propylene glycol monomethyl ether acetate	108-65-6	3.8	D 30.0 ppm 15 min TWA, A None, O None
Synthetic resin	Not Avail	None	A None, O None
T-butyl acetate	540-88-5	None	A 200.0 ppm, O 200.0 ppm
Toluene	108-88-3	22.0	A 20.0 ppm, O 300.0 ppm CEIL, O 500.0 ppm 10 min TWA, O 200.0 ppm, D 50.0 ppm 8 & 12 hour TWA Skin
Xylene	1330-20-7	8.0@25.0 °C	A 150.0 ppm 15 min STEL, A 100.0 ppm, O 100.0 ppm, D 100.0 ppm 8 & 12 hour TWA

*A=ACGIH, O=OSHA, D=DuPont, S=Suppliers. Limits are 8 hour TWA unless otherwise specified. Vapor pressure @ 20° C unless otherwise noted.
D=DuPont, Results obtained from E. I. du Pont de Nemours and Company.

3. Hazards identification

Potential Health Effects:

Inhalation:

May cause nose and throat irritation. May cause nervous system depression, characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. If this product contains or is mixed with an isocyanate activator/hardener, the following health effects may apply: Exposure to isocyanates may cause respiratory sensitization. This effect may be permanent. Symptoms include an asthma-like reaction with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Repeated overexposure to isocyanates may cause a decrease in lung function, which may be permanent. Individuals with lung or breathing problems or prior reactions to isocyanates must not be exposed to vapors or spray mist of this product.

Ingestion:

May result in gastrointestinal distress.

Skin or eye contact:

May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Other Potential Health Effects in addition to those listed above:

2,4-pentanedione

2,4-pentanedione, a component of this product, is regulated by the U.S. EPA, under a significant new use rule. It is a violation of federal law to sell or use this product in consumer applications, including to private individuals, schools, and vocational schools. Can be absorbed through the skin in harmful amounts. Repeated exposures to high concentrations has caused adverse health effects in laboratory animals. These effects involved the central nervous system, immune system, and the red blood cell forming system. No effect was seen at 100 ppm. The odor is disagreeable at a few ppm. Repeated or prolonged skin contact may cause any of the following: skin sensitization. Skin or eye contact may cause any of the following: irritation. Overexposure of this substance may cause effects on any of the following organs/systems: central nervous system, lungs, upper respiratory system, thymus.

4-chlorobenzotrifluoride

Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: skin. Prolonged or repeated exposure may cause damage to any of the following organs/systems: kidneys, liver, thyroid. Potential skin sensitizer that may cause allergic reactions and contact dermatitis resulting in severe irritation, dryness, and cracking of the skin. Ingestion may cause any of the following: gastrointestinal irritation. Eye contact may cause any of the following: permanent eye injury. Inhalation may cause any of the following: stupor (central nervous system depression), respiratory tract irritation.

Acetone

The following medical conditions may be aggravated by exposure: lung disease, eye disorders, skin disorders. Overexposure may cause damage to any of the following organs/systems: blood, central nervous system, eyes, kidneys, liver, respiratory system, skin.

Aliphatic polyisocyanate resin

Overexposure may cause asthma-like reactions with shortness of breath, wheezing, cough, which may be permanent; or permanent lung sensitization. This effect may be delayed for several hours after exposure. The following medical conditions may be aggravated by exposure: asthma, skin disorders, respiratory disorders. Potential skin sensitizer that may cause allergic reactions and contact dermatitis resulting in severe irritation, dryness, and cracking of the skin.

Aromatic hydrocarbon

The following medical conditions may be aggravated by exposure: skin disorders. Laboratory studies with rats have shown that petroleum distillates can cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown a significant increase of kidney damage or an increase in kidney or liver tumors.

Butyl acetate

May cause abnormal liver function. The following medical conditions may be aggravated by exposure: respiratory system. Tests for embryotoxic activity in animals has been inconclusive. Rats exposed to very high airborne levels have exhibited high frequency hearing deficits. The significance of this to man is unknown. Has been toxic to the fetus in laboratory animals at doses that are toxic to the mother.

Ethyl acetate

Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: eyes, respiratory system, skin. Tests in laboratory animals have shown effects on any of the following organs/systems: blood, kidneys, liver.

Ethylbenzene

Is an IARC, NTP or OSHA carcinogen. Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: central nervous system, kidneys, liver, lungs. Recurrent overexposure may result in liver and kidney injury. Studies in laboratory animals have shown reproductive, embryotoxic and developmental effects. WARNING: This chemical is known to the State of California to cause cancer.

Ethylene glycol monobutyl ether acetate

May destroy red blood cells. May cause abnormal kidney function. May cause temporary upper respiratory and/or lung irritation with cough, difficult breathing, or shortness of breath. The following medical conditions may be aggravated by exposure: central nervous system, gastrointestinal system, kidneys, liver, dermatitis. Can be absorbed through the skin in harmful amounts. Overexposure may cause damage to any of the following organs/systems: blood, kidneys, liver. Ingestion may cause headache, nausea, vomiting, dizziness, and drowsiness.

Heptane

Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: central nervous system, respiratory system, skin. May cause central nervous system effects such as dizziness, headache, nausea, and loss of consciousness. Laboratory studies with rats have shown that petroleum distillates can cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several

studies evaluating petroleum workers have not shown a significant increase of kidney damage or an increase in kidney or liver tumors. Aspiration may occur during swallowing or vomiting, resulting in lung damage.

Hydrotreated heavy naphtha (petroleum)

Laboratory studies with rats have shown that petroleum distillates can cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown a significant increase of kidney damage or an increase in kidney or liver tumors.

Isopropyl alcohol

The following medical conditions may be aggravated by exposure: dermatitis, respiratory disease. Developmental toxicity was seen in rat's offspring at doses that were maternally toxic. Contact may cause skin irritation with discomfort or rash. Can be absorbed through the skin in harmful amounts. Contact will cause moderate to severe redness and swelling, itching, tingling sensation, painful burning. May cause injury to the cornea of the eyes. Prolonged or repeated exposure may cause damage to any of the following organs/systems: liver. Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights. Aspiration may occur during swallowing or vomiting, resulting in lung damage. May cause central nervous system depression with headache, stupor, uncoordinated or strange behavior, or unconsciousness. Irritating to the mouth, throat and stomach. May cause irritation of the respiratory tract, experienced as nasal discomfort and discharge, coughing and possibly accompanied by chest pain. Prolonged or repeated skin contact may cause drying, cracking, or irritation. Ingestion may cause headache, nausea, vomiting, dizziness, and drowsiness. Swallowing significant amounts of substance could cause serious injury, even death.

Methyl ethyl ketone

Material is irritating to mucous membranes and upper respiratory tract. Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: central nervous system, eyes, respiratory system, skin. Prolonged or repeated overexposure may cause any of the following: conjunctivitis, dermatitis. High concentrations have caused embryotoxic effects in laboratory animals. Aspiration may occur during swallowing or vomiting, resulting in lung damage. Ingestion may cause headache, nausea, vomiting, dizziness, and drowsiness.

Propoxypropanol

May cause moderate eye burning. Recurrent overexposure may result in liver and kidney injury.

Propylene glycol monomethyl ether acetate

Recurrent overexposure may result in liver and kidney injury.

T-butyl acetate

Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: central nervous system, eyes, gastrointestinal system, liver, skin.

Toluene

Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: central nervous system, kidneys, liver, respiratory system, skin. Can be absorbed through the skin in harmful amounts. Recurrent overexposure may result in liver and kidney injury. High airborne levels have produced irregular heart beats in animals and occasional palpitations in humans. Rats exposed to very high airborne levels have exhibited high frequency hearing deficits. The significance of this to man is unknown. WARNING: This chemical is known to the State of California to cause birth defects or other reproductive harm.

Xylene

Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: bone marrow, cardiovascular system, central nervous system, kidneys, liver, lungs. Recurrent overexposure may result in liver and kidney injury. High exposures may produce irregular heart beats. Canada classifies Xylene as a developmental toxin as high exposures in some animal studies have been reported to cause health effects on the developing fetus/embryo. These effects were often at levels toxic to the adult animal. The significance of these effects to humans is not known. Repeated or prolonged skin contact may cause any of the following: irritation, dryness, cracking of the skin.

4. First aid measures

First Aid Procedures:

Inhalation:

If affected by inhalation of vapor or spray mist, move to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing difficulty persists, or occurs later, consult a physician.

Ingestion:

In the unlikely event of ingestion, DO NOT INDUCE VOMITING. Call a physician immediately and have names of ingredients available.

Skin or eye contact:

In case of eye contact, immediately flush with plenty of water for at least 15 minutes; call a physician. In case of skin contact, wash thoroughly with soap and water. If irritation occurs, contact a physician.

5. Firefighting measures

Flash Point (Closed Cup):

See Section 11 for exact values.

Flammable Limits: LFL 0.5 % UFL 16.9 %

Extinguishing Media:

Universal aqueous film-forming foam, carbon dioxide, dry chemical.

Fire Fighting Procedures:

Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fog nozzles may be used to prevent pressure build-up.

Fire and Explosion Hazards:

For flammable liquids, vapor/air will ignite when an ignition source is present. In other cases, when heated above the flash point, emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mists or sprays may be flammable at temperatures below the flash point.

6. Accidental release measures**Procedures for cleaning up spills or leaks:**

Ventilate area. Remove sources of ignition. Prevent skin and eye contact and breathing of vapor. If material does not contain or is not mixed with an isocyanate activator/hardener: Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly. If the material contains, or is mixed with an isocyanate activator/hardener: Wear a positive-pressure, supplied-air respirator (NIOSH approved TC-19C), eye protection, gloves and protective clothing. Pour liquid decontamination solution over the spill and allow to sit at least 10 minutes. Typical decontamination solutions for isocyanate containing materials are: 20% Surfactant (Tergitol TMN 10) and 80% Water OR 0-10% Ammonia, 2-5% Detergent and Water (balance). Pressure can be generated. Do not seal waste containers for 48 hours to allow CO₂ to vent. After 48 hours, material may be sealed and disposed of properly.

Ecological information:

There is no data available on the product. The product should not be allowed to enter drains, water courses or the soil.

7. Handling and storage**Precautions to be taken in handling and storing:**

Observe label precautions. If combustible (flashpoint between 38-93 deg C or 100 - 200 deg F), keep away from heat, sparks and flame. If flammable (flashpoint less than 38 deg C or 100 deg F), also keep away from static discharges and other sources of ignition. If material is extremely flammable (flashpoint less than - 8 deg C or 20 deg F) or flammable, VAPORS MAY IGNITE EXPLOSIVELY OR CAUSE FLASH FIRE, respectively. Vapors may spread long distances. Prevent buildup of vapors. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Do not store above 49 deg C or 120 deg F. If product is waterbased, do not freeze.

Other precautions:

If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Handling and processing operations should be conducted in accordance with best practices (e.g.NFPA-654).

8. Exposure controls/personal protection**Ventilation:**

Provide sufficient ventilation in volume and pattern to keep contaminants below applicable exposure limits.

Respiratory protection:

Do not breathe vapors or mists. If this product contains isocyanates or is used with an isocyanate activator/hardener, wear a positive-pressure, supplied-air respirator (NIOSH approved TC-19C) while mixing activator/hardener with paint, during application and until all vapors and spray mist are exhausted. If product does not contain or is not mixed with an isocyanate activator/hardener, a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH TC-23C) and particulate filter (NIOSH TC-84A) may be used. Follow respirator manufacturer s directions for respirator use. Do not permit anyone without protection in the painting area. Individuals with history of lung or breathing problems or prior reaction to isocyanates should not use or be exposed vapor or spray mist if product contains or is mixed with isocyanate activators/hardeners.

Protective equipment:

Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Skin and body protection:

Neoprene gloves and coveralls are recommended.

Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

9. Physical and chemical properties

Evaporation rate	Slower than Ether
Water solubility	NIL
Vapour density	Heavier than air
Approx. Boiling Range (°C)	56 – 152 °C
Approx. Freezing Range (°C)	-98 – -65 °C
Gallon Weight (lbs/gal)	7.06021 - 9.09649
Specific Gravity	0.85 - 1.09
Percent Volatile By Volume	28.44 - 100.00
Percent Volatile By Weight	23.55 - 99.99
Percent Solids By Volume	0.00 - 71.56
Percent Solids By Weight	0.00 - 76.44

10. Stability and reactivity**Stability:**

Stable

Incompatibility (materials to avoid):

None reasonably foreseeable

Hazardous decomposition products:

CO, CO₂, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Hazardous Polymerization:

Will not occur.

Sensitivity to Static Discharge:

For flammable materials (flashpoint less than 38 deg C or 100 deg F) and combustibles (flashpoint between 38- 93 deg C or 100-200 deg F) if heated above the flashpoint, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact:

None known.

11. Additional Information

193S™ Aliphatic polyisocyanate resin, Butyl acetate, Ethyl acetate, Ethylene glycol monobutyl ether acetate(4%*^o@) **GAL WT: 9.09 WT PCT SOLIDS: 74.99 VOL PCT SOLIDS: 69.80 SOLVENT DENSITY: 7.53 VOC LE: 2.3 VOC AP: 2.3 FLASH POINT: 20 °F to below 73 °F H: 3 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

194S™ 2-ethylhexyl acetate, Aliphatic polyisocyanate resin, Butyl acetate, Ethyl acetate **GAL WT: 9.05 WT PCT SOLIDS: 75.00 VOL PCT SOLIDS: 69.53 SOLVENT DENSITY: 7.43 VOC LE: 2.3 VOC AP: 2.3 FLASH POINT: 20 °F to below 73 °F H: 3 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

3401S™ 1,2,4-trimethyl benzene(1%*), Acrylic polymer-A, Aromatic hydrocarbon, Butyl acetate, Ethyl 3-ethoxy propionate, Ethylbenzene(1.0%*^o@), Ethylene glycol monobutyl ether acetate(10%*^o@), Methyl ethyl ketone, Propylene glycol monomethyl ether acetate, Toluene(9%*^o@), Xylene(4%*^o@) **GAL WT: 7.29 WT PCT SOLIDS: 4.91 VOL PCT SOLIDS: 3.80 SOLVENT DENSITY: 7.21 VOC LE: 6.9 VOC AP: 6.9 FLASH POINT: 20 °F to below 73 °F H: 2 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

3420S™ 4-chlorobenzotrifluoride, Acetone, Acrylic polymer-B, Acrylic resin, Butyl acetate, Isopropyl alcohol, Methyl acetate, Methyl amyl ketone, Polyester resin-B, Synthetic resin **GAL WT: 8.56 WT PCT SOLIDS: 53.96 VOL PCT SOLIDS: 49.06 SOLVENT DENSITY: 7.74 VOC LE: 2.6 VOC AP: 2.1 FLASH POINT: 20 °F to below 73 °F H: 2 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

3430S™ 2-ethylhexyl acetate, Acetone, Acrylic polymer-B, Dimethyl glutarate, Hydrotreated heavy naphtha (petroleum), Isopropyl alcohol, Methyl amyl ketone **GAL WT: 8.02 WT PCT SOLIDS: 52.26 VOL PCT SOLIDS: 44.69 SOLVENT DENSITY: 6.94 VOC LE: 3.7 VOC AP: 3.6 FLASH POINT: 20 °F to below 73 °F H: 2 F: 3 R: 0 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

3440S™ Acrylic polymer-B, Butanedioic acid, dimethyl ester, Butyl acetate, Dimethyl glutarate, Ethylene glycol monobutyl ether acetate(3%*^o@), Methyl amyl ketone, Methyl ethyl ketone, Toluene(4%*^o@) **GAL WT: 8.17 WT PCT SOLIDS: 53.35 VOL PCT SOLIDS: 46.68 SOLVENT DENSITY: 7.17 VOC LE: 3.8 VOC AP: 3.8 FLASH POINT: 20 °F to below 73 °F H: 1 F: 3 R: 0 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

3480S™ 2-ethylhexyl acetate, Acetone, Acrylic polymer-B, Dimethyl glutarate, Hydrotreated heavy naphtha (petroleum), Isopropyl alcohol, Methyl amyl ketone **GAL WT: 8.02 WT PCT SOLIDS: 52.26 VOL PCT SOLIDS: 44.69 SOLVENT DENSITY: 6.94 VOC LE: 3.7 VOC AP: 3.6 FLASH POINT: 20 °F to below 73 °F H: 2 F: 3 R: 0 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

389S™ 2,4-pentanedione, Dibutyl tin dilaurate **GAL WT: 8.14 WT PCT SOLIDS: 1.00 VOL PCT SOLIDS: 0.94 SOLVENT DENSITY: 8.14 VOC LE: 8.1 VOC AP: 8.1 FLASH POINT: 73 °F to below 100 °F H: 2 F: 3 R: 0 OSHA STORAGE: IC TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

8685S™ Ethyl acetate, Ethylene glycol monobutyl ether acetate(40%*^o@), Methyl ethyl ketone **GAL WT: 7.55 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00 SOLVENT DENSITY: 7.57 VOC LE: 7.5 VOC AP: 7.5 FLASH POINT: 20 °F to below 73 °F H: 2 F: 3 R: 0 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

8840S™ 2-ethylhexyl acetate, Acetone, Acrylic polymer-B, Acrylic resin, Butyl acetate, Dimethyl glutarate, Isopropyl alcohol, Methyl amyl ketone, Polyester resin-A **GAL WT: 8.02 WT PCT SOLIDS: 51.70 VOL PCT SOLIDS: 44.32 SOLVENT DENSITY: 6.97 VOC LE: 3.7 VOC AP: 3.5 FLASH POINT: 20 °F to below 73 °F H: 2 F: 3 R: 0 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

8989S™ 2,4-pentanedione, Dibutyl tin dilaurate **GAL WT: 8.16 WT PCT SOLIDS: 5.00 VOL PCT SOLIDS: 4.68 SOLVENT DENSITY: 8.13 VOC LE: 7.8 VOC AP: 7.8 FLASH POINT: 73 °F to below 100 °F H: 2 F: 3 R: 0 OSHA STORAGE: IC TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

EZ-3460S™ 2-ethylhexyl acetate, Acetone, Acrylic polymer-A, Acrylic resin, Butyl acetate, Heptane, Hydrotreated heavy naphtha (petroleum), Isopropyl alcohol, Methyl amyl ketone, Methyl isoamyl ketone **GAL WT: 7.86 WT PCT SOLIDS: 49.48 VOL PCT SOLIDS: 41.51 SOLVENT DENSITY: 6.80 VOC LE: 3.8 VOC AP: 3.6 FLASH POINT: 20 °F to below 73 °F H: 2 F: 3 R: 0 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

EZ-3461S™ Butyl acetate, Ethyl acetate, Ethylene glycol monobutyl ether acetate(4%*^o@), Methyl acetate, Polyisocyanate **GAL WT: 9.10 WT PCT SOLIDS: 76.44 VOL PCT SOLIDS: 71.56 SOLVENT DENSITY: 7.54 VOC LE: 2.1 VOC AP: 2.1 FLASH POINT: 20 °F to below 73 °F H: 2 F: 3 R: 0 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

RKP27687™ Acetone, Amorphous silica, Polycaprolactone diol, Polyester resin-A, Propoxypropanol, T-butyl acetate **GAL WT: 8.69 WT PCT SOLIDS: 56.70 VOL PCT SOLIDS: 47.44 SOLVENT DENSITY: 7.16 VOC LE: 3.6 VOC AP: 3.5 VOC LE (TBAC): 0.9 VOC AP (TBAC): 0.5 FLASH POINT: 20 °F to below 73 °F H: 2 F: 3 R: 0 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

RKP33093™ Acetone, Amorphous silica - precipitated, Butyl acetate, Ethylbenzene(0.4%*^o@), Methyl acetate, Methyl ethyl ketone, Polyester resin-C, Toluene(1%*^o@), Xylene(2%*^o@) **GAL WT: 8.88 WT PCT SOLIDS: 50.85 VOL PCT SOLIDS: 42.33 SOLVENT DENSITY: 7.57 VOC LE: 2.0 VOC AP: 1.2 FLASH POINT: Below 20 °F H:**

2 F: 3 R: 0 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO

VGP28269™ Butyl acetate, Dibutyl tin dilaurate, Methyl amyl ketone GAL WT: 7.06 WT PCT SOLIDS: 1.15 VOL PCT SOLIDS: 0.93 SOLVENT DENSITY: 7.06 VOC LE: 7.0 VOC AP: 7.0 FLASH POINT: 73 °F to below 100 °F H: 2 F: 3 R: 0 OSHA STORAGE: IC TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO

Footnotes:

TSCA: in compliance In compliance with TSCA Inventory requirements for commercial purposes.

ACGIH American Conference of Governmental Industrial Hygienists.

IARC International Agency for Research on Cancer.

NTP National Toxicology Program.

OSHA Occupational Safety and Health Administration.

PNOR Particles not otherwise regulated.

PNOC Particles not otherwise classified.

STEL Short term exposure limit.

TWA Time-weighted average.

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

TBAC is not universally recognized as an exempt solvent.

Users should consult the applicable regulations for their region.

All products denoted with TM or R are trademarks or registered trademarks of Axalta Coating Systems, LLC and all affiliates.

* = Section 313 Supplier Notification: These chemicals are subject to the reporting requirements of Section 313 of the Emergency planning and Right-to-Know act of 1986 and of 40 CFR 372.

@ = Listed as a Clean Air Act Hazardous Air Pollutant.

= EPCRA Section 302 - Extremely hazardous substances.

Notice:

The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Product Manager: Refinish Sales

Prepared by: Y. B. Yarbrough

1. Identification of the substance/mixture and of the company/undertaking

Manufacturer: Axalta Coating Systems, LLC
1007 Market Street, D-13111
Wilmington, DE 19898

Telephone: Product information: (800) 438-3876
Medical emergency: (855) 274-5698
Transportation emergency: (800) 424-9300 (CHEMTREC)

Product: **Imron® Activators and Additives**

DOT Shipping Name: See DOT Addendum.

Hazardous Materials Information: See Section 10.

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2. Composition/information on ingredients

INGREDIENTS	CAS #	VAPOR PRESSURE	EXPOSURE LIMITS
1,2,4-trimethyl benzene	95-63-6	7.0@44.4 °C	A 25.0 ppm, O 25.0 ppm
1,3-propanediol, homo polymer	345260-48-2	None	A None, O None
1,6-hexamethylene diisocyanate	822-06-0	0.0@25.0 °C	A 5.0 ppb, O None
2,4-pentanedione	123-54-6	9.0	A 25.0 ppm Skin, D 5.0 ppm 8 & 12 hour TWA, O None
2-ethylhexyl acetate	103-09-3	0.5	A None, O None
4-chlorobenzotrifluoride	98-56-6	7.6@25.0 °C	D 20.0 ppm 8 & 12 hour TWA, A None, O None
Acetone	67-64-1	247.0@68.0 °F	A 750.0 ppm 15 min STEL, A 500.0 ppm, O 1000.0 ppm, D 500.0 ppm 8 & 12 hour TWA
Acrylic polymer	Not Avail	None	A None, O None
Aliphatic polyisocyanate resin	28182-81-2	None	S 0.5 mg/m3, A None, O None
Aluminum hydroxide	21645-51-2	None	A 1.0 mg/m3, O None
Amorphous silica	7631-86-9	None	A 3.0 mg/m3 Respirable Dust, O 20.0 mppcf, D 3.0 mg/m3, D 6.0 mg/m3
Aromatic hydrocarbon	64742-95-6	10.0@25.0 °C	D 50.0 ppm 8 & 12 hour TWA, A None, O None
Bis(1,2,2,6,6-pentamethyl-4-piperidiny) sebacate	41556-26-7	None	A None, O None
Butyl acetate	123-86-4	15.0	A 200.0 ppm 15 min STEL, A 150.0 ppm, O 150.0 ppm
C.i. pigment red 254	84632-65-5	None	A None, O None
C.i. pigment yellow 154	68134-22-5	None	A None, O None
Carbon black	1333-86-4	None	A 3.0 mg/m3, O 3.5 mg/m3, D 0.5 mg/m3 8 & 12 hour TWA
Dibutyl tin dilaurate	77-58-7	<10.0	A 0.2 mg/m3 15 min STEL Sn, A 0.1 mg/m3 Sn, O 0.1 mg/m3 Sn
Ethyl acetate	141-78-6	100.0	A 400.0 ppm, O 400.0 ppm
Ethylbenzene	100-41-4	7.0	A 20.0 ppm, O 100.0 ppm, D 25.0 ppm 8 & 12 hour TWA
Ethylene glycol monobutyl ether acetate	112-07-2	0.3	A 20.0 ppm, D 20.0 ppm 8 & 12 hour TWA, O None
Iron hydroxide	20344-49-4	None	A None, O None
Iron oxide	1309-37-1	None	A 5.0 mg/m3 Respirable Dust, O 10.0 mg/m3, D 3.0 mg/m3
Isoindolinone pigment	36888-99-0	None	A None, O None
Methyl acetate	79-20-9	179.5@68.0 °F	A 250.0 ppm 15 min STEL, A 200.0 ppm, O 200.0 ppm
Monoazo pigment	12236-62-3	None	A 10.0 mg/m3 inhalable dust particulate, O 15.0 mg/m3 Total Dust, O 5.0 mg/m3 Respirable Dust
Organotin compound	Not Avail	None	A 0.1 mg/m3 Skin Sn, O 0.1 mg/m3 Skin Sn
Phthalocyanine blue pigment	147-14-8	None	A 10.0 mg/m3 inhalable dust PNOC, A 3.0 mg/m3 respirable particulate PNOC, O 15.0 mg/m3 Total Dust PNOR, O 5.0 mg/m3 TWA Respirable Dust PNOR
Phthalocyanine green	1328-53-6	None	A 3.0 mg/m3 TWA Respirable Dust, A 10.0 mg/m3 TWA inhalable dust, O 15.0 mg/m3 TWA Total Dust, O 5.0 mg/m3 TWA Respirable Dust
Polyester resin	129922-22-1	None	A None, O None
Polyisocyanate	28182-81-2	None	A None, O None
Polyisocyanate based on hdi	Not Avail	None	A None, O None
Propylene glycol monomethyl ether acetate	108-65-6	3.8	D 30.0 ppm 15 min TWA, A None, O None
Quinacridone pigment	1047-16-1	None	A 10.0 mg/m3 inhalable dust, O 15.0 mg/m3 Total Dust PNOR, O 5.0 mg/m3 Respirable Dust, D 10.0 mg/m3 Total Dust

INGREDIENTS	CAS #	VAPOR PRESSURE	EXPOSURE LIMITS
Reactive diluent e	Not Avail	None	A None, O None
Silicone resin	9016-00-6	7.0	A None, O None
T-butyl acetate	540-88-5	None	A 200.0 ppm, O 200.0 ppm
Titanium dioxide	13463-67-7	None	O 15.0 mg/m ³ Total Dust, D 10.0 mg/m ³ 8 & 12 hour TWA Total Dust, D 5.0 mg/m ³ 8 & 12 hour TWA Respirable Dust, A None
Xylene	1330-20-7	8.0@25.0 °C	A 150.0 ppm 15 min STEL, A 100.0 ppm, O 100.0 ppm, D 100.0 ppm 8 & 12 hour TWA

*A=ACGIH, O=OSHA, D=DuPont, S=Suppliers. Limits are 8 hour TWA unless otherwise specified. Vapor pressure @ 20° C unless otherwise noted. D=DuPont, Results obtained from E. I. du Pont de Nemours and Company.

3. Hazards identification

Potential Health Effects:

Inhalation:

May cause nose and throat irritation. May cause nervous system depression, characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. If this product contains or is mixed with an isocyanate activator/hardener, the following health effects may apply: Exposure to isocyanates may cause respiratory sensitization. This effect may be permanent. Symptoms include an asthma-like reaction with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Repeated overexposure to isocyanates may cause a decrease in lung function, which may be permanent. Individuals with lung or breathing problems or prior reactions to isocyanates must not be exposed to vapors or spray mist of this product.

Ingestion:

May result in gastrointestinal distress.

Skin or eye contact:

May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

Other Potential Health Effects in addition to those listed above:

1,6-hexamethylene diisocyanate

Overexposure may cause asthma-like reactions with shortness of breath, wheezing, cough, which may be permanent; or permanent lung sensitization. This effect may be delayed for several hours after exposure. The following medical conditions may be aggravated by exposure: asthma, skin disorders, respiratory disorders. Overexposure may cause damage to any of the following organs/systems: lungs, skin. Potential skin sensitizer that may cause allergic reactions and contact dermatitis resulting in severe irritation, dryness, and cracking of the skin.

2,4-pentanedione

2,4-pentanedione, a component of this product, is regulated by the U.S. EPA, under a significant new use rule. It is a violation of federal law to sell or use this product in consumer applications, including to private individuals, schools, and vocational schools. Can be absorbed through the skin in harmful amounts. Repeated exposures to high concentrations has caused adverse health effects in laboratory animals. These effects involved the central nervous system, immune system, and the red blood cell forming system. No effect was seen at 100 ppm. The odor is disagreeable at a few ppm. Repeated or prolonged skin contact may cause any of the following: skin sensitization. Skin or eye contact may cause any of the following: irritation. Overexposure of this substance may cause effects on any of the following organs/systems: central nervous system, lungs, upper respiratory system, thymus.

4-chlorobenzotrifluoride

Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: skin. Prolonged or repeated exposure may cause damage to any of the following organs/systems: kidneys, liver, thyroid. Potential skin sensitizer that may cause allergic reactions and contact dermatitis resulting in severe irritation, dryness, and cracking of the skin. Ingestion may cause any of the following: gastrointestinal irritation. Eye contact may cause any of the following: permanent eye injury. Inhalation may cause any of the following: stupor (central nervous system depression), respiratory tract irritation.

Acetone

The following medical conditions may be aggravated by exposure: lung disease, eye disorders, skin disorders. Overexposure may cause damage to any of the following organs/systems: blood, central nervous system, eyes, kidneys, liver, respiratory system, skin.

Aliphatic polyisocyanate resin

Overexposure may cause asthma-like reactions with shortness of breath, wheezing, cough, which may be permanent; or permanent lung sensitization. This effect may be delayed for several hours after exposure. The following medical conditions may be aggravated by exposure: asthma, skin disorders, respiratory disorders. Potential skin sensitizer that may cause allergic reactions and contact dermatitis resulting in severe irritation, dryness, and cracking of the skin.

Aromatic hydrocarbon

The following medical conditions may be aggravated by exposure: skin disorders. Laboratory studies with rats have shown that petroleum distillates can cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown a significant increase of kidney damage or an increase in kidney or liver tumors.

Butyl acetate

May cause abnormal liver function. The following medical conditions may be aggravated by exposure: respiratory system. Tests for embryotoxic activity in animals has been inconclusive. Rats exposed to very high airborne levels have exhibited high frequency hearing deficits. The significance of this to man is unknown. Has been toxic to the fetus in laboratory animals at doses that are toxic to the mother.

C.i. pigment yellow 154

Inhalation may cause any of the following: respiratory tract irritation. Skin or eye contact may cause any of the following: irritation.

Carbon black

Is an IARC, NTP or OSHA carcinogen. Has shown carcinogenic activity in laboratory animals at high doses. Significance to man is unknown. The following medical conditions may be aggravated by exposure: asthma, respiratory disease. WARNING: This chemical is known to the State of California to cause cancer.

Ethyl acetate

Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: eyes, respiratory system, skin. Tests in laboratory animals have shown effects on any of the following organs/systems: blood, kidneys, liver.

Ethylbenzene

Is an IARC, NTP or OSHA carcinogen. Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: central nervous system, kidneys, liver, lungs. Recurrent overexposure may result in liver and kidney injury. Studies in laboratory animals have shown reproductive, embryotoxic and developmental effects. WARNING: This chemical is known to the State of California to cause cancer.

Ethylene glycol monobutyl ether acetate

May destroy red blood cells. May cause abnormal kidney function. May cause temporary upper respiratory and/or lung irritation with cough, difficult breathing, or shortness of breath. The following medical conditions may be aggravated by exposure: central nervous system, gastrointestinal system, kidneys, liver, dermatitis. Can be absorbed through the skin in harmful amounts. Overexposure may cause damage to any of the following organs/systems: blood, kidneys, liver. Ingestion may cause headache, nausea, vomiting, dizziness, and drowsiness.

Polyisocyanate

Overexposure may cause asthma-like reactions with shortness of breath, wheezing, cough, which may be permanent; or permanent lung sensitization. This effect may be delayed for several hours after exposure. The following medical conditions may be aggravated by exposure: asthma, skin disorders, respiratory disorders. Potential skin sensitizer that may cause allergic reactions and contact dermatitis resulting in severe irritation, dryness, and cracking of the skin.

Propylene glycol monomethyl ether acetate

Recurrent overexposure may result in liver and kidney injury.

T-butyl acetate

Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: central nervous system, eyes, gastrointestinal system, liver, skin.

Titanium dioxide

Is an IARC, NTP or OSHA carcinogen. In a lifetime inhalation test, lung cancers were found in some rats exposed to 250 mg/m³ respirable titanium dust. Analysis of the titanium dioxide concentrations in the rat's lungs showed that the lung clearance mechanism was overwhelmed and that the results at the massive 250 mg/m³ level are not relevant to the workplace. Results of a DuPont epidemiology study showed that employees who had been exposed to Titanium Dioxide were at no greater risk of developing lung cancer than were employees who had not been exposed to Titanium dioxide. No pulmonary fibrosis was found in any of the employees and no association was observed between Titanium dioxide exposure and chronic respiratory disease or x-ray abnormalities. Based on the results of this study DuPont concludes that titanium dioxide will not cause lung cancer or chronic respiratory disease in humans at concentrations experienced in the workplace.'

Xylene

Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: bone marrow, cardiovascular system, central nervous system, kidneys, liver, lungs. Recurrent overexposure may result in liver and kidney injury. High exposures may produce irregular heart beats. Canada classifies Xylene as a developmental toxin as high exposures to xylenes in some animal studies have been reported to cause health effects on the developing fetus/embryo. These effects were often at levels toxic to the adult animal. The significance of these effects to humans is not known. Repeated or prolonged skin contact may cause any of the following: irritation, dryness, cracking of the skin.

4. First aid measures

First Aid Procedures:

Inhalation:

If affected by inhalation of vapor or spray mist, move to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing difficulty persists, or occurs later, consult a physician.

Ingestion:

In the unlikely event of ingestion, DO NOT INDUCE VOMITING. Call a physician immediately and have names of ingredients available.

Skin or eye contact:

In case of eye contact, immediately flush with plenty of water for at least 15 minutes; call a physician. In case of skin contact, wash thoroughly with soap and water. If irritation occurs, contact a physician.

5. Firefighting measures

Flash Point (Closed Cup):

See Section 11 for exact values.

Flammable Limits: LFL 0.9 % UFL 11.6 %

Extinguishing Media:

Universal aqueous film-forming foam, carbon dioxide, dry chemical.

Fire Fighting Procedures:

Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fog nozzles may be used to prevent pressure build-up.

Fire and Explosion Hazards:

For flammable liquids, vapor/air will ignite when an ignition source is present. In other cases, when heated above the flash point, emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mists or sprays may be flammable at temperatures below the flash point.

6. Accidental release measures

Procedures for cleaning up spills or leaks:

Ventilate area. Remove sources of ignition. Prevent skin and eye contact and breathing of vapor. If material does not contain or is not mixed with an isocyanate activator/hardener: Wear a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH approved TC-23C), eye protection, gloves and protective clothing. Confine, remove with inert absorbent, and dispose of properly. If the material contains, or is mixed with an isocyanate activator/hardener: Wear a positive-pressure, supplied-air respirator (NIOSH approved TC-19C), eye protection, gloves and protective clothing. Pour liquid decontamination solution over the spill and allow to sit at least 10 minutes. Typical decontamination solutions for isocyanate containing materials are: 20% Surfactant (Tergitol TMN 10) and 80% Water OR 0-10% Ammonia, 2-5% Detergent and Water (balance). Pressure can be generated. Do not seal waste containers for 48 hours to allow CO2 to vent. After 48 hours, material may be sealed and disposed of properly.

Ecological information:

There is no data available on the product. The product should not be allowed to enter drains, water courses or the soil.

7. Handling and storage

Precautions to be taken in handling and storing:

Observe label precautions. If combustible (flashpoint between 38-93 deg C or 100 - 200 deg F), keep away from heat, sparks and flame. If flammable (flashpoint less than 38 deg C or 100 deg F), also keep away from static discharges and other sources of ignition. If material is extremely flammable (flashpoint less than - 8 deg C or 20 deg F) or flammable, VAPORS MAY IGNITE EXPLOSIVELY OR CAUSE FLASH FIRE, respectively. Vapors may spread long distances. Prevent buildup of vapors. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Do not store above 49 deg C or 120 deg F. If product is waterbased, do not freeze.

Other precautions:

If material is a coating: do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves. Combustible dust clouds may be created where operations produce fine material (dust). Avoid formation of significant deposits of material as they may become airborne and form combustible dust clouds. Handling and processing operations should be conducted in accordance with best practices (e.g.NFPA-654).

8. Exposure controls/personal protection

Ventilation:

Provide sufficient ventilation in volume and pattern to keep contaminants below applicable exposure limits.

Respiratory protection:

Do not breathe vapors or mists. If this product contains isocyanates or is used with an isocyanate activator/hardener, wear a positive-pressure, supplied- air respirator (NIOSH approved TC-19C) during spray application (or brush and roll application in poorly ventilated areas) and until all vapors and spray mist are exhausted. For mixing and brush and roll application in well ventilated areas or, if the product does not contain or is not mixed with an isocyanate activator/hardener, a properly fitted air-purifying respirator with organic vapor cartridges (NIOSH TC-23C) may be used until all vapors are exhausted. In addition, for spray application when product does not contain or is not mixed with an isocyanate activator/hardener, a particulate filter (NIOSH TC-84A) is needed with the organic vapor cartridges until all vapors and spray mist are exhausted. Follow respirator manufacturer's directions for respirator use. Do not permit anyone without protection in the painting area. Individuals with history of lung or breathing problems or prior reaction to isocyanates should not use or be exposed to vapor or spray mist if product contains or is mixed with isocyanate activators/hardeners.

Protective equipment:

Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

Skin and body protection:

Neoprene gloves and coveralls are recommended. Desirable in all industrial situations. Goggles are preferred to prevent eye irritation. If safety glasses are substituted, include splash guard or side shields.

9. Physical and chemical properties

Evaporation rate	Slower than Ether
Water solubility	NIL
Vapour density	Heavier than air
Approx. Boiling Range (°C)	77 – 203 °C
Approx. Freezing Range (°C)	-84 °C
Gallon Weight (lbs/gal)	7.24381 - 11.1495
Specific Gravity	0.87 - 1.34
Percent Volatile By Volume	0.19 - 100.00
Percent Volatile By Weight	0.00 - 99.73
Percent Solids By Volume	0.00 - 99.82
Percent Solids By Weight	0.00 - 99.84

10. Stability and reactivity

Stability:

Stable

Incompatibility (materials to avoid):

None reasonably foreseeable

Hazardous decomposition products:

CO, CO₂, smoke, and oxides of any heavy metals that are reported in "Composition, Information on Ingredients" section.

Hazardous Polymerization:

Will not occur.

Sensitivity to Static Discharge:

For flammable materials (flashpoint less than 38 deg C or 100 deg F) and combustibles (flashpoint between 38- 93 deg C or 100-200 deg F) if heated above the flashpoint, solvent vapors in air may explode if static grounding and bonding is not used during transfer of this product.

Sensitivity to Mechanical Impact:

None known.

11. Additional Information

189S™ 2,4-pentanedione(99.7%) GAL WT: 8.14 WT PCT SOLIDS: 0.27 VOL PCT SOLIDS: 0.25 SOLVENT DENSITY: 8.14 VOC LE: 8.1 VOC AP: 8.1 FLASH POINT: 73 °F to below 100 °F H: 2 F: 3 R: 0 OSHA STORAGE: IC TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO

193S™ Aliphatic polyisocyanate resin(74.9%), Butyl acetate(6.9%), Ethyl acetate(13.8%), Ethylene glycol monobutyl ether acetate(4.3%*[@]) GAL WT: 9.09 WT PCT SOLIDS: 74.99 VOL PCT SOLIDS: 69.80 SOLVENT DENSITY: 7.53 VOC LE: 2.3 VOC AP: 2.3 FLASH POINT: 20 °F to below 73 °F H: 3 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO

389S™ 2,4-pentanedione(99.0%), Dibutyl tin dilaurate(1.0%) GAL WT: 8.14 WT PCT SOLIDS: 1.00 VOL PCT SOLIDS: 0.94 SOLVENT DENSITY: 8.14 VOC LE: 8.1 VOC AP: 8.1 FLASH POINT: 73 °F to below 100 °F H: 2 F: 3 R: 0 OSHA STORAGE: IC TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO

9M01™ 4-chlorobenzotrifluoride(99.0%) GAL WT: 11.15 WT PCT SOLIDS: 0.00 VOL PCT SOLIDS: 0.00 SOLVENT DENSITY: 11.15 VOC LE: 0.0 VOC AP: 0.0 FLASH POINT: 100 °F - 141 °F H: 1 F: 2 R: 1 OSHA STORAGE: II TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO

9T00-A™ 4-chlorobenzotrifluoride(5.0%), Aliphatic polyisocyanate resin(94.9%) GAL WT: 9.83 WT PCT SOLIDS: 95.00 VOL PCT SOLIDS: 95.59 SOLVENT DENSITY: 11.16 VOC LE: 0.0 VOC AP: 0.0 FLASH POINT: 73 °F to below 100 °F H: 3 F: 3 R: 1 OSHA STORAGE: IC TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO

9T01™ 4-chlorobenzotrifluoride(6.4%), Acetone(1.2%), Acrylic polymer(23.9%), Aluminum hydroxide(1.0%), Amorphous silica(1.6%), Polyester resin(9.8%), T-butyl acetate(25.5%), Titanium dioxide(26.2%) GAL WT: 10.66 WT PCT SOLIDS: 65.36 VOL PCT SOLIDS: 51.97 SOLVENT DENSITY: 7.68 VOC LE: 3.1 VOC AP: 2.9 VOC LE (TBAC): 0.3 VOC AP (TBAC): 0.2 FLASH POINT: 20 °F to below 73 °F H: 1 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO

9T02™ 4-chlorobenzotrifluoride(13.0%), Acetone(1.9%), Acrylic polymer(35.6%), Carbon black(1.5%), Polyester resin(15.1%), T-butyl acetate(25.6%) GAL WT: 8.69 WT PCT SOLIDS: 56.82 VOL PCT SOLIDS: 53.39 SOLVENT DENSITY: 8.05 VOC LE: 2.8 VOC AP: 2.4 VOC LE (TBAC): 0.4 VOC AP (TBAC): 0.2 FLASH POINT: 20 °F to below 73 °F H: 1 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO

9T03™ 4-chlorobenzotrifluoride(1.4%), Acetone(1.6%), Acrylic polymer(35.4%), C.i. pigment yellow 154(10.2%), Polyester resin(15.0%), T-butyl acetate(29.4%) GAL WT: 8.64 WT PCT SOLIDS: 64.69 VOL PCT SOLIDS: 58.10 SOLVENT DENSITY: 7.28 VOC LE: 2.9 VOC AP: 2.8 VOC LE (TBAC): 0.4 VOC AP (TBAC): 0.2 FLASH POINT: 20 °F to below 73 °F H: 1 F: 3 R: 0 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO

9T04™ 4-chlorobenzotrifluoride(9.8%), Acetone(1.9%), Acrylic polymer(33.6%), Polyester resin(12.7%), Quinacridone pigment(8.0%), T-butyl acetate(27.5%) GAL WT: 8.77 WT PCT SOLIDS: 58.57 VOL PCT SOLIDS: 53.63 SOLVENT DENSITY: 7.83 VOC LE: 2.9 VOC AP: 2.6 VOC LE (TBAC): 0.3 VOC AP (TBAC): 0.2 FLASH POINT: 20 °F to below 73 °F H: 1 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO

9T05™ 4-chlorobenzotrifluoride(15.1%), Acetone(1.4%), Acrylic polymer(32.2%), Isoindolinone pigment(7.4%), Polyester resin(13.2%), T-butyl acetate(24.5%) GAL WT: 8.90 WT PCT SOLIDS: 56.33 VOL PCT SOLIDS: 52.58 SOLVENT DENSITY: 8.20 VOC LE: 2.8 VOC AP: 2.4 VOC LE (TBAC): 0.4 VOC AP (TBAC): 0.2 FLASH POINT: 20 °F to below 73 °F H: 1 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO

9T06™ 4-chlorobenzotrifluoride(10.3%), Acetone(1.5%), Acrylic polymer(30.0%), C.i. pigment red 254(12.9%), Polyester resin(11.9%), T-butyl acetate(27.8%) GAL WT: 8.90 WT PCT SOLIDS: 58.28 VOL PCT SOLIDS: 52.85 SOLVENT DENSITY: 7.87 VOC LE: 3.0 VOC AP: 2.7 VOC LE (TBAC): 0.3 VOC AP (TBAC): 0.2 FLASH POINT: 20 °F to below 73 °F H: 1 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO

9T07™ 4-chlorobenzotrifluoride(14.7%), Acetone(1.6%), Acrylic polymer(35.7%), Phthalocyanine blue pigment(3.5%), Polyester resin(12.8%), T-butyl acetate(25.8%) GAL WT: 8.79 WT PCT SOLIDS: 55.82 VOL PCT SOLIDS: 52.35 SOLVENT DENSITY: 8.15 VOC LE: 2.8 VOC AP: 2.4 VOC LE (TBAC): 0.3 VOC AP (TBAC): 0.2 FLASH POINT: 20 °F to below 73 °F H: 1 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO

9T08™ 4-chlorobenzotrifluoride(13.1%), Acetone(1.2%), Acrylic polymer(27.9%), Iron hydroxide(18.5%), Polyester resin(9.8%), T-butyl acetate(25.0%) GAL WT: 9.99 WT PCT SOLIDS: 58.94 VOL PCT SOLIDS: 49.45 SOLVENT DENSITY: 8.11 VOC LE: 3.1 VOC AP: 2.7 VOC LE (TBAC): 0.3 VOC AP (TBAC): 0.2 FLASH POINT: 20 °F to below 73 °F H: 1 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO

9T09™ 4-chlorobenzotrifluoride(10.9%), Acetone(1.4%), Acrylic polymer(35.6%), Phthalocyanine green(4.3%), Polyester resin(12.5%), T-butyl acetate(28.5%) **GAL WT: 8.74 WT PCT SOLIDS: 56.27 VOL PCT SOLIDS: 51.51 SOLVENT DENSITY: 7.88 VOC LE: 3.1 VOC AP: 2.7 VOC LE (TBAC): 0.5 VOC AP (TBAC): 0.3 FLASH POINT: 20 °F to below 73 °F H: 1 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

9T10™ 1,3-propanediol, homo polymer(2.7%), 2,4-pentanedione(1.3%), 4-chlorobenzotrifluoride(4.7%), Acetone(4.3%), Acrylic polymer(30.4%), Bis(1,2,2,6,6-pentamethyl-4-piperidiny) sebacate(1.0%), Polyester resin(16.9%), Quinacridone pigment(9.3%), T-butyl acetate(25.2%) **GAL WT: 8.64 WT PCT SOLIDS: 63.14 VOL PCT SOLIDS: 57.42 SOLVENT DENSITY: 7.47 VOC LE: 2.7 VOC AP: 2.4 VOC LE (TBAC): 0.4 VOC AP (TBAC): 0.2 FLASH POINT: 20 °F to below 73 °F H: 1 F: 3 R: 0 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

9T11™ 4-chlorobenzotrifluoride(6.4%), Acetone(1.2%), Acrylic polymer(23.9%), Aluminum hydroxide(1.0%), Amorphous silica(1.6%), Polyester resin(9.8%), T-butyl acetate(25.5%), Titanium dioxide(26.1%) **GAL WT: 10.65 WT PCT SOLIDS: 65.35 VOL PCT SOLIDS: 51.96 SOLVENT DENSITY: 7.68 VOC LE: 3.1 VOC AP: 2.9 VOC LE (TBAC): 0.3 VOC AP (TBAC): 0.2 FLASH POINT: 20 °F to below 73 °F H: 1 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

9T12™ 2,4-pentanedione(1.2%), 4-chlorobenzotrifluoride(12.2%), Acetone(1.5%), Acrylic polymer(31.3%), Iron oxide(10.7%), Polyester resin(14.0%), T-butyl acetate(22.9%) **GAL WT: 9.52 WT PCT SOLIDS: 60.75 VOL PCT SOLIDS: 53.80 SOLVENT DENSITY: 8.09 VOC LE: 2.8 VOC AP: 2.4 VOC LE (TBAC): 0.4 VOC AP (TBAC): 0.2 FLASH POINT: 20 °F to below 73 °F H: 1 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

9T13™ 4-chlorobenzotrifluoride(8.5%), Acetone(1.2%), Acrylic polymer(30.5%), Monoazo pigment(16.3%), Polyester resin(10.9%), T-butyl acetate(26.2%) **GAL WT: 9.01 WT PCT SOLIDS: 60.77 VOL PCT SOLIDS: 54.67 SOLVENT DENSITY: 7.79 VOC LE: 2.9 VOC AP: 2.7 VOC LE (TBAC): 0.5 VOC AP (TBAC): 0.3 FLASH POINT: 20 °F to below 73 °F H: 1 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

FG-0162™ 2-ethylhexyl acetate(3.8%), Acetone(1.5%), Aliphatic polyisocyanate resin(74.9%), Butyl acetate(11.0%), Propylene glycol monomethyl ether acetate(8.7%) **GAL WT: 9.08 WT PCT SOLIDS: 75.00 VOL PCT SOLIDS: 69.75 SOLVENT DENSITY: 7.50 VOC LE: 2.2 VOC AP: 2.1 FLASH POINT: 20 °F to below 73 °F H: 3 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

FG-062™ 2-ethylhexyl acetate(3.8%), Aliphatic polyisocyanate resin(74.9%), Butyl acetate(12.5%), Propylene glycol monomethyl ether acetate(8.7%) **GAL WT: 9.10 WT PCT SOLIDS: 75.00 VOL PCT SOLIDS: 69.90 SOLVENT DENSITY: 7.55 VOC LE: 2.3 VOC AP: 2.3 FLASH POINT: 20 °F to below 73 °F H: 3 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

FG-1333™ 4-chlorobenzotrifluoride(2.5%), Aliphatic polyisocyanate resin(94.9%), Methyl acetate(2.5%) **GAL WT: 9.73 WT PCT SOLIDS: 95.00 VOL PCT SOLIDS: 94.70 SOLVENT DENSITY: 9.18 VOC LE: 0.0 VOC AP: 0.0 FLASH POINT: 141 °F - 200 °F H: 3 F: 2 R: 1 OSHA STORAGE: IIIA TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

FG-1633™ Aliphatic polyisocyanate resin(94.9%), Butyl acetate(2.5%), T-butyl acetate(2.5%) **GAL WT: 9.60 WT PCT SOLIDS: 95.00 VOL PCT SOLIDS: 93.39 SOLVENT DENSITY: 7.26 VOC LE: 0.5 VOC AP: 0.5 VOC LE (TBAC): 0.2 VOC AP (TBAC): 0.2 FLASH POINT: 20 °F to below 73 °F H: 3 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

FG-33321™ 4-chlorobenzotrifluoride(2.3%), Methyl acetate(1.6%), Polyisocyanate(96.0%) **GAL WT: 9.78 WT PCT SOLIDS: 96.04 VOL PCT SOLIDS: 95.91 SOLVENT DENSITY: 9.45 VOC LE: 0.0 VOC AP: 0.0 FLASH POINT: 20 °F to below 73 °F H: 1 F: 3 R: 0 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

FG-572™ 1,6-hexamethylene diisocyanate(0.1%*), Aliphatic polyisocyanate resin(94.6%), Polyisocyanate based on hdi(2.1%), Reactive diluent e(2.8%) **GAL WT: 9.69 WT PCT SOLIDS: 99.84 VOL PCT SOLIDS: 99.82 SOLVENT DENSITY: 8.23 VOC LE: 0.0 VOC AP: 0.0 FLASH POINT: Above 200 °F H: 3 F: 1 R: 1 OSHA STORAGE: IIIB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

FG-633™ Aliphatic polyisocyanate resin(94.9%), Butyl acetate(5.0%) **GAL WT: 9.61 WT PCT SOLIDS: 95.00 VOL PCT SOLIDS: 93.46 SOLVENT DENSITY: 7.34 VOC LE: 0.5 VOC AP: 0.5 FLASH POINT: 100 °F - 141 °F H: 3 F: 2 R: 1 OSHA STORAGE: II TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

RT002P™ Ethylbenzene(18.8%*), Silicone resin(1.5%), Xylene(79.2%*) **GAL WT: 7.24 WT PCT SOLIDS: 1.50 VOL PCT SOLIDS: 1.19 SOLVENT DENSITY: 7.22 VOC LE: 7.1 VOC AP: 7.1 FLASH POINT: 73 °F to below 100 °F H: 2 F: 3 R: 0 OSHA STORAGE: IC TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: YES**

VG-6005™ 1,2,4-trimethyl benzene(1.7%*), Aliphatic polyisocyanate resin(89.9%), Aromatic hydrocarbon(2.6%), Butyl acetate(5.0%) **GAL WT: 9.45 WT PCT SOLIDS: 90.00 VOL PCT SOLIDS: 87.10 SOLVENT DENSITY: 7.29 VOC LE: 0.9 VOC AP: 0.9 FLASH POINT: 100 °F - 141 °F H: 3 F: 2 R: 1 OSHA STORAGE: II TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: YES**

VG-610™ Aliphatic polyisocyanate resin(74.9%), Butyl acetate(6.9%), Ethyl acetate(13.8%), Ethylene glycol monobutyl ether acetate(4.3%*) **GAL WT: 9.09 WT PCT SOLIDS: 74.96 VOL PCT SOLIDS: 69.77 SOLVENT DENSITY: 7.53 VOC LE: 2.3 VOC AP: 2.3 FLASH POINT: 20 °F to below 73 °F H: 3 F: 3 R: 1 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

VG-805™ 2,4-pentanedione(98.0%), Organotin compound(2.0%) **GAL WT: 8.19 WT PCT SOLIDS: 2.00 VOL PCT SOLIDS: 1.42 SOLVENT DENSITY: 8.14 VOC LE: 8.0 VOC AP: 8.0 FLASH POINT: 73 °F to below 100 °F H: 2 F: 3 R: 0 OSHA STORAGE: IC TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO**

VGM-6005™ 1,2,4-trimethyl benzene(1.7%*), Aliphatic polyisocyanate resin(89.9%), Aromatic hydrocarbon(2.6%), Butyl acetate(5.0%) **GAL WT: 9.45 WT PCT SOLIDS: 90.00 VOL PCT SOLIDS: 87.10 SOLVENT DENSITY: 7.29 VOC LE: 0.9 VOC AP: 0.9 FLASH POINT: 100 °F - 141 °F H: 3 F: 2 R: 1 OSHA STORAGE: II TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: YES**

VGy611™ Aliphatic polyisocyanate resin(74.9%), Butyl acetate(6.9%), Ethyl acetate(13.8%), Ethylene glycol monobutyl ether acetate(4.3%*) **GAL WT: 9.09 WT PCT SOLIDS: 74.99 VOL PCT SOLIDS: 69.80 SOLVENT DENSITY: 7.53 VOC LE: 2.3 VOC AP: 2.3 FLASH POINT: 20 °F to below 73 °F H: 3 F: 3 R: 1 OSHA STORAGE:**

IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO

VHY691™ Dibutyl tin dilaurate(1.6%), Ethyl acetate(98.3%) GAL WT: 7.54 WT PCT SOLIDS: 1.55 VOL PCT SOLIDS: 1.34 SOLVENT DENSITY: 7.52 VOC LE: 7.4
VOC AP: 7.4 FLASH POINT: 20 °F to below 73 °F H: 1 F: 3 R: 0 OSHA STORAGE: IB TSCA STATUS: In Compliance PHOTOCHEMICALLY REACTIVE: NO

Footnotes:

TSCA: in compliance In compliance with TSCA Inventory requirements for commercial purposes.

ACGIH American Conference of Governmental Industrial Hygienists.

IARC International Agency for Research on Cancer.

NTP National Toxicology Program.

OSHA Occupational Safety and Health Administration.

PNOR Particles not otherwise regulated.

PNOC Particles not otherwise classified.

STEL Short term exposure limit.

TWA Time-weighted average.

* VOC less exempt (theoretical) and VOC as packaged (theoretical) are based upon the VOC of the packaged material at the point of manufacture.

TBAC is not universally recognized as an exempt solvent.

Users should consult the applicable regulations for their region.

All products denoted with TM or R are trademarks or registered trademarks of Axalta Coating Systems, LLC and all affiliates.

* = Section 313 Supplier Notification: These chemicals are subject to the reporting requirements of Section 313 of the Emergency planning and Right-to-Know act of 1986 and of 40 CFR 372.

@ = Listed as a Clean Air Act Hazardous Air Pollutant.

= EPCRA Section 302 - Extremely hazardous substances.

Notice:

The information on this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Product Manager: Refinish Sales

Prepared by: Y. B. Yarbrough

Material Safety Data Sheet

Omni Specialty Packaging

For Compliance with OSHA 29 CFR 1910.1200 and ANSI Z400.1-1998

1. Product and Company Identification	
Product Name O'REILLY DEXRON® III/MERCON® AUTOMATIC TRANSMISSION FLUID	MSDS Code Number
Trade Name & Synonyms	Date of Last Revision 1/20/2007
Chemical Name	Manufacturer Omni Specialty Packaging
C.A.S. Number	Address 10399 Hwy. 1 Shreveport La. 71115
Grades or Minor Variant Identities	Information Telephone Number (318) 524-1100
	Foreign Emergency Telephone Number
Product Use (for Canada)	Emergency Telephone Number (318) 524-1100

2. Composition/Information on Ingredients			
Hazardous Components	C.A.S Number	Exposure Limits Oil Mist	%
Hydrotreated Heavy Paraffinic Petroleum Distillates	64742-54-7	5MG/M3	0-85
Severely Solvent Refined Heavy/Light Paraffinic Petroleum Oil	Mixture	5MG/M3	10-40
Additive Mixture	N/A	5MG/M3	0-15
Propriety additive	N/A	5MG/M3	0-5
OSHA Regulatory Status 29 CFR 1910.1200.			

3. Hazards Identification					
Emergency Overview					
This product is considered not hazardous under 29 CFR 1910.1200 (Hazard Communication).					
Routes of Exposure	Signs and Symptoms	Single, Repeated, or Lifetime Exposures	Severity (Mild, Moderate, Severe)	Acute and Chronic Health Effect(s)	Target Organ(s)
Eye	Eye contact may result in slight irritation and redness.				
Skin	Minimally irritating upon direct contact.	May cause irritation/dermatitis.			
Inhalation	Low hazard at standard temperatures and pressures. Inhalation of oil mist or fumes can cause irritation of the nose, throat and upper respiratory tract				
Ingestion	Don not ingest. May cause nausea, vomiting/diarrhea.				
Other	On rare occasions, prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as chronic lung inflammation. This condition is usually asymptomatic as a result of repeated small aspirations.				
Medical Conditions Aggravated by Exposure					
Personnel with pre-existing skin disorders should avoid contact with this product.					

MSDS – OMNI SPECIALTY PACKAGING

4. First Aid Measures			
Routes of Exposure	First Aid Instructions	Immediate Medical Attention	Delayed
Eye	Flush with large amount of water for 15 minutes. Get medical attention if eye irritation develops or persists.		
Skin	Wash with soap and water. Remove contaminated clothes and wash before reuse. Get medical attention if skin discolor develop.		
Inhalation	This material is not expected to present an inhalation exposure at ambient conditions		
Ingestion	Do not induce vomiting. Get immediate medical attention or advice.		
Other	Not available		
Note to Physicians (Treatment, Testing, and Monitoring) Not available			

5. Fire Fighting Measures																
Flashpoint Method:	°F	Flammable (Explosive) Limits in Air LEL UEL		Autoignition Temperature °F												
COC	330	Not determined	Not determined	N/A N/A												
Flame Propagation or Burning Rate (for solids)	Properties Contributing to Fire Intensity		Flammability Classification	<table border="1"> <thead> <tr> <th colspan="2">Hazard Rating</th> </tr> </thead> <tbody> <tr> <td>Health</td> <td>1</td> </tr> <tr> <td>Fire</td> <td>1</td> </tr> <tr> <td>Reactivity</td> <td>0</td> </tr> <tr> <td>Flammability</td> <td>1</td> </tr> <tr> <td>PPE</td> <td>B</td> </tr> </tbody> </table>	Hazard Rating		Health	1	Fire	1	Reactivity	0	Flammability	1	PPE	B
Hazard Rating																
Health	1															
Fire	1															
Reactivity	0															
Flammability	1															
PPE	B															
Not Available	Not Determined		Not Available													
Extinguishing Media	Extinguishing Media to Avoid		Reactions to Extinguishing Media													
Water fog, foam, CO ₂ , dry chemical	Not Available		Not Available													
Protection and Procedures for Firefighters																
Wear positive pressure self-contained breathing apparatus (SCUBA). Use water to cool containers exposed to flames. Structural firefighters' protective clothing will only provide limited protection.																
Unusual Fire and Explosion Hazards																
Mist or sprays may be flammable below the product normal flash point.																

6. Accidental Release Measures
Spill/Leak Clean-up Procedures and Equipment
Observing health hazards described above, ventilate area. Dike to contain spill. Pick up free liquid fro recycle and/or disposal. Residual liquid and/or solid can be absorbed on inert material. Keep from sewers and natural water.
Evacuation Procedures
Large spill * Consider initial downwind evacuate for at least 300 meters (1000 feet).
Fire * If tank, rail car or tank car is involved in a fire, isolate for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions.
Special Instructions
When using this material, do not eat, drink, or smoke. Wash thoroughly after handling. Keep away from animals and children.
Reporting Requirements
Spills that enter a water body must be reported immediately to the USEPA's National Response Center at (800)546-2972. Check with your local and state regulators regarding their reporting requirements.

7. Handling and Storage
Handling Practices and Warnings
Do not pressure, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode. See NFPA 30 and OSHA 1910.106 – flammable and combustible liquids.
Storage Practices and Warnings
Store away from heat, sparks, open flame, or strong oxidizing agents in closed and properly labeled containers. Empty containers retain product residue (liquid, and/or vapor) and can be dangerous.

8. Exposure Control/Personal Protection

Other Engineering controls	Ventilation	
N/A	Additional area ventilation or local exhaust may be required to maintain air concentrations below recommended limits.	
Routes of Entry:	Personal Protective Equipment (PPE) for Normal Use:	PPE for Emergencies
Eye/Face	Safety glasses or face shield where splashing is possible.	Full face shield
Skin	As needed to prevent repeated skin contact. Solvent resistant gloves should be used if needed.	
Inhalation	Not normally needed.	Respirator

9. Physical and Chemical Properties

Appearance	Red Liquid		Odor	Petroleum odor
Normal Physical State:	Boiling Point		N/A ° F	
<input checked="" type="checkbox"/> Liquid	<input type="checkbox"/> Gas	Melting Point		N/A ° F
<input type="checkbox"/> Solid	<input type="checkbox"/> (Other)	Freezing Point		<-54 ° C
Specific Gravity or Density (H ₂ O = 1)	Solubility in Water		pH	
0.86 –0.88	N/D		N/A	
Vapor Pressure (mm Hg.)	Vapor Density (AIR = 1)		Evaporation Rate (Butyl Acetate = 1)	
N/A	N/A		N/A	
Other	N/A			

10. Stability and Reactivity

Incompatibility (Materials to Avoid)				
strong oxidizing agents.				
Hazardous Products Produced During Decomposition				
Carbon monoxide, carbon dioxide, and oxides of boron and phosphorus.				
Hazardous Polymerization?	<input type="checkbox"/> May Occur	<input checked="" type="checkbox"/> Will Not Occur	Conditions to Avoid	
Stability?	<input checked="" type="checkbox"/> Stable	<input type="checkbox"/> Unstable	Conditions to Avoid Sources of ignition	

11. Toxicological Information

Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic Effects, Reproductive Effects, or Structure Activity Data

Acute Toxicity: Test on similar materials show a low order of acute oral and dermal toxicity.

Acute oral Effects: Test on similar materials indicates low order of acute toxicity.

Acute Inhalation Effects: Low acute toxicity expected on inhalation.

Skin Effects: Practically non-toxic if absorbed. Other similar highly refined products have not shown skin tumors in mouse skin painting studies.

Eye Irritation: Minimal irritation on contact. Eye irritation slightly or practically non-irritating base on similar products.

Carcinogenicity:

Skin: Not considered a potential carcinogen base on IP346 DMSO of less than 3.0 wt%

Genotoxicity: This product is considered non-mutagenic and has negative potential for tumor development based on from Modified Ames Assay, with Mutagenic Index of less than 1.0.

12. Ecological Information
<p>Toxicity, Environmental Fate, Physical/Chemical Data, or Other Data Supporting Environmental Hazard Statements</p> <p>If applied to leaves, this product may kill grasses and small plants by interfering with transpiration and respiration. This product is not toxic to fish but may coat gill structures resulting in suffocation if spilled in shallow, running water. Product may be moderately toxic to amphibians by preventing dermal respiration. This product may cause gastrointestinal distress to birds and mammals through ingestion during pelage grooming.</p>

13. Disposal Considerations
<p>Regulations</p> <p>Dispose in accordance with all local, state, and federal regulations. Keep this product out of sewers and waterways.</p>
<p>Note: State or local requirements may differ from federal regulations. Processing or using this product may make the information here inappropriate. Waste generators are responsible for waste classification, transport, and disposal.</p>

14. Transport Information		
<p>Regulated for shipping?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Proper Shipping Name</p> <p>N/A</p>	<p>Packing Group</p> <p>N/A</p>
<p>Do changes in quantity, packaging, or shipment method change product qualification?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Hazard Class</p> <p>N/A</p>	<p>Identification Number</p> <p>N/A</p>
<p>Other</p> <p>No Known</p>		

15. Regulatory Information

Federal Regulations (OSHA, TSCA, CERCLA, FIFRA, EPCRA, CAA, CWA, SDWA, CPSA, DEA, FDA/USDA, etc.)

State Regulations

U.S. Federal Regulatory Information:

CERCLA/SARA

302/303/304 Categories: Extremely Hazardous Substances No
(40 CFR 355 Appendix A)

311/312 Categories: Immediate (Acute) Health Effects No
(40 CFR 370) Delayed (Chronic) Health Effects No

Fire Hazard No

Sudden Release of Pressure Hazard No

Reactivity Hazard No

313 Categories: Toxic Chemicals (40 CFR 372) No

Clean Air Act: Hazardous Air Pollutants (HAPS) No

Clean Water Act: If spilled into navigable waters it is reportable to National Response Center, 800-424-8802
(40 CFR 116; 401.15) Reportable Quantity = Oil Sheen present on navigable water surface

OSHA (29 CFR 1910): This product is not hazardous under Hazard Communication Standard 29 CFR 1910.1200

RCRA (40 CFR 261.133) This product does not meet hazardous waste criteria.

EPA/TSCA Inventory: The components of this product are listed on the EPA/TSCA inventory of chemicals.
CAS No. 64742-54-7

State Regulations:

California Prop 65 No Proposition 65 chemicals exist in this product, no labeling required.

Florida No listed ingredients are present

Massachusetts RTK No listed ingredients are present

Minnesota RTK No listed ingredients are present

New Jersey RTK Lists petroleum oil, but this product does not contain hazardous ingredients.

Pennsylvania RTK Lists petroleum oil, but this product does not contain hazardous ingredients greater than 3%.

Illinois DOL TSL No listed ingredients are present

Other Regulations:

WHMIS (Canada) Not listed on the Canadian Controlled Product Ingredient Disclosure and is compliant with Controlled Products Regulation

CONEG Metals: Since cadmium, chromium, lead and mercury are not detectable and it does not exceed 100 ppm total in this product, it is compliant with CONEG Metals regulation.

EEC (Europe): This product is not known to be a dangerous good internationally.

No known R-Phrases or S-Phrases

Hazard Label None

Danger Symbol None

International Regulations

N/A

Other

Not all ingredients will be present in some finished products.

16. Other Information

Label Text, Hazard Rating System, Key Legend, or Other

Abbreviations

ACGIH(American Conference of Governmental Industrial Hygienists); ANSI(American National Standards Institute); CAS(Chemical Abstract Service); CERCLA(Comprehensive Environmental Response, Compensation, & Liability Act); CFR(Code of Federal Regulations); CHIP (Chemicals Hazard Information & Packaging for Supply); CONCAWE (European Organization for Environment, Health & Safety); CPR(Controlled Products Regulations); DOL (Department of Labor); EED(European Economic Community Directives); EINECS (European Inventory of Existing Commercial Chemical Substances); EL50 (Effective loading rate required to immobilize 50% invertebrate species); ELINCS(European List of New Chemical Substances); EPA (Environmental Protection Agency); EPCRA(Emergency Planning & Community Right-To-Know Act of 1986); EU(European Union); FDA(Food & Drug Administration-USA); GHS (Global Harmonization System); HCS (Hazard Communication Standard); IARC(International Agency for Research on Cancer); ILO(International Labor Organization); LC50(Lethal Concentration 50% test organisms); LD50(Lethal Dose 50% test organisms); LVP-VOC(Low Vapor Pressure Volatile Organic Compound); MSDS(Material Safety Data Sheet); MSHA(Mine Safety & Health Administration); NIOSH(National Institute of Occupational Safety & Health);NTP(National Toxicology Program); OSHA(Occupational Safety & Health Administration); PEL(Permissible Exposure Limit); Prop 65(California Proposition 65); PMCC(Pensky Martin Closed Cup); RCRA(Resource Conservation & Recovery Act); RTK(Right-To-Know); R-Phrases(EU Risk Phrases; S-Phrases (EU Safety Phrases); SARA(Superfund Amendments & Reauthorization Act); TSCA (Toxic Substances Control Act); TSL (Toxic Substance List); TLV(Threshold Limit Value); WHMIS(Workplace Hazardous Materials Information System-Canada); Irl50 (Inhibitory loading rate required to reduce algal growth rate by 50%; Ibl50 (Inhibitory loading rate required to reduce area under growth curve or biomass by 50%); ppm (parts per million); mg/m3 (milligrams per cubic meter); N(no); Y (yes)

NFPA Hazard Rating – Health	1 Slight
-Fire	1 Slight
Reactivity	0 Least

Prepared By: Juan Parker **Phone:** (318)524-1100

This MSDS complies with OSHA Hazard Communication Standard (HCS) 29 CFR 1910.1200 and conforms to ANSI Z 400.1 16-Section Format.

Disclaimer: Omni Specialty Packaging believes this information is accurate but not all-inclusive in all circumstances. It is the responsibility of the user to determine suitability of the material for their purposes. No warranty, expressed or implied, is given.

NOTE: OSHA's Hazard Communication Standard (29 CFR 1910.1200) does not require the information requested in Sections 11, 12, 13, 4, 15, and 16 for MSDSs. If your company chooses not to fill in these sections, you may wish to enter something (like N/R for "not regulated" or N/A for "not applicable") to indicate that the field is purposely being left blank.

TE-KA TEAK WOOD CLEANER PART B

This product appears in the following stock number(s):

3024C 3024U 3026C 3026U 3028C 3028U

Last revised: 09/28/05

Printed: 9/29/2005

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**Tradename:** TE-KA TEAK WOOD CLEANER PART B**General use:** A two component product. Carefully read MSDSs for both Part A & B.**Chemical family:** Aqueous mineral acid**MANUFACTURER**ITW Philadelphia Resins
130 Commerce Dr.
Montgomeryville, PA 18936**EMERGENCY INFORMATION****Emergency telephone number****(CHEMTREC): (800) 424-9300****Other Calls: (215) 855-8450****2. COMPOSITION/INFORMATION ON INGREDIENTS****HAZARDOUS CONSTITUENTS****Exposure limits**

Constituent	Abbr.	CAS No.	Weight percent	ACGIH TLV	OSHA PEL	Other Limits
Phosphoric Acid		7664382	20-30	1 mg/m ³	1mg/m ³	1 mg/m ³ (Canada)

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) established by the American Conference of Governmental Industrial Hygienists. "STEL" indicates a short-term exposure limit. "PEL" indicates the OSHA Permissible Exposure Limit. "n/e" indicates that no exposure limit has been established. An asterisk (*) indicates a substance whose identity is a trade secret of our supplier and unknown to us.

3. HAZARDS IDENTIFICATION**Emergency Overview**

Appearance, form, odor: Light green liquid with slight odor.

WARNING! CONTAINS PHOSPHORIC ACID. CAUSES SEVERE EYE, SKIN AND RESPIRATORY TRACT IRRITATION. AVOID CONTACT WITH EYES, SKIN AND CLOTHING. USE IN WELL VENTILATED AREA. FIRST AID: INGESTION - RINSE MOUTH WITH WATER. GIVE A GLASS OF MILK. DO NOT INDUCE VOMITING. EYES - FLUSH WITH WATER FOR AT LEAST 15 MINUTES AND GET SEEK MEDICAL ATTENTION. SKIN - WASH THOROUGHLY WITH SOAP AND WATER. KEEP OUT OF REACH OF CHILDREN.

Potential health effects

Primary routes of exposure: Skin contact Skin absorption Eye contact Inhalation Ingestion

Symptoms of acute overexposure:

Skin: Corrosive. May cause skin irritation and burns. Burning sensation may not be immediate, delaying the awareness that contact has occurred.

Eyes: Corrosive. May cause burns and permanent eye damage.

Inhalation:

Respiratory irritant. Can irritate the nose, throat and mucous membranes. Symptoms include headache, nausea, vomiting, and dizziness.

Ingestion:

May cause burns in the mouth, throat and esophagus. Causing pains in the stomach, difficulty breathing, nausea, vomiting, diarrhea and convulsions. In severe cases collapse and death may occur.

Effects of chronic overexposure:

Slightly toxic with repeated inhalation or ingestion. May cause upper respiratory disease. Dermatitis may occur from prolonged or repeated skin contact.

Carcinogenicity -- OSHA regulated: No

ACGIH: No

National Toxicology Program: No

International Agency for Research on Cancer:No

Cancer-suspect constituent(s) : None

Medical conditions which may be aggravated by exposure:

Skin, eye and respiratory disorders.

4. FIRST AID MEASURES**First aid for eyes:**

Immediately flush with large amounts of water for at least 15 minutes. See a physician.

First aid for skin:

Immediately remove contaminated clothing and wash with soap and water. If irritation persists, obtain medical attention.

First aid for inhalation:

Remove patient to fresh air. Administer oxygen if breathing is difficult. Get medical attention.

First aid for ingestion:

Do NOT induce vomiting. Give patient 2-3 liters of water followed by one glass of milk. Do not give anything by mouth to an unconscious person. Prevent aspiration of vomit. Immediately consult physician.

5. FIRE FIGHTING MEASURES**Extinguishing media:**

Water

Carbon dioxide

Dry chemical

Foam

Alcohol foam

Flash Point (°F): n/a

Method: n/a

Explosive limits in air (percent) -- Lower: n/a

Upper: n/a

Special firefighting procedures:

Not combustible. Extinguish fire using agent suitable for surrounding fire.

Unusual fire and explosion hazards:

Evolves flammable/explosive hydrogen gas on contact with most metals.

Hazardous products of combustion:

Toxic fumes of phosphorous oxides during thermal decomposition. Small amounts of oxides of carbon

6. ACCIDENTAL RELEASE MEASURES**Spill control:**

Eliminate all ignition sources. Ventilate area. Wear appropriate protective equipment and approved respirator.

Containment:

Dike and contain spill with absorbent material.

Cleanup:

Contain spill with absorbent material. Sprinkle hydrated lime or soda ash on spill area. Scrape up and remove. Put into proper containers for disposal.

Special procedures:

Prevent material from contacting any water sources or sewers leading to surface water.

7. HANDLING AND STORAGE**Handling precautions:**

Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after using and particularly before eating, drinking, smoking, applying cosmetics, or using toilet facilities.

Laundry contaminated clothing and protective gear before reuse. Discard contaminated leather articles. Oxides of phosphorous are formed during thermal decomposition. Use caution when mixing with base.

Storage:

Store in a cool, dry place with adequate ventilation. Keep away from open flame and high temperatures, alkalis and most metals. Do not store in direct sunlight. Store above freezing point. Keep containers closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Engineering controls****Ventilation :**

Local exhaust ventilation is preferred although good general mechanical ventilation is usually adequate for most industrial applications. Local exhaust is recommended for confined areas. Sufficient ventilation should be used to keep concentrations below the established TLVs.

Other engineering controls :

Have emergency shower and eye wash available.

Personal protective equipment**Eye and face protection:**

Chemical safety goggles or face shield.

Skin protection:

Chemical resistant rubber gloves and other protective gear as required to prevent skin contact.

Respiratory protection:

Avoid breathing of vapor or spray mist. Use NIOSH approved organic vapor/acid/P100 cartridge mask if vapor/mist is generated.

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific gravity:	1.5	Boiling point (°F):	212
Melting point (°F):	n/d	Vapor density (air = 1):	> 1
Vapor pressure (mmHg):	2 at 68 °F	Evaporation rate (butyl acetate = 1):	< 1
VOC (grams/liter):	0	Solubility in water:	Completely
Percent volatile by volume:	0	pH (5% solution or slurry in water):	1.5 - 2.0
Percent solids by weight:	100		

10. STABILITY AND REACTIVITY

This material is chemically stable. Hazardous polymerization will not occur.

Conditions to avoid :

Direct sunlight. Excess heat, or freezing temperatures.

Incompatible materials:

Alkaline mat'l (base, lye, caustic); nitromethane. Fluorides, silicides, carbides, strong oxidizing & reducing agents. Metals. Sulfides, phosphides, cyanides, acetylides, sulfites.

Hazardous products of decomposition:

Toxic fumes of phosphorous oxides during thermal decomposition. Small amounts of oxides of carbon

Conditions under which hazardous polymerization may occur:

None

11. TOXICOLOGICAL INFORMATION

Acute oral effects: LD50 (rat): Not available.

Acute dermal effects: LD50 (rabbit): Not available.

Not corrosive per DOT test criteria (49 CFR).

Acute inhalation effects: LC50 (rat): Not available.

Exposure: 0 hours.

Eye irritation:

Not available.

Subchronic effects:

Not available.

Carcinogenicity, teratogenicity, and mutagenicity:

Not available.

Other chronic effects:

Not available.

Toxicological information on hazardous chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
Phosphoric Acid	1530 mg/kg	2740 mg/kg	n/d

'n/d' = 'not determined'

12 ECOLOGICAL INFORMATION**Ecotoxicity:**

No data available.

Mobility and persistence:

No data available.

Environmental fate:

No data available.

13. DISPOSAL CONSIDERATIONS

Please see also Section 15, Regulatory Information.

Waste management recommendations:

Dispose of in accordance with applicable federal, state, and local regulations.

14. TRANSPORT INFORMATION

Proper shipping name: Non-regulated
Technical name : N/A
Hazard class : N/A
UN number: N/A
Packing group: N/A
Emergency Response Guide no.: N/A
IMDG page number: N/A
Other: Not corrosive per 49 CFR test criteria.

15. REGULATORY INFORMATION**U.S. Federal Regulations****TSCA**

All ingredients of this product are listed, or are exempt from listing, on the TSCA inventory.

The following RCRA code(s) applies to this material if it becomes waste:

D002

Regulatory status of hazardous chemical constituents of this product:

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Phosphoric Acid	No	No	5000.0	Not required

*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance list.

**Substances for which the "Toxic Chemical" column is marked "Yes" are on the SARA Section 313 list of Toxic Chemicals, for which release reporting may be required. For specific requirements, consult the appropriate regulations.

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: - Immediate health hazard -- Delayed health hazard -

Canadian regulations**WHMIS hazard class(es) :** D2B

16. OTHER INFORMATION

**Hazardous Materials
Identification System (HMIS)
ratings:**

Health

2*

Flammability

0

Reactivity

0

The information and recommendations in this document are based on the best information available to us at the time of preparation, but we make no other warranty, express or implied, as to its correctness or completeness, or as to the results of reliance on this document.

TE-KA TEAK CLEANER PART A

This product appears in the following stock number(s):

3024C 3024U 3026C 3026U 3028C 3028U

Last revised: 09/27/05

Printed: 9/29/2005

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**Tradename:** TE-KA TEAK CLEANER PART A**General use:** A two component product. Carefully read MSDSs for both Part A & B.**Chemical family:** Aqueous Caustic Solution**MANUFACTURER**ITW Philadelphia Resins
130 Commerce Dr.
Montgomeryville, PA 18936**EMERGENCY INFORMATION****Emergency telephone number****(CHEMTREC): (800) 424-9300****Other Calls: (215) 855-8450****2. COMPOSITION/INFORMATION ON INGREDIENTS****HAZARDOUS CONSTITUENTS****Exposure limits**

Constituent	Abbr.	CAS No.	Weight percent	ACGIH TLV	OSHA PEL	Other Limits
Sodium Hydroxide		1310732	5-10		2mg/m ³	n/e

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) established by the American Conference of Governmental Industrial Hygienists. "STEL" indicates a short-term exposure limit. "PEL" indicates the OSHA Permissible Exposure Limit. "n/e" indicates that no exposure limit has been established. An asterisk (*) indicates a substance whose identity is a trade secret of our supplier and unknown to us.

3. HAZARDS IDENTIFICATION**Emergency Overview**

Appearance, form, odor: Clear liquid with mild odor.

DANGER! EXTREMELY CORROSIVE. CONTAINS SODIUM HYDROXIDE. CAUSES SEVERE EYE AND SKIN BURNS. RESPIRATORY TRACT IRRITANT. AVOID CONTACT WITH EYES, SKIN AND CLOTHING. DO NOT TAKE INTERNALLY. FIRST AID: INGESTION - RINSE MOUTH WITH WATER. GIVE A GLASS OF MILK. DO NOT INDUCE VOMITING. EYES - FLUSH WITH WATER FOR AT LEAST 15 MINUTES AND GET SEEK MEDICAL ATTENTION. SKIN - WASH THOROUGHLY WITH SOAP AND WATER. KEEP OUT OF REACH OF CHILDREN.

Potential health effects

Primary routes of exposure: Skin contact Skin absorption Eye contact Inhalation Ingestion

Symptoms of acute overexposure:

Skin: Corrosive action causes burns and frequently deep ulceration with subsequent scarring. Prolonged contact destroys tissue. Can cause irritant dermatitis.

Eyes: Causes severe burns; small quantities can result in permanent damage and/or loss of vision.

Inhalation:

Inhalation of mists can cause damage to the upper respiratory tract and to lung tissue depending upon the severity of exposure. Effects can range from mild irritation of mucous membranes to severe pneumonitis and destruction of lung tissue.

Ingestion:

Can cause serious damage to the mucous membranes or other tissues with which contact is made, and may be fatal.

Effects of chronic overexposure:

The effect of long-term, low-level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the avoidance of all effects from repetitive acute exposures.

Carcinogenicity -- OSHA regulated: No**ACGIH: No****National Toxicology Program: No****International Agency for Research on Cancer: No****Cancer-suspect constituent(s) : None****Medical conditions which may be aggravated by exposure:**

None known

4. FIRST AID MEASURES**First aid for eyes:**

Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Rinse continuously with water while on way to get medical attention.

First aid for skin:

Remove contaminated clothing and contaminant. Wash with soap and water. Continue washing with water until slick skin feeling is gone. Get immediate medical attention.

First aid for inhalation:

Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get immediate medical attention.

First aid for ingestion:

Do NOT induce vomiting. If conscious drink large quantities of water or acidic beverage (tomato juice, orange juice, carbonated soft drinks). Do not give anything by mouth to an unconscious person. Prevent aspiration of vomit. If vomiting occurs give additional water. Get immediate medical attention.

5. FIRE FIGHTING MEASURES**Extinguishing media:** Water Carbon dioxide Dry chemical Foam Alcohol foam**Flash Point (°F):** None**Method:****Explosive limits in air (percent) -- Lower:** N/A**Upper:** N/A**Special firefighting procedures:**

Use appropriate extinguishing media for surrounding fire.

Unusual fire and explosion hazards:

Contact with some metals, particularly magnesium, aluminum and galvanized zinc can rapidly generate hydrogen (explosive).

Hazardous products of combustion:

6. ACCIDENTAL RELEASE MEASURES**Spill control:**

Avoid personal contact. Eliminate ignition sources. Ventilate area. Wear protective equipment.

Containment:

Use absorbent material

Cleanup:

Neutralize with dilute acid. Absorb material on an inert absorbent material and place in a properly labeled container for disposal.

Special procedures:

Do not allow this material to be released to sewers or waterways.

7. HANDLING AND STORAGE**Handling precautions:**

Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after using and particularly before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Avoid breathing vapors and mists. Launder contaminated clothing and protective gear before reuse. Discard contaminated leather articles. Use caution when mixing with acids. Do not add to warm or hot water. Hazardous carbon monoxide can form upon contact with food and beverage products in enclosed vessels and can cause death.

Storage:

Store in a cool, dry place with adequate ventilation. Keep away from open flame and high temperatures. Do not store in direct sunlight. Store above freezing point. Keep containers closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Engineering controls****Ventilation :**

General exhaust should be sufficient under most uses. Local exhaust when dusts or mists are generated. Sufficient ventilation should be used to keep concentrations below the established TLVs.

Other engineering controls :

Have emergency showers and eye wash available.

Personal protective equipment**Eye and face protection:**

Chemical goggles or face shield.

Skin protection:

Nitrile, neoprene, or natural rubber gloves and other protective gear as required to prevent skin contact.

Respiratory protection:

None required for normal use. If mists are generated use a NIOSH approved filter respirator (P100).

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific gravity:	2.1	Boiling point (°F):	212
Melting point (°F):	n/d	Vapor density (air = 1):	>1
Vapor pressure (mmHg):	n/d at 0 °F	Evaporation rate (butyl acetate = 1):	slower than ether
VOC (grams/liter):	n/d	Solubility in water:	complete
Percent volatile by volume:	90	pH (5% solution or slurry in water):	> 12
Percent solids by weight:	10		

10. STABILITY AND REACTIVITY

This material is chemically stable. Hazardous polymerization will not occur.

Conditions to avoid :

Reaction with various food sugars may form carbon monoxide.

Incompatible materials:

Organic mat'ls & acids may cause violent reactions. Contact with magnesium, aluminum, zinc (galvanized), tin, chromium, brass & bronze generates hydrogen gas. Water. Carbon dioxide

Hazardous products of decomposition:

When heated to decomposition it emits toxic fumes of Na₂O.

Conditions under which hazardous polymerization may occur:

none

11. TOXICOLOGICAL INFORMATION

Acute oral effects: LD50 (rat): Not available.

Acute dermal effects: LD50 (rabbit): Not available.

Acute inhalation effects: LC50 (rat): Not available.

Exposure: hours.

Eye irritation:

Not available.

Subchronic effects:

Not available.

Carcinogenicity, teratogenicity, and mutagenicity:

Not available.

Other chronic effects:

Not available.

Toxicological information on hazardous chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
Sodium Hydroxide	500 mg/kg	n/d	n/d

'n/d' = 'not determined'

12 ECOLOGICAL INFORMATION**Ecotoxicity:**

Not available.

Mobility and persistence:

Not available.

Environmental fate:

Not available.

13. DISPOSAL CONSIDERATIONS

Please see also Section 15, Regulatory Information.

Waste management recommendations:

Dispose of in accordance with all federal, state and local regulations.

14. TRANSPORT INFORMATION**Proper shipping name:** Sodium hydroxide solution**Technical name :** N/A**Hazard class :** 8**UN number:** 1824**Packing group:** II**Emergency Response Guide no.:** 154**IMDG page number:** N/A**Other:****15. REGULATORY INFORMATION****U.S. Federal Regulations****TSCA**

All ingredients of this product are listed, or are exempt from listing, on the TSCA inventory.

The following RCRA code(s) applies to this material if it becomes waste:

D002

Regulatory status of hazardous chemical constituents of this product:

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Sodium Hydroxide	No	No	1000.0	Not required

*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance list.

**Substances for which the "Toxic Chemical" column is marked "Yes" are on the SARA Section 313 list of Toxic Chemicals, for which release reporting may be required. For specific requirements, consult the appropriate regulations.

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: - Immediate health hazard -- Reactivity hazard -

Canadian regulations

WHMIS hazard class(es): E

All components of this product are on the Domestic Substances List.

16. OTHER INFORMATION

Hazardous Materials Identification System (HMIS) ratings:	Health	Flammability	Reactivity
	3	0	1

The information and recommendations in this document are based on the best information available to us at the time of preparation, but we make no other warranty, express or implied, as to its correctness or completeness, or as to the results of reliance on this document.

Delta~dB

Sound Damping Coating

Designed to reduce excessive sound from structural or mechanical noise, Delta~dB Sound Damping Coating is a flexible, enviro-friendly product that bonds directly to a wide range of surfaces. Comprised of noise suppressants encased in an acrylic binder, Delta~dB is easily applied via brush, roll or spray methods.

Sound travels two ways – through structure and through the air. To reduce sound energy's conversion from structurally transmitted energy to airborne sound waves, you need to dampen vibration effects on the surface. Delta~dB employs its sound-damping technology, suppressing vibration movement through the sound path. This suppression basically reduces or "kills" the sound prior to its airborne transmission.

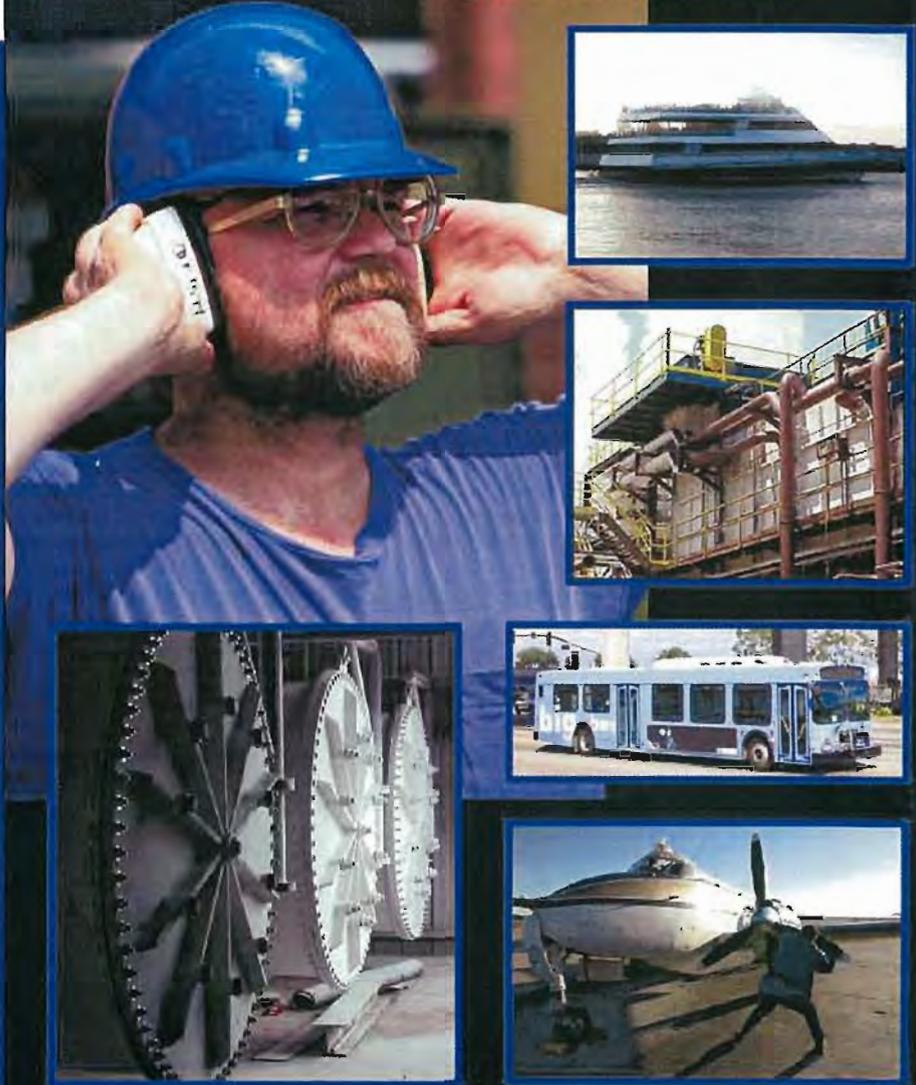
Its unique chemistry and proven Dispersion²™ technology allow Delta~dB to pack more sound-suppression materials into a flexible adhesive coating. The result is greater reduction of sound transmission at lower dry film weights compared to traditional damping solutions. In addition, application is normally 3-4 times faster than standard cut-and-paste-type damping materials. With Delta~dB, equipment surfaces are always viewable, so inspectability is never an issue like it is with conventional wraps and bulky sound insulation. And because the coating bonds directly to all clean surfaces, there's no risk of adhesion loss or water entrapment that can lead to corrosion under insulation.

Delta~dB can be applied to carbon and stainless steel (carbon steel requires a primer), aluminum, brass, fiberglass, plastic, and many other surfaces. A typical application of just two coats provides the most cost-effective sound damping control, but additional coats can be applied as needed. Delta~dB is enviro-friendly, with no toxic ingredients or volatile organic compounds (VOCs). It's water-based, so clean-up is easy with just soap and water.

Delta~dB is a Class A (1) fire retardant coating approved for use on cars, buses, trains, boats and large industrial complexes. Combining Delta~dB with Delta T Marine thermal insulation coating achieves dramatic sound reduction and thermal qualities.

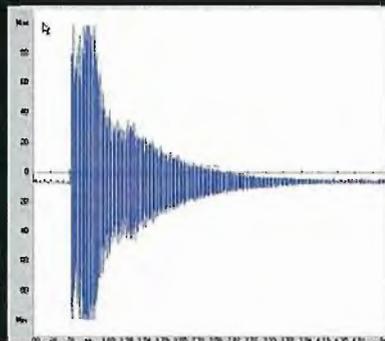
The Best Choice for Sound Environments

Delta~dB Quiets Even the Noisiest Sounds

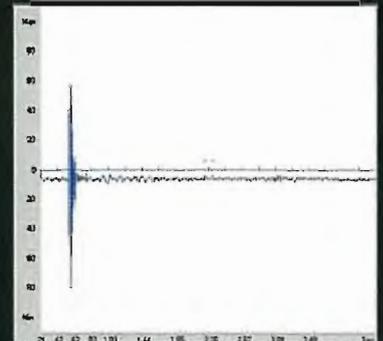


Uncoated Surface vs Coated Surface

Below are two identical surfaces in a before and after study. The graphics depict the sound waves expressed in Decibels over time. The left graphic shows the uncoated surface vs. the right graphic showing the coated surface (at 40 mils or 1.0 mm).



Control - Bare steel surface



Test surface - Steel with 40 mils dft Delta dB in two coats



www.Mascoat.com



Sound Damping Coating

Brief Tech Data:

Packaged:	5 gallon pails or 55 gallon drums
Color:	Black, Grey, Off-White, White
Odor:	Little to none
Base:	Water based acrylic
VOC:	0.0 lbs/gal
Shelf Life:	1 year
WPG (wet):	13.35 lbs
Weight dry:	0.005 lbs/ft ² @1 mil 0.300 lbs/ft ² @60 mils
Spec. Grav. (wet):	1.60
Volume solids:	58%
Weight Solids:	84%
Viscosity:	4200 cp
Hardness:	Good to great
Flexibility:	Great, capable of free film bend of 1/8" dia without cracking at 20 mils DFT
Adhesion:	5B
Coat thickness:	20-40mils (0.5-1.0mm) per coat
Max coat:	No upper limitation as long as each coat does not exceed 40 mils wet.
Dry time (80°F):	25 min @ 20 mils wet
Application Temp:	50°-250° F (10°-110°C)
Recoat:	30-120 mins
Cure time:	24-72 hours

SOUND DAMPING EFFECTS USING COATINGS

Decrease in Decibels vs. Frequency

Frequency Hz	188	366	585	881	1000	3000	5000
60 mils Delta~dB	9.3	11.5	10.7	11.6	10.8	10.9	11
40 mils Delta~dB	4.0	5.8	5.3	5.7	5.7	5.7	5.8
Delta~dB + Delta T Marine	10.2	11.8	11.7	12.9	12.9	12.9	12.9
Plain panel (no coating)	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Explanation: The numbers above show a decrease in decibels across the various frequencies of vibrational movement. The coatings demonstrate a very positive effect on damping of the surface. All tests were performed on like aluminum surfaces according to Loss Beam Factor Test performed at Noise Control Engineering.

Note: A plain aluminum panel that shows no damping or sound loss effects was used as the control for the test. Delta~dB and Delta T Marine is a typical system of both sound and thermal insulation. Delta T Marine is also a product of Mascoat Products USA.

How Does The Coating Work?

Sound transfer is based upon three factors: the sound source (where the sound originates), the sound path (the vehicle that transfers the sound) and the sound receiver (how we perceive the sound). To control sound, it is vital to control at least one of these factors. Because in most cases it is difficult to control the source, controlling the sound transfer path is vital.

Delta~dB incorporates special anti-vibrational fillers with a sound absorption resin. This formulation suppresses the vibrational movement through the sound path, retarding sound/vibration transfer through the path. By controlling the vibration, less sound is transmitted through the surface.

Typical Uses: Delta~dB is an excellent lightweight material that can be applied to almost any surface to dramatically reduce road structural noise. Easily applied to the interior or exterior of a vehicle, Delta~dB dampens noises before they are released into the car, truck, bus, etc. Because the coating stays flexible when dry, its adhesion on vibrating surfaces is significantly better than typical glue-on damping materials.

Other Applications: Delta~dB can also be used on industrial and other equipment that produce high noise levels due to structural translation. The coating can be applied directly to most surfaces to lower noise prior to airborne release. Where noise level safety is concerned, Delta~dB is a very cost-effective, low-effort solution.

Applying Delta~dB: The coating can be applied via airless, conventional, brush or roller.

Surfaces: Delta~dB can be applied directly to almost any surface. Carbon steel requires a primer.

Application Rate: Delta~dB can be applied to 25-40 mils wet film thickness. Thinner coats promote faster dry times. Typical application is 2-3 coats.

For a complete list of approvals, please call
800.549.0043 or 713.465.0304

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DeltadB - 01005



Leaders in Insulating Coating Systems

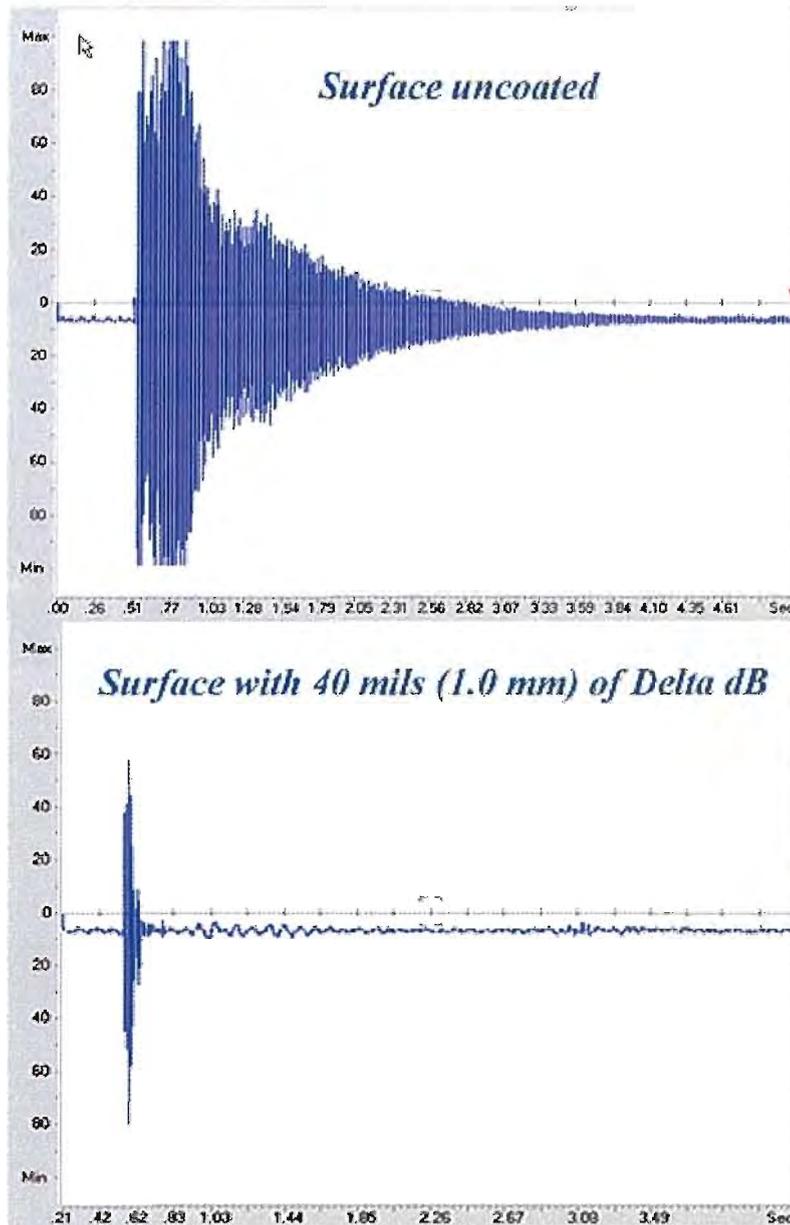


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Why Paint
And then
Insulate?

The Industry Leaders in Thermal Insulation Coatings

**Sound comparison using Control Uncoated Surface and
Surface with Delta~dB Damping Coating**



Test performed at Mascoat Products Laboratory using VFEdit® Software.
Y axis = dB X Axis = time of dB register



Mascoat
P R O D U C T S

**Why Paint
And then
Insulate?**

The Industry Leaders in Insulation Coatings

Sound and Sound Loss

Sound can travel through many mediums such as air, liquid and gas states. Each medium represents a different manner in which sound is translated through that medium or between mediums. The way in which the sound travels through those mediums and between the mediums is important as it affects the way in which the sound deadening materials are used.

Sound in a non-technical or laymen's point of view is the amount of vibration (noise generation) through a medium that is dependent on both frequency (range of sound) and amplitude (amount or degree of loudness). Frequency is the pitch or what we hear from a tone, and amplitude is the degree or loudness of the tone. Deadening sound can be done through various means, but the two major ways of sound decreasing components are *Absorption* and Damping (*Dampening*). To understand how to decrease sound a thorough understanding of each is needed.

Sound Absorption

Sound absorption is the manner in which sounds traveling through air by are reduced by means of absorbing the sound waves (both amplitude and frequency). Imagine a room with a hard tile floor, large ceilings, no furniture, and no fabric or carpet. This room is a great chamber for sound to propagate as each wall, floor, and ceiling efficiently reflects the sound waves during its travel in and around the room. As the sound is generated the air borne vibration travels through the air with little deflection and bounces on the wall, and immediately off the wall with little loss. The walls within the room become an effective reflector thereby shooting the sound wave back into the air and the process continues. This reflective rate decreases slowly due to the hard reflective type surfaces and eventually dies out, but keeps the room noisy for a long period after the noise generation is stopped.

Now let's look at the same room with carpet, drapery, pictures, furniture, etc. Imagine the same sound being produced again, but this time the loss is substantial. The reason is due to the "Sound Absorbing" type materials such as carpet, draperies, couches, paintings, etc that swallows up or do not efficiently reflect the sound waves as they travel around the room and back through the air. This absorption shows how sound can be trapped and effectively quiet the room.

Delta dB

Sound absorbing materials are an important deterrent for air borne noise generated into and through air movement. Materials such as lightweight fabrics, cloths, and special sound absorbing materials (sometimes even with irregular type materials and surfaces) to varying degrees. However they only take care of the sound that is generated through the air. They do not dampen sound through solid type surfaces.

Sound Damping (Dampening)

Now let's examine the same room again. This time instead of the noise being generated from the inside of the room, the noise is generated through the walls. Now to even go worse case, let's imagine that the walls are made of steel and that the noise is being generated from a piece of equipment which is bolted to the wall creating vibrational noise. Since the steel walls translate the noise quite efficiently, the noise is propagated to the next medium of the air. Once the noise starts, it is difficult to reduce the noise without using materials to either help absorb or most importantly getting to the root of the noise and dampening it. Normally dampening type materials are heavy and bulky as the materials use their weight and density to stop or kill the vibration before it is propagated. As the noise is generated, the damping material takes the sound wave energy from the surface thereby effectively retarding its vibrational translation. This reduction in vibration leads to less sound being produced by the surface or structure and therefore into the air. This loss is effectively called sound damping and an important function to decreasing sound within the environment.

Dampening materials come in many forms such as lead liners, heavy-dense insulation, and most recently in sound dampening coatings. Usually, the heavier the material, the better for the reduction of sound.

Mascoat and Sound Damping (Dampening)

Over the past years our technology has been more in the thermal arenas for marine, commercial and residential insulation. Delta T Marine Thermal Insulating Coating has been used inside most all forms of transportation from air to water to land. This material was used inside most all forms and has been found to produce dramatic sound absorption qualities. However, from the sound dampening characteristics; it was not as effective as the materials incorporated were simply too lightweight. The materials used inside Delta T Marine were more structured for thermal insulating rather than sound insulating. Thus, Mascoat set out to define the sound problems and how to use its coating technology to produce a product uniquely different, and technologically superior.

As we started to understand sound better, we used our already extensive library of materials and coatings' background to find out what could be used decrease sound from a dampening standpoint. We found that the materials superior for thermal were not very effective sound dampening. Conversely we found that the materials used for sound were not good thermal insulators (actually we found the materials were highly conductive). So making one coating that did both well



became an option, but not the best option. Since we felt that a blend of the two products robbed both of their peak performance, we then set out to engineer the best sound dampening type coating.

In our search, we found that there was not one material that produced sound dampening characteristics across the entire frequency spectrum. We used our in-house technology to define each "prospective ingredient" and the sound results it produced. We then, used these materials in a "blend approach" to effectively dampen the sound against the frequency spectrum. Also we understood the need to apply the coating in thick formats quickly so that labor costs did not get out of hand. Our formulation therefore incorporated our Dispersion 2™ Technology, to produce a heavy coating that could be sprayed to overhead and vertical walls without major sagging. The new coating using this blend approach became *Delta~dB* Sound Dampening Coating.

Mascoat feels that this coating is a perfect alternative to dampening type materials. Its unique coating medium allows for easy application to most any substrate or surface both regular and irregular. Using *Delta~dB* allows its user to cost effectively reduce sound transmission before it ever enters the air-borne state. Using Delta T Marine adds to sound loss with its natural absorption qualities while also providing dramatic temperature differentials.



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Master Data Sheet for Delta~dB Sound Damping Coating

Item	English Value	Metric Value	Test Method	Notes
Coverage	50 ft ² /gal @ 20 mils	1.3 m ² /liter @ 0.5 mm	Internal	Wet film
Container	5 gallon	Aprox 20 liter		US gallon pail
Wet Film Thickness	0.020" = 20 mils	0.50 mm		Wet film thickness/coat
Color	White, Grey, Black	White, Grey, Black		
Component Parts	Inclusive	Inclusive		
Pot life	None, one part	None, one part		
Base Formulation	Water base acrylic	Water base acrylic		
VOC Content	0.0 lbs/gallon	1.0 grams/liter	EPA method 24	
Weight	13.35 lb/gal	1.60 kg/liter		Wet weight
Weight dry	0.31 lbs/ft ²	1.46 kg/m ²		60 mil (1.5 mm) thickness
Binding structure	Water, Acrylic emul	Water, Acrylic emul		
Boiling Point	Does not boil	Does not boil	Setaflash	Coating hardened
Weight non volatiles	84%	84%	ASTM D - 2369	
Volume Solids	58-60%	58-60%	Internal	Draw down
Vapor Density	>1	>1	Calculated	
Evaporation Rate	<1	<1	Calculated	
pH	9.3	9.3	Calculated	
Aging study	pending		ASTM B -117	No detrimental affects
Cyclic Salt Fog	pending		ASTM D - 5894	No detrimental affects
QUV	pending		ASTM G -154	No detrimental affects
Application Temp.	50-250+°F	10-110°C	Internal	
Operating Temp.	Up to 350°F	Up to 176°C	Internal	
Cross Hatch Adhesion	100% 5 B	100% 5 B	ASTM D - 3359	
Pull apart strength	450+ psi		ASTM D - 4541	Cohesive failure
Elongation Rate	1/8" Mandel bend	1/8" Mandel bend	ASTM D - 638	Tested at 70°F
Flame Spread	5	5	ASTM E - 84	
Smoke Developed	5	5	ASTM E - 87	
Decibel decrease 60 mils (1.5mm)	Average 12 dB Loss		Loss Beam Factor	aluminum plate
Decibel decrease 40 mils (1.0 mm)	Average 5 dB Loss		Loss Beam Factor	aluminum plate
<i>Loss beam factor performed at Noise Control Engineering across frequency of 188-1000 hz.</i>				
Packing and Storage:	Delta~dB should be kept in a storage area above 32F (0C). Product can be reused if sealed correctly. It is best to keep the container out of direct sunlight for sustained periods.			
Surface Preparation:	<p>For aluminum and stainless surfaces: Clean surfaces prior to application of Delta T. Slight sanding or grinding can be used to give product tooth.</p> <p>For Carbon steel surfaces: Use primer capable of the highest peak temperature. Zinc and epoxies usually perform best in higher temperatures and industrial type environments. Please contact Mascoat if a primer is needed.</p>			
Methods of application:	<p>Spraying: Use airless spray methods as defined by recommended sprayers.</p> <p>SA Gun for small applications</p> <p>Rolling: Use low to medium mat roller.</p> <p>Brushing: Use nylon or bristle brush capable of water based coatings.</p>			

MATERIAL SAFETY DATA SHEET - 8 Point

SECTION 1 – PRODUCT INFORMATION

Mascoat Products
Houston, TX 77041

Emergency phone: (713) 465-0304
Fax: (713) 465-0302
Date Reviewed: Jan 2007

Product Name: Delta dB Sound Dampening Coating
Product ID: DdBSDC (Version number)
Common Chemical Name: Acrylic Insulation Emulsion
Synonyms: None
Molecular Formula: Mixture

Thermal Insulating Material	
HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0
Personnel Protection	G
Eye protection Gloves Dust mask	

SECTION 2 – HAZARDOUS INGREDIENTS DETERMINED BY OSHA

<u>Cas Number</u>	<u>Ingredients</u>	<u>% Range</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
	NONE as determined by OSHA standards			

SECTION 3 – PHYSICAL PROPERTIES

Color:	Dark Grey/Black	Form/Appearance:	Thick emulsion mixture
Odor (wet):	Slight ammonia	Melting Point:	N/A
Boiling Point:	No boiling point	Evaporation Rate (Butyl Ace =1):	<1
Freeze Point	32°F (0°C)	Solubility in H2O:	Dilutable
Specific Gravity:	1.60	Volume Solids:	58%
Pounds/Gallon (wet):	13.35	VOC Content:	1.0 gram per liter
Non Volatile Solids (weight):	83%		

SECTION 4 – FIRE FIGHTING MEASURES

Flash Point: Noncombustible
Auto ignition: N/A
Extinguished Media: (for dried film) carbon dioxide, dry chemical, or alcohol foam.
Special Fire Fighting Procedures: Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure buildup.
Unusual Fire and Explosion: Product will not burn but may spatter if temperature exceeds boiling point. Extreme heat may cause closed containers to burst. Dried film of product is capable of burning giving off oxides of carbon/nitrogen.

SECTION 5 – REACTIVITY DATA

Stability Data: Stable
Incompatibility: Solvents will coagulate the product.
Conditions or Hazards to Avoid: Extreme temperatures above 500°F (260°C)
Hazardous Decomposition: Hazardous polymerization will not occur.
Corrosive Properties: Not corrosive
Oxidizer Properties: Not an oxidizer
Chloride Properties: None

SECTION 6 – HEALTH HAZARD AND FIRST AID DATA

Routes of entry: skin-possible ingestion-possible inhalation-possible
Health Hazards Acute - In a confined area vapors in high concentration can bother some personnel. Extended periods of exposure without PP may result in health concerns.

Carcinogenicity: N/A

SECTION 6 – HEALTH HAZARD AND FIRST AID DATA (cont)

First aid procedure:

Eye exposure - flush eyes with water immediately. Get immediate medical attention.
Skin contact - wash area with soap and water. If redness persists, seek medical attention
Ingestion – If swallowed, dilute with water. DO NOT INDUCE VOMITING. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get immediate medical attention.
Inhalation – Move to fresh air. Aid in breathing if needed and get immediate medical attention.
Notes to Physicians – none known.
Aggravated Medical Attention – No data is available at this time which addresses medical conditions that are generally recognized as being aggravated by exposure to this product. Please refer to the effects of overexposure section for effects (if any) observed in animals.
Special Precautions – No

SECTION 7 – ACCIDENTAL RELEASE MEASURES

Steps if material is released: Spills should be contained and placed in suitable containers for disposal by a licensed facility.

Waste Disposal Methods: Waste from this material is not hazardous as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Incinerate in approved facility. Do not incinerate closed containers. Dispose of in accordance with Federal, State, and Local regulations regarding pollution.

Precaution in handling and storage: Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using. Protect against dust which may be generated by sanding or abrading the dried film.

Other Precautions: Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. *Keep out of reach of children.*

General: Protect from freezing.

Other: Keep out of direct sunlight in storage area

SECTION 8 – PERSONNEL PROTECTION

Clothing: Gloves, coveralls, apron, and boots necessary to prevent contact.

Respiratory Protection: Ventilation and dust mask recommended during application. If sprayed in confined area respiratory equipment is recommended due to slight ammonia odor.

Ventilation: Local exhaust - *preferable* Mechanical (gen) - *acceptable*

Protective Gloves: Preferred.

Eye Protection: Spectacles with unperforated sideshields.

Other Protective Equipment: None needed

OTHER

Special Handling: **DO NOT LET PRODUCT FREEZE.**

Hazardous ratings: Mascoat Products currently uses the National Paint and Coatings Association rating system. The use of an asterisk (*) in the HMIS rating indicates the potential for chronic health effects

HMIS:

Health	Fire	Reactivity	Special
1	1	0	0

Hazardous rating OSHA: **The product is considered NON HAZRDOUS by the OSHA Hazard Communication Standard.**

Trademark: Delta dB Sound Dampening Coating™ is a registered trademark of Mascoat Product, Houston, TX USA.

Important: While descriptions, designs, data and other information contained herein are presented in good faith and believed to be accurate, it is provided for guidance only. Many factors may influence the processing or application/use, Mascoat recommends that tests are made for the suitability for the product in the intended purpose. The intended use of this document is for health and handling procedures and not intended for an ingredients list for reformulation.

Shipping: This product is acceptable for shipment as non-hazardous via motor, air or ocean freight without any specialized handling. (Class 55).

Noise Control Engineering, Inc.



799 MIDDLESEX TNPK.
BILLERICA MA 01821-3445
PHONE: 978-670-5339
FAX: 978-667-7047
E-mail: nonoise@noise-control.com

JOB MEMO

TO: George More
COMPANY: Mascoat
FROM: Ronald Dempsey {ron@noise-control.com}
Ray Fischer {nonoise@noise-control.com}
DATE: August 1st 2005
SUBJECT: Acoustic Evaluation of Damping Materials
CC:

SUMMARY:

NCE evaluated six different samples of materials and multi-layered materials supplied by Mascoat to determine their relative damping performance and assist in selecting the optimal damping material. The objective is to determine promising candidate materials and combination of layers that provide significant damping performance. The candidate materials/layers will improve acoustic performance over existing spray-on materials.

Several materials and layers, such as Delta dB + Delta T Marine or thicker applications of Delta dB, show very promising damping performance. The Mascoat materials provide an improvement equivalent to a 10 to 13 dB reduction in structureborne noise over an untreated structure in the 200-1000 Hz range. Improvements as high as 10 dB were measured at lower frequencies (188 Hz). These are significant improvements for a spray-on type material. As predicted by theory, the optimum thickness is on the order of the base plate thickness; therefore, methods to apply these coatings in thicknesses of 0.25" to 0.35" will likely be required for use on shipboard structures. As tested, the optimal sample added approximately 0.4 lbs to the base weight of 1.8 lbs for the aluminum strip.

These materials show good promise for improved damping and therefore reduced structureborne noise transmission.

EVALUATION METHOD:

The testing was carried out in NCE's office (see Figure 1). Each beam¹ was excited by a Wilcoxon shaker driven by a Nicolet Phaser signal analyzer through a Crown amplifier. Each sample was attached to the shaker by a 3/8 inch threaded steel rod inserted through a hole drilled in the center of the sample and held in place with double hex nuts. To assist in measuring the damping loss factors two PCB accelerometers were attached to the opposing

¹ 3/16" x 2" x 4' long aluminum strip

ends of the sample. The vibration levels from these accelerometers were divided by the force levels at the shaker head, measured by the shaker's internal force gauge. The drive point acceleration was also measured (in indication of input impedance). The Phaser was used to provide a swept sine excitation. Various frequency ranges were investigated.

The frequency of each beam resonance peak and its 3 dB down points, where the level is 3 dB below the peak, was recorded. The damping loss factor, η , is then calculated by the equation below. The higher the loss factor, the lower the structureborne energy and the greater the improvements in airborne transmission loss over a wider range of frequencies.

$$\eta = (F_{+3 \text{ dB}} - F_{-3 \text{ dB}}) / F_{\text{center}}$$

where $F_{+3 \text{ dB}}$ is the upper frequency at which the response is down by 3 dB and $F_{-3 \text{ dB}}$ is the lower frequency at which the response is down by 3 dB and F_{center} is the center frequency at the resonance of interest.

Figures 3 through 6 show screen captures of the vibration data collected at various points.

TEST RESULTS:

NCE tested a set of six beams provided by Mascoat, including one untreated sample for reference. Table 1 rank orders the eight samples in terms of the increased damping over a bare aluminum beam. The improvement in noise, if controlled by structureborne noise, would scale as $10 \log$ the damping ratio. This scaling ratio or improvement in damping is listed in Table 1. Table 1 covers the frequency range from 78 Hz to 881 Hz. However, the levels at low frequency are suspect as the untreated beam had a much higher damping loss factor at this frequency than predicted. The overall ranking is based in a linear average of the improved damping over the 188 Hz to 881 Hz frequency range.

Based on these tests, the best performing damping materials are samples treated with Delta dB + Delta T Marine and the 3 coats of Delta dB. These samples typically have the thicker layers. Figure 2 presents the data from Table 1 graphically.

The highest frequency measurable by this method is limited by the beam size and overall damping. At frequencies above those tested the relative damping is expected to be on the same order as that measured around 881 Hz. The damping loss factor will typically improve with frequency above the range measured by NCE in our lab.

Table 1: Relative damping improvement in dB

Approx Freq, Hz		78	188	366	595	881	Avg	Rank
	Thickness, mm	Improvement, dB						
DELTA DB + DELTA T MARINE	80	-0.8	10.2	11.8	11.7	12.9	11.6	1
DELTA DB 1	60	-7.3	9.3	11.5	10.7	11.6	10.8	2
DELTA DB 2	60	-4.6	8.0	10.4	9.7	10.6	9.7	3
DELTA DB 2	40	-1.9	4.0	5.8	5.3	5.7	5.2	4
DELTA DB 1	40	-2.9	3.5	4.1	4.5	7.2	4.8	5

Figure 1: Test Setup

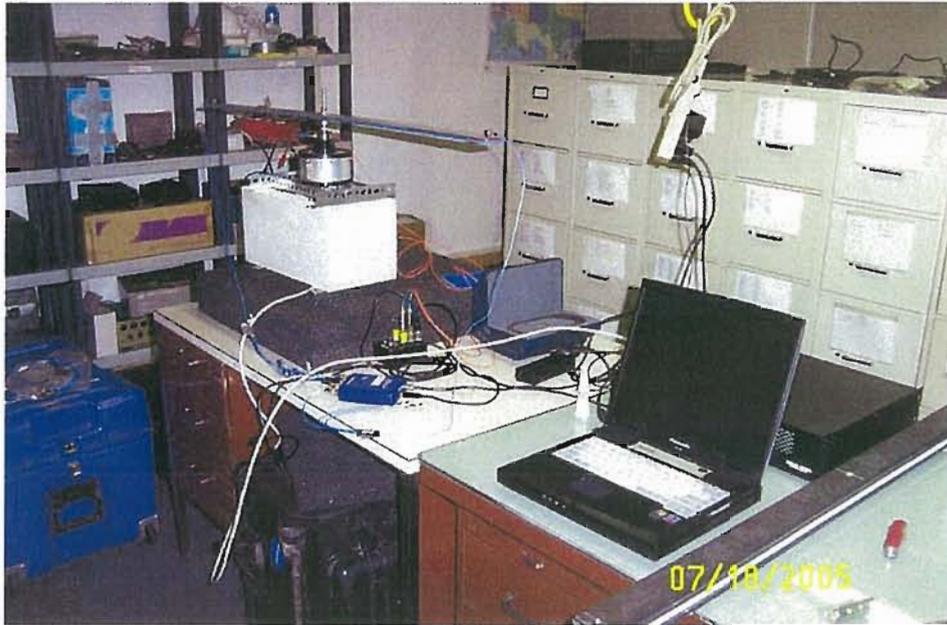


Figure 3: Example of Low (5-150 Hz) Frequency Results

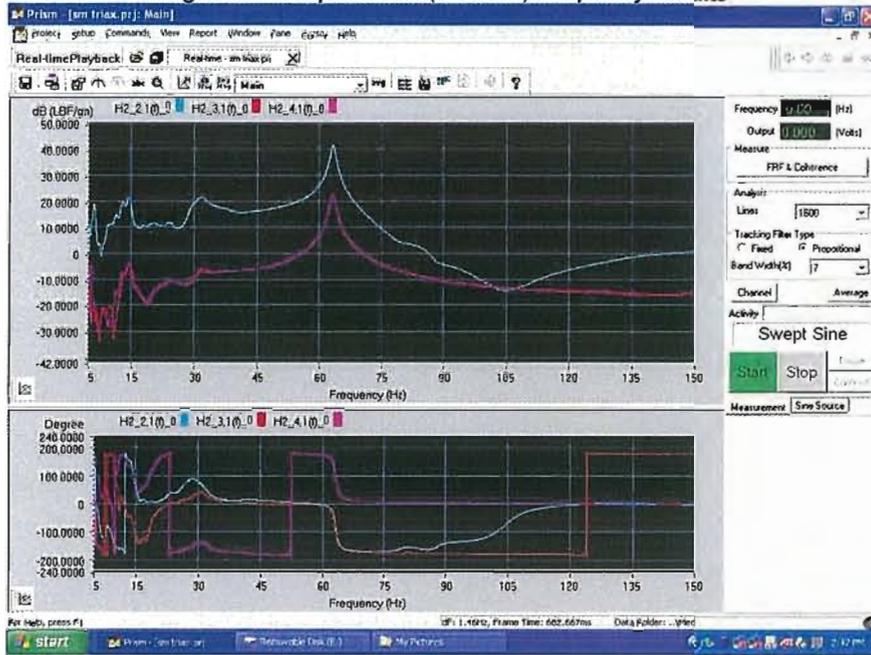


Figure 4: Example of High (100-2000 Hz) Frequency Results

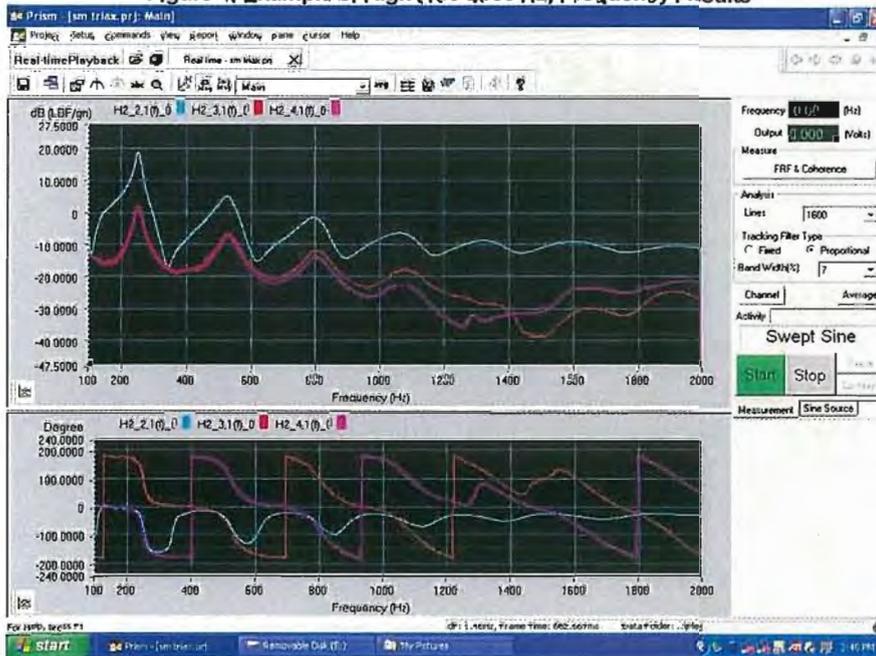


Figure 5: Example of Finding Peak of Resonance

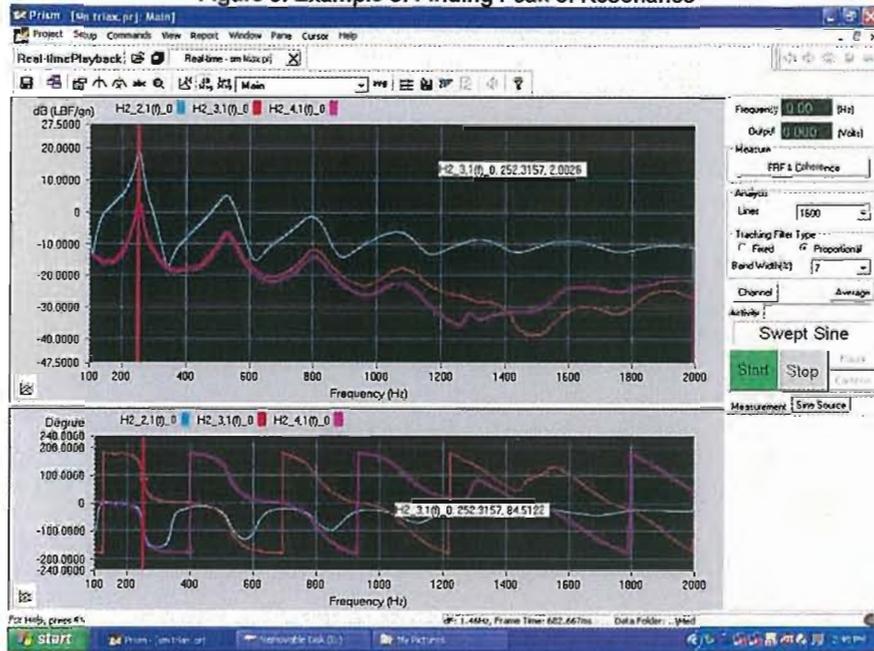


Figure 6: Example of Finding 3 dB Down Point of Resonance

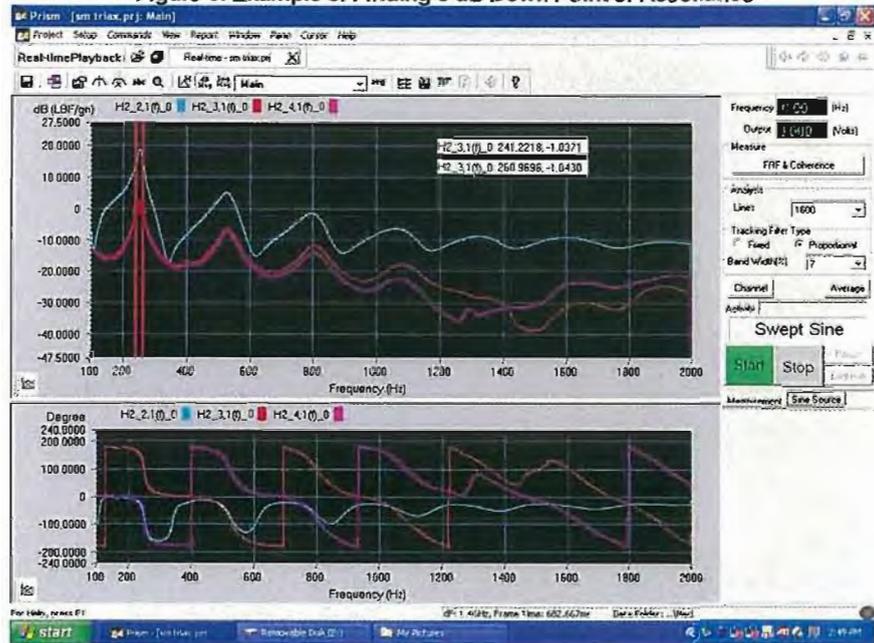
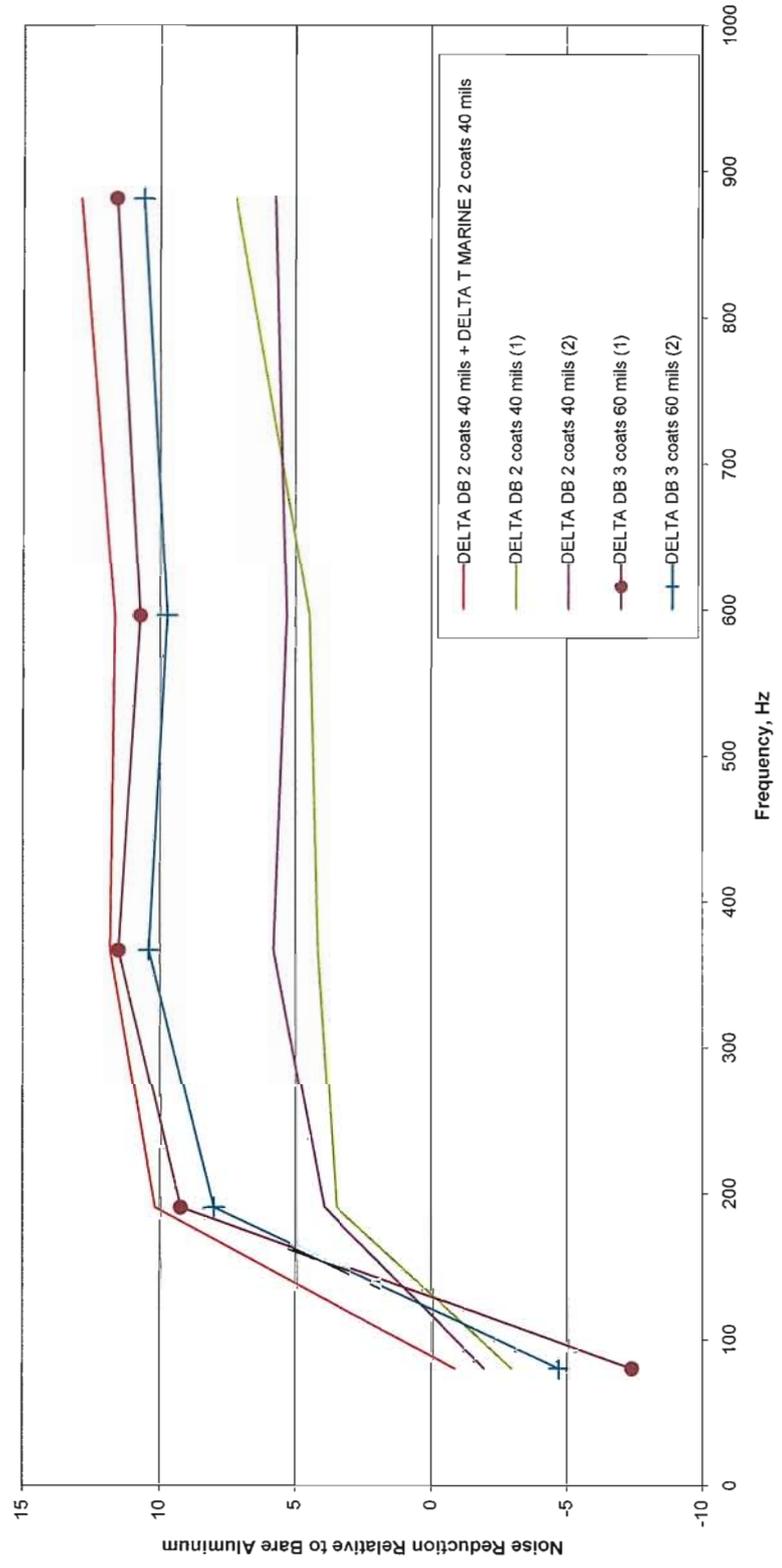


Figure 2: Relative Performance of Mascoat Samples
 Relative Performance of Mascoat Samples



TDS FE180A Fitting Epoxy – Base Resin

Date: 04.08.2009

Date of revision:

1. Identification of the substance/preparation and of the company/undertaking:

Product name: TDS FE180A Fitting Epoxy – Base Resin

Company: Zeta Marine Group
Address: Gotlandsvej 6
DK-5700 Svendborg
Denmark
e-mail: mic@zetamarinegroup.com
Phone: +45 6220 1312
Fax: +45 6220 1477

Field of application: Fitting and fairing epoxy.

2. Hazards identification:



Irritant



Dangerous for the environment

Irritating to eyes and skin. May cause sensitisation by skin contact. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Contains epoxy constituents. See information supplied by the manufacturer.

Code no.: 00 – 5 (1993) (Denmark)

Ready-to-use mixture: 00 – 5 (1993)

3. Composition/information on ingredients:

Name:	CAS no:	EINECS	Weight %:	Symbol:	R-phrases:
Bisphenol A diglycidyl ethers	9003-36-5	500-006-8	5-15	Xi; N	36/38-43-51/53
Bisphenol F/Epichlorohydrin					
Epoxy Resin	25068-38-6	500-033-5	50-65	Xi; N	36/38-43-51/53

See section 16 for the full text of the R-phrases.

4. First aid measure:

Generally: Never give anything by mouth if patient is unconscious or have convulsions. Whenever in doubt, seek medical advice.

Inhalation: No data given.

Skin contact: Wash the skin thoroughly with soap and water.

Eye contact: Flush eyes with large amounts of water for 15 minutes. Open eyes wide. Seek medical attention.

Ingestion: If the patient is conscious, give large quantities of water and seek medical attention.

5. Fire-fighting measures:

Extinguishing media: Use powder, water spray, foam or CO₂.

Fire hazards: Decomposition products may be toxic.

Personal protection: Wear suitable protective equipment including self-containing breathing apparatus.

TDS FE180A Fitting Epoxy – Base Resin

6. Accidental release measures:

Personal precautions: Avoid contact with the product. Wear personal protection, see section 8.
Environmental precautions: Do not emit to the water- or soil environment or sewers. In case of pollution, contact the local environmental authorities.
Methods for cleaning up: Spillage is absorbed with suitable absorbent material and collected in suitable containers for destruction, see section 13. Flush the area with water.

7. Handling and storage:

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing mist, vapour or spray. Wear personal protection, see section 8. Wash hands/skin after handling the product.
Storage: Store in a cool place.

8. Exposure controls/personal protection:

Engineering controls: Ensure adequate ventilation.

Occupational exposure limits:

None. Long-term: Short-term:

Personal protection:

Respiratory protection: Not needed with adequate ventilation.
Eye protection: Use suitable goggles.
Hand protection: Use suitable protective gloves. Gloves should be chosen in consultation with the glove supplier, with information on effects from other substances in the work place.
Skin protection: Use suitable work clothes.
Work hygiene: Wash hands/skin after handling the product. Wash contaminated clothing before re-use.

9. Physical and chemical properties:

Appearance/colour/odour: White paste with mild aromatic odour
Flame point: > 93,3 °C
Density: 1,5
Solubility in water: Slight

10. Stability and reactivity:

Stability: The product is stable.
Materials to avoid: Strong acids, strong oxidisers and epoxy activators in large quantities.
Hazardous decompositions products: Carbon oxides and aldehydes.
Hazardous polymerisation: Will not occur.

11. Toxicological information:

Inhalation: No data given.
Skin contact: Causes moderate irritation of the skin.
Eye contact: Causes slight irritation of the eyes.
Ingestion: No data given.
Sensitisation: May cause sensitisation by skin contact.
Other information: By overexposure the product may cause irritation, sensitisation and dermatitis.

TDS FE180A Fitting Epoxy – Base Resin

12. Ecological information:

Do not emit to the water- or soil environment or sewers. In case of pollution, contact the local environmental authorities. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. Disposal considerations:

Material should be disposed of in accordance with National and Local regulations.

14. Transport information:

Not dangerous goods.

15. Regulatory information:

According to EEC Directive 67/548/EEC the product is labelled as follows:



Irritant



Dangerous for the environment

R-phrases: 36/38- Irritating to eyes and skin.
43- May cause sensitisation by skin contact.
51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S-phrases: 28- After contact with skin, wash immediately with plenty of water
37- Wear suitable gloves
39- Wear eye/face protection
61- Avoid release to the environment. Refer to special instructions/safety data sheet

Special labelling: Contains epoxy constituents. See information supplied by the manufacturer.

16. Other information:

R-phrases section 3:

36/38- Irritating to eyes and skin
38- Irritating to skin
43- May cause sensitisation by skin contact.
51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Revised: Revised in section:

The directions are given assuming the product is used for its normal purpose. It is however always the responsibility of the user to comply with national legislation's. The information in this Safety Data Sheet should be understood as a description for safe handling of the product and is no guarantee for the properties of the product.

Material Safety Data Sheet

OT0016

T0016 AWLSPAR T109 REDUCER

Version No: 2 Revision Date: 05/07/2003

1. Identification of the preparation and company

Preparation/Product Name	T0016 AWLSPAR T109 REDUCER
Product Code	OT0016
HSE Number	
Intende d use	See Technical Data Sheet. For professional use only.
Application Method	See Technical Data Sheet.
Company Name	Awlgrip Europe International Paint Belgium NV Bannerlaan 54 B-2280 Grobbendonk Belgium - -
Telephone No.	+32 14 257770
Fax No.	+32 14 230880
24 hour Emergency Telephone No.	+44 (0)191 469 6111
Official Advisory Body Telephone No.	+44 (0) 870 600 6266 For Advice to Doctors & Hospitals only

2. Composition/information on ingredients

This product contains the following substances that present a health hazard within the meaning of the Dangerous Substances Directive 67/548/EEC and the Chemicals (Hazard Information and Packaging for Supply) Regulations 1999 (2) or have occupational exposure limits detailed in EH40.

Ingredient	EINECS	Concentration Label	Symbol(s)	Risk phrases (*)
Solvent naphtha (petroleum), medium aliphatic	265-191-7	50-100	Xn,N	R51-53,R65

* The full texts of the phrases are shown in section 16.

Your attention is drawn to the Product Datasheet and the package labelling, which with this Safety Data Sheet comprise an integral information system about this product. The information contained in this sheet is liable to modification from time to time in the light of our policy of continuous product development and of changes in legislation. Awlgrip® is a trademark of Akzo Nobel.



Material Safety Data Sheet

OT0016

T0016 AWLSPAR T109 REDUCER

Version No: 2 Revision Date: 05/07/2003

3. Hazard identification of the product

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Harmful: May cause lung damage if swallowed.

Further information is given in section 11.

4. First aid measures**General**

In all cases of doubt, or when symptoms persist, seek medical attention.

Never give anything by mouth to an unconscious person.

Inhalation

Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

Eye Contact

Irrigate copiously with clean fresh water for at least 10 minutes, holding the eyelids apart and seek medical attention.

Skin Contact

Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognised skin cleanser. Do NOT use solvents or thinners.

Ingestion

If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

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Version No: 2 Revision Date: 05/07/2003

5. Fire-fighting measures

Recommended extinguishing media; alcohol resistant foam, CO². powder, water spray.

Do not use; water jet.

Note; Fire will produce dense black smoke. Decomposition products may be hazardous to health. Avoid exposure and use breathing apparatus as appropriate.

Cool closed containers exposed to fire by spraying them with water. Do not allow run off water and contaminants from fire fighting to enter drains or water courses.

6. Accidental release measures

Ventilate the area and avoid breathing vapours. Take the personal protective measures listed in section 8.

Contain and absorb spillage with non-combustible materials e.g. sand, earth, vermiculite. Place in closed containers outside buildings and dispose of according to the Waste Regulations. (See section 13).

Clean, preferably with a detergent. Do not use solvents.

Do not allow spills to enter drains or watercourses.

If drains, sewers, streams or lakes are contaminated, inform the local water company immediately. In the case of contamination of rivers, streams or lakes the Environmental Protection Agency should also be informed.

Your attention is drawn to the Product Datasheet and the package labelling, which with this Safety Data Sheet comprise an integral information system about this product. The information contained in this sheet is liable to modification from time to time in the light of our policy of continuous product development and of changes in legislation. Awlgrip® is a trademark of Akzo Nobel.



Material Safety Data Sheet

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Version No: 2 Revision Date: 05/07/2003

7. Handling and storage**Handling****In Storage**

Handle containers carefully to prevent damage and spillage.

In Use

Avoid skin and eye contact. Avoid inhalation of vapours and spray mists. Observe label precautions. Use personal protection as shown in section 8.

Smoking, eating and drinking should be prohibited in all preparation and application areas.

Never use pressure to empty a container; containers are not pressure vessels.

Storage

Store in a well ventilated, dry place away from sources of heat and direct sunlight.

Store on concrete or other impervious floor, preferably with bunding to contain any spillage. Do not stack more than 3 pallets high.

Keep container tightly closed. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in the original container or one of the same material.

Prevent unauthorised access.

Your attention is drawn to the Product Data sheet and the package labelling, which with this Safety Data Sheet comprise an integral information system about this product. The information contained in this sheet is liable to modification from time to time in the light of our policy of continuous product development and of changes in legislation. Awlgrip® is a trademark of Akzo Nobel.



Material Safety Data Sheet

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Version No: 2 Revision Date: 05/07/2003

8. Exposure controls and personal protection

Engineering Measures

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapour below occupational exposure limits suitable respiratory protection must be worn.

Exposure Limits

The following occupational exposure limits have been established by the Health and Safety Executive as published in EH40.

Material	Short term (15 min. ave)		Long term (8hr time weighted average)	
	ppm	mg/m ³	ppm	mg/m ³

(M) Maximum Exposure Limit

(S) Occupational Exposure Standard

(R) Suppliers Recommended Limit

(+) There is a risk of absorption through unbroken skin.

Personal Protection

Respiratory Protection

When concentrations exceed the exposure limits shown above workers must wear appropriate respirators approved in accordance with Directive 89/656/EEC and the Personal Protection Equipment Regulations.

Eye Protection

Wear safety eyewear, e.g. safety spectacles, goggles or visors to protect against the splash of liquids. Eyewear should comply with British Standard 2092.

Hand Protection

Nitrile rubber gloves should be worn during mixing and application.

Skin Protection

Overalls which cover the body, arms and legs should be worn. Skin should not be exposed. Barrier creams may help to protect areas which are difficult to cover such as the face and neck. They should however not be applied once exposure has occurred. Petroleum jelly based types such as Vaseline should not be used. All parts of the body should be washed after contact.

Your attention is drawn to the Product Datasheet and the package labelling, which with this Safety Data Sheet comprise an integral information system about this product. The information contained in this sheet is liable to modification from time to time in the light of our policy of continuous product development and of changes in legislation. Awlgrip® is a trademark of Akzo Nobel.



Material Safety Data Sheet

OT0016

T0016 AWLSPAR T109 REDUCER

Version No: 2 Revision Date: 05/07/2003

9. Physical and chemical properties

Physical State	Liquid
Flash Point (deg C)	60
Viscosity (cSt)	1
Specific Gravity	0.778
Vapour Density	Heavier than air.
Lower Explosive Limit	0.8
Solubility in Water	Immiscible
R.A.Q. to ventilate to 10% of the LEL (m ³ /l)	154

10. Stability and reactivity

Stable under recommended storage and handling conditions (see section 7). When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, oxides of nitrogen and smoke.

Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid possible exothermic reactions.

11. Toxicological information

There are no data available on the product itself.

Your attention is drawn to the Product Datasheet and the package labelling, which with this Safety Data Sheet comprise an integral information system about this product. The information contained in this sheet is liable to modification from time to time in the light of our policy of continuous product development and of changes in legislation. Awlgrip® is a trademark of Akzo Nobel.



Material Safety Data Sheet

OT0016

T0016 AWLSPAR T109 REDUCER

Version No: 2 Revision Date: 05/07/2003

12. Ecological information

There are no data available on the product itself.

The product should not be allowed to enter drains or water courses.

13. Disposal considerations

Do not allow into drains or water courses. Wastes and empty containers should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act.

Using information provided in this data sheet advice should be obtained from the Waste Regulation Authority, whether the special waste regulations apply.

14. Transport information

Transport only in accordance with the following regulations:

ADR/RID UN1263 Paint related material, 3, III, special provision SP640E

IMDG	Class/Div	3	Subsidiary Class
	Proper Shipping Name	Paint Related Material	
	UN No	1263	
	Ems	F-E, S-E	
	Packaging Group	III	
	Marine Pollutant	No	

ICAO/IATA	Shipping Name	Paint Related Material
	Class	3
	UN No	1263
	Packaging Group	III

Your attention is drawn to the Product Datasheet and the package labelling, which with this Safety Data Sheet comprise an integral information system about this product. The information contained in this sheet is liable to modification from time to time in the light of our policy of continuous product development and of changes in legislation. Awlgrip® is a trademark of Akzo Nobel.



Material Safety Data Sheet

OT0016

T0016 AWLSPAR T109 REDUCER

Version No: 2 Revision Date: 05/07/2003

15. Regulatory information

In accordance with EC Directive 88/379/EEC and the Chemicals (Hazard Information and Packaging for Supply) Regulations SI /3247/1994 this product is labelled as follows:

Symbol(s)

Harmful

Dangerous for the environment

Contains;**R. Phrases;**

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Harmful: May cause lung damage if swallowed.

S. Phrases;

Do not breathe vapour/spray.

Use only in well-ventilated areas.

P. Phrases;

Your attention is drawn to the Product Datasheet and the package labelling, which with this Safety Data Sheet comprise an integral information system about this product. The information contained in this sheet is liable to modification from time to time in the light of our policy of continuous product development and of changes in legislation. Awlgrip® is a trademark of Akzo Nobel.



Material Safety Data Sheet

OT0016

T0016 AWLSPAR T109 REDUCER

Version No: 2 Revision Date: 05/07/2003

16. Other information

The information on this MSDS is based upon the present state of our knowledge and on current EEC and national laws.

The product should not be used for purposes other than shown in the product data sheet without first obtaining written advice.

It is always the responsibility of the user to take all necessary steps to meet the demands of applicable legislation.

The information in this Health & Safety Data Sheet is required pursuant to Directive 91/155/EEC and the Chemicals (Hazard Information & Packaging for Supply) Regulations 1994.

The full text of the R phrases appearing in section 2 is:

R51-53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R65 Harmful: May cause lung damage if swallowed.

Your attention is drawn to the Product Data sheet and the package labelling, which with this Safety Data Sheet comprise an integral information system about this product. The information contained in this sheet is liable to modification from time to time in the light of our policy of continuous product development and of changes in legislation. Awlgrip® is a trademark of Akzo Nobel.



1 Identification of substance

· **Product details**

· **Trade name:** 38203 Guide Coat Black

· **Article number:** 38203

· **Manufacturer/Supplier:**

SEM Products Inc.
651 Michael Wylie Dr.
Charlotte, NC 28217
(704)522-1006

· **Information department:**

labsupport@sem.ws : SEM Products 651 Michael Wylie Dr. Charlotte, NC 28217 : phone 1-704-522-1006, M - TH 7am - 4pm EDT

· **Emergency information:** 24 HR EMERGENCY CHEMTREC 1-800-424-9300

2 Composition/Data on components

· **Chemical characterization**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

67-64-1	acetone Danger:  2.6/2 Warning:  3.3/2A, 3.8/3	25-50%
68476-86-8	Petroleum gases, liquefied, sweetened Danger:  2.2/1 Warning:  2.5/C	10-25%
108-88-3	toluene Danger:  2.6/2;  3.10/1, 3.7/2 Warning:  3.2/2, 3.3/2A, 3.8/3	10-25%
141-78-6	ethyl acetate Danger:  2.6/2 Warning:  3.3/2A, 3.8/3	2.5-10%
	ACRYLIC RESIN Warning:  3.2/2, 3.3/2A, 3.8/3	2.5-10%
78-93-3	butanone Danger:  2.6/2 Warning:  3.3/2A, 3.8/3	1-2.5%

3 Hazards identification

· **Hazard description:**



Harmful
Extremely flammable

· **Information pertaining to particular dangers for man and environment:**

The product has to be labelled due to the calculation procedure of international guidelines.

Warning! Pressurized container.

Extremely flammable.

(Contd. on page 2)

Trade name: 38203 Guide Coat Black

(Contd. of page 1)

Harmful by inhalation.
Irritating to eyes, respiratory system and skin.
Danger of serious damage to health by prolonged exposure.
Possible risk of harm to the unborn child.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
94.5 % by mass of the contents are flammable
Keep out of the reach of children.

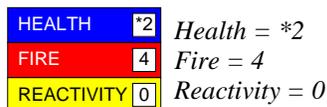
· **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **GHS label elements**



2.2/1 - Extremely flammable gas.
2.3/1 - Extremely flammable aerosol.



3.7/2 - Suspected of damaging fertility or the unborn child.



3.1/4 - Harmful if inhaled.
3.2/2 - Causes skin irritation.
3.3/2A - Causes serious eye irritation.
3.8/3 - May cause respiratory irritation.

· **Prevention:**

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Do not spray on an open flame or other ignition source.
Pressurized container: Do not pierce or burn, even after use.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Use personal protective equipment as required.

(Contd. on page 3)

Trade name: 38203 Guide Coat Black

(Contd. of page 2)

· **Response:**

IF ON SKIN: Wash with plenty of soap and water.

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Call a POISON CENTER or doctor/physician if you feel unwell.

Specific treatment (see label).

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Take off contaminated clothing and wash before reuse.

Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

Eliminate all ignition sources if safe to do so.

· **Storage:**

Store in a well-ventilated place.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Protect from sunlight. Do not expose to temperatures exceeding 50°C/ 122°F.

· **Disposal:**

Dispose of contents/container in accordance with local/regional/national/international regulations.

4 First aid measures

· **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** *If symptoms persist consult doctor.*

5 Fire fighting measures

· **Suitable extinguishing agents:** *CO2, sand, extinguishing powder. Do not use water.*

· **For safety reasons unsuitable extinguishing agents:** *Water with full jet*

· **Protective equipment:** *Mouth respiratory protective device.*

6 Accidental release measures

· **Person-related safety precautions:** *Wear protective equipment. Keep unprotected persons away.*

· **Measures for environmental protection:** *Do not allow to enter sewers/ surface or ground water.*

· **Measures for cleaning/collecting:**

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

(Contd. on page 4)



Trade name: 38203 Guide Coat Black

(Contd. of page 3)

Do not flush with water or aqueous cleansing agents

7 Handling and storage

- **Handling:**
- **Information for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
- **Information about protection against explosions and fires:**
Do not spray on a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Observe official regulations on storing packagings with pressurized containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Do not gas tight seal receptacle.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

67-64-1 acetone

PEL	2400 mg/m ³ , 1000 ppm
REL	590 mg/m ³ , 250 ppm
TLV	Short-term value: 1782 mg/m ³ , 750 ppm Long-term value: 1188 mg/m ³ , 500 ppm BEI

108-88-3 toluene

PEL	Short-term value: C 300; 500* ppm Long-term value: 200 ppm *10-min peak per 8-hr shift
REL	Short-term value: 560 mg/m ³ , 150 ppm Long-term value: 375 mg/m ³ , 100 ppm
TLV	75 mg/m ³ , 20 ppm

141-78-6 ethyl acetate

PEL	1400 mg/m ³ , 400 ppm
REL	1400 mg/m ³ , 400 ppm
TLV	1440 mg/m ³ , 400 ppm

(Contd. on page 5)

Trade name: 38203 Guide Coat Black

(Contd. of page 4)

78-93-3 butanone

PEL	590 mg/m ³ , 200 ppm
REL	Short-term value: 885 mg/m ³ , 300 ppm Long-term value: 590 mg/m ³ , 200 ppm
TLV	Short-term value: 885 mg/m ³ , 300 ppm Long-term value: 590 mg/m ³ , 200 ppm
BEI	

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **General Information**

Form:	Aerosol
Color:	According to product specification
Odor:	Characteristic

· **Change in condition**

Melting point/Melting range: Undetermined.

(Contd. on page 6)



Trade name: 38203 Guide Coat Black

(Contd. of page 5)

Boiling point/Boiling range:	< 0°C (< 32°F)
· Flash point:	< 0°C (< 32°F)
· Ignition temperature:	460°C (860°F)
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	In use, may form flammable/explosive vapour-air mixture.
· Explosion limits:	
Lower:	1.2 Vol %
Upper:	13.0 Vol %
· Vapor pressure at 20°C (68°F):	233 hPa (175 mm Hg)
· Density at 20°C (68°F):	0.76 g/cm ³
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Solvent content:	
Organic solvents:	94.5 %
VOC content:	47.5 %
	358.5 g/l / 2.99 lb/gl
· Solids content:	5.5 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous products of decomposition:** No dangerous decomposition products known.

11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

108-88-3 toluene

Oral	LD50	5000 mg/kg (rat)
Dermal	LD50	12124 mg/kg (rabbit)
Inhalative	LC50/4 h	5320 mg/l (mouse)

· **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

USA

(Contd. on page 7)

Trade name: 38203 Guide Coat Black

(Contd. of page 6)

12 Ecological information

· **General notes:**

Water hazard class 3 (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.

13 Disposal considerations

· **Product:**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **DOT regulations:**



- **Hazard class:** 2.1
- **Identification number:** UN1950
- **Packing group:** -
- **Proper shipping name (technical name):** AEROSOLS, flammable
- **Label:** 2.1

· **Land transport TDG (Canada) and ADR/RID (Europe):**



- **Hazard class:** 2 5F Gases
- **UN-Number:** 1950
- **Packaging group:** -
- **Label:** 2.1
- **Description of goods:** 1950 AEROSOLS

· **Maritime transport IMDG:**



- **IMDG Class:** 2.1
- **UN Number:** 1950
- **Label:** 2.1
- **Packaging group:** -

(Contd. on page 8)

Trade name: 38203 Guide Coat Black

(Contd. of page 7)

- **EMS Number:** F-D,S-U
- **Marine pollutant:** No
- **Propper shipping name:** AEROSOLS

· **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 2.1
- **UN/ID Number:** 1950
- **Label:** 2.1
- **Packaging group:** -
- **Propper shipping name:** AEROSOLS, flammable

· **UN "Model Regulation":** UN1950; AEROSOLS; 2.1; -

15 Regulations

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

108-88-3	toluene
	ACRYLIC RESIN
78-93-3	butanone
1330-20-7	xylene
67-56-1	methanol
100-41-4	ethylbenzene

· **TSCA (Toxic Substances Control Act):**

67-64-1	acetone
68476-86-8	Petroleum gases, liquefied, sweetened
108-88-3	toluene
141-78-6	ethyl acetate
78-93-3	butanone
123-86-4	n-butyl acetate
1330-20-7	xylene
1333-86-4	Carbon black
68611-44-9	Silane Modified Silica
111-76-2	2-butoxyethanol
68855-54-9	Kieselguhr, soda ash flux-calcined
67-56-1	methanol
100-41-4	ethylbenzene
7732-18-5	water, distilled, conductivity or of similar purity

(Contd. on page 9)



Trade name: 38203 Guide Coat Black

(Contd. of page 8)

· Proposition 65

· Chemicals known to cause cancer:

1330-20-7	xylene
1333-86-4	Carbon black
68855-54-9	Kieselguhr, soda ash flux-calcined
100-41-4	ethylbenzene

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

108-88-3	toluene
----------	---------

· Cancerogenity categories

· EPA (Environmental Protection Agency)

67-64-1	acetone	D
108-88-3	toluene	D
78-93-3	butanone	D
1330-20-7	xylene	D
100-41-4	ethylbenzene	D

· IARC (International Agency for Research on Cancer)

108-88-3	toluene	3
1330-20-7	xylene	3
1333-86-4	Carbon black	2B
111-76-2	2-butoxyethanol	3
68855-54-9	Kieselguhr, soda ash flux-calcined	GROUP 1
9002-88-4	POLYETHYLENE	3
100-41-4	ethylbenzene	2B

· NTP (National Toxicology Program)

68855-54-9	Kieselguhr, soda ash flux-calcined	HUMAN CARCINOGEN
------------	------------------------------------	------------------

· TLV (Threshold Limit Value established by ACGIH)

67-64-1	acetone	A4
108-88-3	toluene	A4
1330-20-7	xylene	A4
1333-86-4	Carbon black	A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)

1333-86-4	Carbon black
-----------	--------------

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Product related hazard informations:

The product has been classified and marked in accordance with directives on hazardous materials.

(Contd. on page 10)

Trade name: 38203 Guide Coat Black

(Contd. of page 9)

· **Hazard symbols:**

Harmful
Extremely flammable

· **Hazard-determining components of labelling:**

toluene

· **Risk phrases:**

Extremely flammable.
Harmful by inhalation.
Irritating to eyes, respiratory system and skin.
Danger of serious damage to health by prolonged exposure.
Possible risk of harm to the unborn child.

· **Safety phrases:**

Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
Wear suitable protective clothing and gloves.
Use only in well-ventilated areas.
This material and its container must be disposed of as hazardous waste.

· **Special labeling of certain preparations:**

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
94.5 % by mass of the contents are flammable
Keep out of the reach of children.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:** Environment protection department.

· **Contact:** Steve Gaver

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement internationale concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent



CUKOTE™
3400 Series
Safety Data Sheet

Ablative Self-Polishing Coating

- Multi-Season Performance
- Does Not Contain Any Organotin Compounds (TBT)

CHEMTREC 24-HR EMERGENCY RESPONSE NUMBER
800-424-9300 • OUTSIDE US 703-527-3887
CHEMTREC should only be called in the event of chemical emergencies involving spill, leak, fire, exposure, or accident involving chemicals.



*Self-Polishing
Copolymer Antifoulant*



**OVER
35
YEARS**

Sect. 1 – Product Identification

Product Name: **Cukote 3400 Series, All Colors**
Product Use: **Antifouling Paint, Bottom Paint**
Appearance: **Liquid with hydrocarbon odor**
Cas Number: **Mixture**

Synonyms: **None**
Revision Date: **October 2013**
Prepared by : **Chief Chemist**

Sect. 2 – Hazardous Identification

EMERGENCY OVERVIEW: WARNING! Combustible liquid and vapor. Harmful or fatal if swallowed or inhaled. May cause eye, skin and respiratory tract irritation.

EYES: May cause moderate eye irritation. Not expected to cause permanent damage if promptly rinsed from eyes.

SKIN: May cause skin irritation. Prolonged and/or repeated skin contact may cause irritation characterized by redness, cracking and blistering. May be absorbed in toxic amounts through the skin and cause systematic effects.

INHALATION: May cause respiratory tract irritation. Exposure to high concentrations may cause central nervous system effects, including headache, drowsiness, nausea, and dizziness. Continued inhalation may result in unconsciousness or death.

INGESTION: May cause gastrointestinal disturbances such as nausea, vomiting, diarrhea, and effects similar to those described in INHALATION.

INHALATION. Aspiration of this product into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury possibly progressing to death.

CHRONIC: Reports have associated repeated or prolonged occupational exposure to solvents with permanent brain or nervous system damage, liver and kidney damage or may cause cardiac arrhythmia.

CARCINOGENS: Ethylbenzene and carbon black are classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence of carcinogenicity in laboratory animals.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Skin, eyes, respiratory tract, liver, kidneys.

HMS Rating: Health: 2 Flammability: 3 Reactivity: 0



Sect. 3 – Composition/information on ingredients

Hazardous Components	Cas Number	Percentage Range by Weight	Reg Agency	PPM	MG/M3	Notes
Hydrocarbon	64742-95-6	18-22	ACGIH TLV OSHA-PEL	100		STS
Ethylbenzene	100-41-4	<1	ACGIH STEL ACGIH-TWA NIOSH NIOSH STEL OSHA STEL OSHA TWA	125 100 100 125 125 100	543 434 435 545 545 435	
Zinc Oxide (as dust)	1314-13-2	5-7	ACGIH TWA OSHA TWA OSHA-TWA	- - -	2.0 15 5	1 2
Cupric Oxide	1317-38-0	1-5	N/A			
Cuprous Oxide	1317-39-1	45-48	ACGIH-TLV OSHA TWA		1.0 1.0	

Notes:

- 1 Respirable fraction
- 2 Respirable dust
- 8 0.1 mg/m3 in presence of polycyclic aromatic hydrocarbons
- (+) NIOSH Occupational Carcinogen
- ST Recommend that exposure limits for standard solvent be used as a guideline.
- S

Sect. 4 – First Aid Measures

EYE CONTACT: Hold one eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing the eye. Contact a poison control center for treatment advice.

SKIN CONTACT: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call poison control center or doctor for treatment advice. Wash contaminated clothing before reuse.

INHALATION: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth. Call a poison control center or doctor for further treatment advice.

INGESTION: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

NOTE TO PHYSICIAN: There is no specific antidote for effects from overexposure to the material. Treatment should be directed at the control of symptoms and the clinical condition.

Sect. 5 – Fire Fighting Measures

FLASH POINT: 101°F/38°C

EXTINGUISHING MEDIA: Use dry chemical, carbon dioxide, water spray, or foam.



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Safety Data Sheet

FIRE FIGHTING PROCEDURES: As in any fire, wear complete fire service protective equipment, including full-face MSHA/NIOSH approved or equivalent self-contained breathing apparatus. Use water to cool fire-exposed container/structure/protect personnel.

FIRE AND EXPLOSION HAZARDS: Can release vapors that form explosive mixtures. Vapors can travel to a source of ignition and flash back. Closed containers may explode when exposed to extreme heat (fire). Toxic vapors may be given off in a fire.

Sect. 6 – Spill and Leak Procedures

Stop spill/leak if no risk involved. Avoid breathing vapor. Eliminate All sources of ignition such as flares, flames (including pilot lights), and electrical sparks. Ventilate area. Take up carefully to avoid heat and sparks. Use an inert absorbent to complete a clean-up. This material reacts with oxidizing materials. Dispose of contaminated absorbent, container and unused contents in accordance with local, state, and federal regulations.

Sect. 7 – Handling and Storage

HANDLING: Avoid breathing of vapors, mists or fumes. Do not get on the skin, in eyes or on clothing. Spray paint in accordance with OSHA 29 CFR 1910.107. Use with adequate ventilation. Wash thoroughly after handling.

STORAGE: Store in areas/buildings designed to comply with OSHA 1910.106. Keep in a closed, labeled container within a cool (wellshaded), dry, ventilated area. Protect from physical damage. Keep containers closed when material is not is use. Maintain good housekeeping.

OTHER: Keep away from heat and open flame. If post application/use processing of this product generates dust or if spray application is made, "Exposure Limits" in section 2 apply. Do not use until manufacturer's precautions have been read/understood. Containers of this material may be hazardous when empty. Since emptied containers retain product residues (vapor, liquid), all hazard precautions given in the data sheet must be observed. **DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THE CAN MAY EXPLODE AND CAUSE INJURY OR DEATH.** All five gallon pails and larger containers, should be grounded and/or bonded when material is transferred.

Sect. 8 – Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Ventilation is normally required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Facilities storing or utilizing this product should be equipped with an eyewash station and shower.

RESPIRATORS: Ensure fresh air entry during the application and drying. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, or if air monitoring demonstrates vapor level is above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved or equivalent) during and after application. Respirator selection, use and maintenance should be in accordance with the requirements in 29 CFR 1910.134 and NIOSH 42 CFR 84, whenever workplace conditions warrant a respirator's use.

PERSONAL PROTECTIVE EQUIPMENT: Industrial safety glasses at a minimum. As necessary for work conditions: use side shields, goggles, or faceshield. As required, chemical resistant flexible-type gloves (heavy duty neoprene or equal). Wear industrial-type work clothing and safety footwear. Depending on working conditions,



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Safety Data Sheet

i.e., contact potential, wear resistant protective garments such as head/neck cover, aprons, jackets, pants, coveralls, boots, etc.

Sect. 9 – Physical and Chemical Properties

Weight Per Gallon: 18.0-18.35 lbs.
Vapor Pressure: 3 @ 77°F/25°C
pH: N/A
Solubility in Water: Insoluble
VOC: 298 Grams/Liter

% Volatile by Weight: 15-18
Evaporation Rate: Slower than Ether
Specific Gravity: 2.02
Viscosity: 83-88 KU

Sect. 10 – Stability and Reactivity

Stability: Stable
Hazardous Polymerization: Will not occur.
Incompatibility: Avoid oxidizing agents, heat, sparks, and open flames.
Hazardous Decomposition Product(s): Carbon monoxide, carbon dioxide, oxides of nitrogen and other toxic organic compounds.

Sect. 11 – Toxicological Information

Certain components of this product have been shown to cause fetotoxic effects in laboratory animal studies. Relevance to humans is uncertain.

Xylene: Laboratory animals exposed to high levels of xylene showed evidence of effects on the liver, kidneys, spleen, and auditory system.

Sect. 12 – Ecological Information

Product has not been tested for ecotoxicity.

Sect. 13 – Disposal Considerations

Dispose of unusable product in accordance with local, state, and federal regulations.

Sect. 14 – Transportation Information

Department of Transportation Reportable Quantities	
<u>Reportable Qty (LBS)</u>	<u>Hazardous Substance</u>
100	N/A

DOT information for domestic ground transport
DOT Proper Shipping Name: Paint
DOT Hazard Class: 3
DOT Identification Number: UN1263
DOT Packing Group: III
Marine Pollutant: Yes

Sect. 15 – Regulatory Information

SARA TITLE III SECTION 313 CHEMICALS:

Ethylbenzene
Zinc Oxide (as dust)
Cupric Oxide
Cuprous Oxide
Xylene

WARNING: THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

EPA REGISTRATION: 44891-7

Globally Harmonized System:



Flammable



Irritant



Health Hazard



Marine Pollutant

Sect. 16 – Other Information

Ethylbenzene is considered a Group 2B carcinogen (possibly carcinogenic to humans). This category generally includes agents for which there is limited evidence in humans in the absence of sufficient evidence in experimental animals.

NOTICE: This document is generated for the purpose of distributing health, safety, and environmental data. The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. New Nautical Coatings, Inc. makes no warranty with respect thereto and disclaims all liability from reliance thereon.

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: S2081 2K SYSTEM 20 CLEAR COAT HS

Product code: S2081

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of substance / mixture: PAINT PRODUCT CONTAINING MIXTURE OF SOLVENTS

1.3. Details of the supplier of the safety data sheet

Company name: U-POL Limited
Denington Industrial Estate
Denington Road
Wellingborough
Nothants
NN8 2QH
United Kingdom
Tel: +44-(0)-1933 230300
Fax: +44-(0)-1933 425797
Email: technical@u-pol.com

1.4. Emergency telephone number

Emergency tel: +44-(0)-1933 230310

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CHIP: -: R10; Xn: R20/21; Xi: R38; -: R52/53

Most important adverse effects: Flammable. Harmful by inhalation and in contact with skin. Irritating to skin. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Classification under CLP: This product has no classification under CLP.

2.2. Label elements

Label elements under CHIP:

Hazard symbols: Harmful.



Risk phrases: R10: Flammable.
R20/21: Harmful by inhalation and in contact with skin.

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S2081 2K SYSTEM 20 CLEAR COAT HS

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R38: Irritating to skin.

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases: S16: Keep away from sources of ignition - No smoking.

S23: Do not breathe vapour/spray

S36/37: Wear suitable protective clothing and gloves.

Precautionary phrases: Restricted to professional users.

2.3. Other hazards

Other hazards: Harmful: may cause lung damage if swallowed.

PBT: This substance is not identified as a PBT substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

XYLENE

EINECS	CAS	CHIP Classification	CLP Classification	Percent
215-535-7	1330-20-7	-: R10; Xn: R20/21; Xi: R38	Flam. Liq. 3: H226; Acute Tox. 4: H332; Acute Tox. 4: H312; Skin Irrit. 2: H315	10-30%

N-BUTYL ACETATE

204-658-1	123-86-4	-: R10; -: R66; -: R67	Flam. Liq. 3: H226; STOT SE 3: H336; -: EUH066	1-10%
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4-METHYLPENTAN-2-ONE

203-550-1	108-10-1	F: R11; Xn: R20; Xi: R36/37; -: R66	Flam. Liq. 2: H225; Acute Tox. 4: H332; Eye Irrit. 2: H319; STOT SE 3: H335; -: EUH066	1-10%
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2-METHOXY-1-METHYLETHYL ACETATE

203-603-9	108-65-6	-: R10	Flam. Liq. 3: H226	1-10%
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LOW BOILING POINT NAPHTHA - UNSPECIFIED - SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM.

265-199-0	64742-95-6	Xn: R65; -: R10; Xi: R37; N: R51/53	Asp. Tox. 1: H304; Flam. Liq. 3: H226; STOT SE 3: H335; Aquatic Chronic 2: H411	1-10%
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Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water. Remove all contaminated clothes and footwear immediately unless stuck to skin.

Eye contact: Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.

Ingestion: Do not induce vomiting. Wash out mouth with water. Transfer to hospital as soon as possible.

[cont...]

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S2081 2K SYSTEM 20 CLEAR COAT HS

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Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and pain.

Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. Drowsiness or mental confusion may occur.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

4.3. Indication of any immediate medical attention and special treatment needed

Immediate / special treatment: Not applicable.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Carbon dioxide. Dry chemical powder. Alcohol or polymer foam.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Flammable. In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding. Alert the neighbourhood to the presence of fumes or gas.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. Wash the spillage site with large amounts of water.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Ensure there is sufficient ventilation of the area. Smoking is forbidden.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep away from sources of ignition. Keep container tightly closed. Keep away from direct sunlight.

[cont...]

SAFETY DATA SHEET
S2081 2K SYSTEM 20 CLEAR COAT HS

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Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits:

Respirable dust

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	50 ppm	100 ppm	1 mg/m ³	-

Hazardous ingredients:

XYLENE

Workplace exposure limits:

Respirable dust

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	220 mg/m ³	441 mg/m ³	-	-

N-BUTYL ACETATE

UK	724 mg/m ³	966 mg/m ³	-	-
----	-----------------------	-----------------------	---	---

4-METHYLPENTAN-2-ONE

UK	208 mg/m ³	416 mg/m ³	-	-
----	-----------------------	-----------------------	---	---

2-METHOXY-1-METHYLETHYL ACETATE

UK	274 mg/m ³	548 mg/m ³	-	-
----	-----------------------	-----------------------	---	---

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area. Ensure lighting and electrical equipment are not a source of ignition.

Respiratory protection: Compressed airline breathing apparatus (EN139).

Hand protection: Nitrile gloves.

Eye protection: Face-shield.

Skin protection: Protective clothing with elasticated cuffs and closed neck.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Colourless

Odour: Aromatic

Evaporation rate: Moderate

Oxidising: Non-oxidising (by EC criteria)

Solubility in water: Insoluble

[cont...]

SAFETY DATA SHEET
S2081 2K SYSTEM 20 CLEAR COAT HS

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Also soluble in: Most organic solvents.

Viscosity: Viscous

Kinematic viscosity: 40 secs

Viscosity test method: DIN 4 Cup 20C

Flammability limits %: lower: 1.0

upper: 6.6

Flash point°C: 24

Autoflammability°C: 490

Relative density: 0.96

VOC g/l: 515

9.2. Other information

Other information: Not applicable.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.
Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Direct sunlight. Heat. Sources of ignition. Flames.

10.5. Incompatible materials

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

Section 11: Toxicological information

11.1. Information on toxicological effects

Relevant effects for mixture:

Effect	Route	Basis
Acute toxicity (harmful)	INH DRM	Hazardous: calculated
Irritation	DRM	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and pain.

Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. Drowsiness or mental confusion may occur.

[cont...]

SAFETY DATA SHEET
S2081 2K SYSTEM 20 CLEAR COAT HS

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Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values: Not applicable.

12.2. Persistence and degradability

Persistence and degradability: Not biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No data available.

12.4. Mobility in soil

Mobility: Volatile. Heavier than water.

12.5. Results of PBT and vPvB assessment

PBT identification: This substance is not identified as a PBT substance.

12.6. Other adverse effects

Other adverse effects: No data available.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Incineration on land.

Recovery operations: Use principally as a fuel or other means to generate energy.

Disposal of packaging: Dispose of in a regulated landfill site or other method for hazardous or toxic wastes.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: UN1263

14.2. UN proper shipping name

Shipping name: PAINT RELATED MATERIAL

14.3. Transport hazard class(es)

Transport class: 3

14.4. Packing group

Packing group: III

14.5. Environmental hazards

Environmentally hazardous: No

Marine pollutant: No

[cont...]

SAFETY DATA SHEET
S2081 2K SYSTEM 20 CLEAR COAT HS

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14.6. Special precautions for user

Special precautions: No special precautions.

Tunnel code: D/E

Transport category: 3

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

FOR PROFESSIONAL USE ONLY. Read full instructions before use.

IMPORTANT: This product contains hazardous materials and therefore appropriate personal protective equipment should always be used.

Please refer to the label and consult the material safety data sheet for full handling instructions and personal protection information. These are available via your local stockist or via the U-POL website at WWW.U-POL.COM.

U-POL disclaim any liability where the user does not wear the recommended personal protective equipment.

Phrases used in s.2 and 3: EUH066: Repeated exposure may cause skin dryness or cracking.

H225: Highly flammable liquid and vapour.

H226: Flammable liquid and vapour.

H304: May be fatal if swallowed and enters airways.

H312: Harmful in contact with skin.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H332: Harmful if inhaled.

H335: May cause respiratory irritation.

H336: May cause drowsiness or dizziness.

H340: May cause genetic defects <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

H350: May cause cancer <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

H411: Toxic to aquatic life with long lasting effects.

R10: Flammable.

[cont...]

SAFETY DATA SHEET

S2081 2K SYSTEM 20 CLEAR COAT HS

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R11: Highly flammable.

R20/21: Harmful by inhalation and in contact with skin.

R20: Harmful by inhalation.

R36/37: Irritating to eyes and respiratory system.

R37: Irritating to respiratory system.

R38: Irritating to skin.

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R65: Harmful: may cause lung damage if swallowed.

R66: Repeated exposure may cause skin dryness or cracking.

R67: Vapours may cause drowsiness and dizziness.

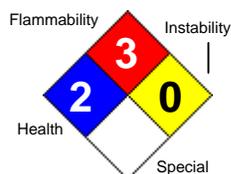
Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Addition of reducers, hardeners and other additives over and above U-POL's recommendations for use, may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, this company shall not be held liable for any damage resulting from handling or from contact with the above product.

MATERIAL SAFETY DATA SHEET

TOLUENE

Page: 1

HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZ.	0
PPE	G

Printed: 12/14/2005
Revision: 06/10/2005

1. Product and Company Identification

Product Code:	CTO42		
Product Name:	TOLUENE		
Reference #:	1645		
Manufacturer Information			
Company Name:	W. M. Barr 2105 Channel Avenue Memphis, TN 38113		
Phone Number:	(901)775-0100		
Emergency Contact:	3E 24 Hour Emergency Contact	(800)451-8346	
Information:	W.M. Barr Customer Service	(800)398-3892	
Web site address:	www.wmbarr.com		

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Percentage	OSHA TWA	ACGIH TWA	Other Limits
1. Toluene	108-88-3	95.0 -100.0 %	200 ppm	50 ppm	No data.
Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Toluene	XS5250000	500 ppm/(10min)	300 ppm	300 ppm	No data.

3. Hazards Identification

Emergency Overview

Danger! Flammable. Keep away from heat, sparks, flame and all other sources of ignition. Vapors may cause flash fire or ignite explosively. Vapors may travel long distances to other areas and rooms away from work site. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition anywhere in the structure, dwelling or building during use and until all vapors are gone from the work site and all areas away from the work site. Keep away from electrical outlets and switches. Beware of static electricity that may be generated by synthetic clothing and other sources.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

Health Hazards (Acute and Chronic)

Inhalation Acute Exposure Effects:

Vapor harmful. May cause dizziness, headache, watering of eyes, depression of central nervous system, loss of appetite, fatigue, hallucinations. Severe overexposure may cause coma, anesthesia and irregular heartbeat, and death. Intentional misuse of this product by deliberately concentrating and inhaling can be harmful or fatal.

Skin Contact Acute Exposure Effects:

This product is a skin irritant. It may be absorbed through the skin. It may cause irritation, dermatitis, drying of skin, and numbness in fingers and arms. May increase severity of symptoms listed under inhalation.

Eye Contact Acute Exposure Effects:

This material is an eye irritant. May cause irritation and pain, conjunctivitis of eyes, burns, corneal ulcerations of the eye, stinging, redness, and tearing. Vapors or mist can irritate eyes.

Ingestion Acute Exposure Effects:

Harmful or fatal if swallowed. May cause headache, nausea, vomiting, burning sensation in mouth and stomach, loss of coordination, gastrointestinal irritation, diarrhea, loss of appetite, and coma.

Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged or repeated contact may cause dermatitis. May cause dizziness, headache, nausea, skin irritation, heart palpitations, permanent central nervous system changes, some loss of memory, kidney damage, and liver damage.

Signs and Symptoms Of Exposure

No data available.

Medical Conditions Generally Aggravated By Exposure

Diseases of the skin, liver, and kidneys.

OSHA Hazard Classes:

HEALTH HAZARDS : N/E

PHYSICAL HAZARDS : N/E

TARGET ORGANS & EFFECTS: N/E

4. First Aid Measures

Emergency and First Aid Procedures

Inhalation:

If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

Skin Contact:

Irritation may result. Immediately wash with soap and water.

Eye Contact:

Immediately flush with water, remove any contact lenses, continue flushing with water for at least 15 minutes, then get medical attention.

Ingestion:

Call you local poison control center, hospital emergency room, or physician immediately for instructions.

Note to Physician

Call your local poison control center for further information.

5. Fire Fighting Measures

Flammability Classification:

OSHA Class IC

Flash Pt:

40.00 F Method Used: TCC

Explosive Limits:

LEL: 1.00 UEL: No data.

Autoignition Pt:

No data.

Special Fire Fighting Procedures

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spay to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Unusual Fire and Explosion Hazards

No data available.

Extinguishing Media

Use carbon dioxide, dry powder, or foam.

Unsuitable Extinguishing Media

No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Cleanup:

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area.

Small Spills:

Take up liquid with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large Spills:

Dike far ahead of spill for later disposal.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users --Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provided protection against vapors.

Eye Protection

Safety glasses, chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

Other Protective Clothing

Various application methods can dictate the use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after use. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

Ventilation

Use only with adequate ventilation to prevent buildup of vapors. Do not use in areas where vapors can accumulate and concentrate such as basements, bathrooms, or small enclosed areas. Whenever possible, use outdoors in an open area. If using indoors, open all windows and doors and maintain a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea or eye-watering -- Stop -- ventilation is inadequate. Leave area immediately. If the work area is not well ventilated, then do not use this product. A dust mask does not provide protection against vapors.

9. Physical and Chemical Properties

Physical States: [] Gas [X] Liquid [] Solid
Melting Point: No data.
Boiling Point: > 230.00 F
Autoignition Pt: No data.
Flash Pt: 40.00 F Method: TCC
Explosive Limits: LEL: 1.00 UEL: No data.
Specific Gravity: 0.000000
Bulk Density: 7.189 LB/GA
Vapor Pressure: No data.
Vapor Density: No data.
Evaporation Rate: No data.
Solubility in Water: No data.
Percent Volatile: 99.999 % by weight.
VOC / Volume: 880.0000 G/L
Corrosion Rate: No data.
pH: No data.

Appearance and Odor

No data available.

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents.

Hazardous Decomposition Or Byproducts

Decomposition may produce carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will occur [] Will not occur [X]

Conditions To Avoid - Hazardous Polymerization

No data available.

11. Toxicological Information

Toxicological Information

No data available.

Carcinogenicity/Other Information

No data available.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

Ecological Information

No data available.

13. Disposal Considerations

Waste Disposal Method

Dispose in accordance with local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name

No data available.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Toluene	108-88-3	No	Yes 1000 LB	Yes	Yes

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Toluene	108-88-3	HAP	Yes	8A CAIR	Yes

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

- Sec.302:** EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.
- Sec.304:** EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.
- Sec.313:** EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.
- Sec.110:** EPA SARA 110 Superfund Site Priority Contaminant List

TSCA (Toxic Substances Control Act) Lists:

- 5A(2):** Chemical Subject to Significant New Rules (SNURS)
- 6A:** Commercial Chemical Control Rules
- 8A:** Toxic Substances Subject To Information Rules on Production
- 8A CAIR:** Comprehensive Assessment Information Rules - (CAIR)
- 8A PAIR:** Preliminary Assessment Information Rules - (PAIR)
- 8C:** Records of Allegations of Significant Adverse Reactions
- 8D:** Health and Safety Data Reporting Rules
- 8D TERM:** Health and Safety Data Reporting Rule Terminations

Other Important Lists:

- CWA NPDES:** EPA Clean Water Act NPDES Permit Chemical
- CAA HAP:** EPA Clean Air Act Hazardous Air Pollutant
- CAA ODC:** EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)
- CA PROP 65:** California Proposition 65

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

- Yes No Acute (immediate) Health Hazard
- Yes No Chronic (delayed) Health Hazard
- Yes No Fire Hazard
- Yes No Reactive Hazard
- Yes No Sudden Release of Pressure Hazard

16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.



PETTIT PAINT

MATERIAL SAFETY DATA SHEET

Supplier:	Kop-Coat, Inc. Marine Group 36 Pine Street Rockaway, NJ 07866	EMERGENCIES: Health/spills:.....: Chemtrec Assistance.....: Chemtrec Outside USA.....:	800-548-0489 800-424-9300 703-527-3887
		Kop-Coat, Inc. Product Information.....: Outside USA.....:	800-221-4466 973-625-3100

1. Product Information

Product name	Prop Coat Barnacle Barrier 1792 Aerosol
Product code	1179320\1

Issuing date: 11/19/2013 **Contact person:** Environmental Health & Safety Mgr

2. Hazards identification

Emergency Overview

Appearance: Liquid **Odor:** Solvent Like

Hazards: DANGER!

Contents under pressure. Extremely flammable liquid and vapor. Vapors may cause flash fire. Harmful if inhaled. Vapor harmful. May affect the brain or nervous system causing dizziness, headache or nausea. Harmful if swallowed.

Potential health effects

Primary Routes of Entry: Eye contact, ingestion, skin contact, inhalation, and absorption.

Eye contact:

Causes eye irritation.

Ingestion:

May be harmful if swallowed. Aspiration of this product into the lungs during ingestion, gagging or vomiting may cause lung damage, which can be fatal.

Skin contact:

May cause skin irritation. Symptoms may include dryness, itching, burning sensation, redness, cracking and swelling depending on the extent of exposure. May be absorbed through skin. Prolonged and/or repeated skin contact may

cause symptoms including dryness, itching, burning sensation, cracking and redness.

Inhalation:

May cause irritation to the nose, throat and respiratory tract. Inhalation of high concentrations of vapors may cause respiratory tract irritation and central nervous system depression. Symptoms may include headache, nausea, dizziness and drowsiness. Continued inhalation may result in unconsciousness or death. Serious risk of suffocation when in confined area.

Chronic effects:

Prolonged or repeated dermal exposure to this product can cause skin dermatitis characterized by red, dry, scaly skin. NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Target Organs: Not Determined

This product contains carcinogens or potential carcinogens as listed by IARC or NTP. See Section 3 NTP, IARC (Carc.) columns for chemical identification.

3. Composition/information on ingredients

Chemical Name	CAS-No.	Weight %	Carc
Zinc	7440-66-6	30 - 50	
Toluene	108-88-3	20 - 30	
Propane/Isobutane/n-Butane	68476-86-8	10 - 20	
Aliphatic petroleum distillates (mineral spirits)	64742-88-7	1 - 10	
Aliphatic Hydrocarbon (Stoddard type)	8052-41-3	1 - 10	
Ethylbenzene	100-41-4	1 - 10	*
Xylene	1330-20-7	1 - 10	

4. FIRST AID MEASURES

Eye contact:

Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Take care not to rinse contaminated water into the unaffected eye or onto the face. Call poison control center, hospital emergency room, or physician immediately.

Ingestion:

NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 2 to 8 oz. (60 to 240 mL) of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water again. Immediately obtain medical advice.

Skin contact:

As quickly as possible, remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Quickly and gently blot or brush away excess chemical. Immediately wash with lukewarm, gently flowing water and non-abrasive soap for 15-20 minutes. Immediately obtain medical advice. Completely decontaminate clothing, shoes and leather goods before reuse or discard.

Inhalation:

This product is combustible/flammable. Take proper precautions (e.g. remove any sources of ignition). Remove source of contamination or move victim to fresh air.

Note to Physician :

There is no specific antidote for effects from overexposure to this material. Treatment should be directed at the control of symptoms and the clinical condition.

5. FIRE-FIGHTING MEASURES

Flash point - 156° deg F / - 104°C

Extinguishing media:

Use alcohol foam, dry chemical, carbon dioxide or any Class B fire extinguishing agent. Water may be unsuitable for extinguishing fires. Water may be used to cool and prevent the rupture of containers that are exposed to the heat from a fire.

Hazardous combustion products:

See Section 10 for potential decomposition products.

Protective equipment and precautions for firefighters:

Extremely flammable liquid and vapor! Evacuate area and fight fire from a safe distance. Evacuate all persons from the fire area to a safe location. Move non-burning material, as feasible, to a safe location as soon as possible. Fire fighters should be protected from potential explosion hazards while extinguishing the fire. Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use. Containers of this material may build up pressure if exposed to heat (fire). Use water spray to cool fire-exposed containers. Use water spray to disperse vapors if a spill or leak has not ignited. DO NOT extinguish a fire resulting from the flow of flammable liquid until the flow of the liquid is effectively shut off. This precaution will help prevent the accumulation of an explosive vapor-air mixture after the initial fire is extinguished.

6. ACCIDENTAL RELEASE MEASURES

Personal & Environmental Precautions:

Follow personal protective equipment recommendations found in Section 8. Personal protection needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the training and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits. Remove sources of ignition immediately. Stop flow of material if safe to do so. Contain spill and keep out of water courses. Ventilate area. Absorb spill in sand, earth or other suitable material. Transfer to appropriate container for disposal using non-sparking tools.

Methods of Containment & Clean-up and Other Information:

This product, if released in large enough quantities, may need to be reported to the US Coast Guard National Response Center at 1-800-424-8802. Contain spills with dikes and absorbents (sand, earth, dry chemical absorbent) to prevent migration and entry into waterways.

7. HANDLING AND STORAGE

Handling:

Avoid contact with eyes, skin or clothing. Avoid inhalation (vapor, mist, dust or fume, as applicable). Use only with adequate ventilation. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Keep container closed and upright when not in use. To prevent generation of static discharges, use bonding/grounding connection when transferring material. Vapors may accumulate and travel to distant ignition sources and flashback. Extinguish all sources of ignition including pilot lights, non-explosion proof motors and electrical equipment until vapors dissipate. Since empty containers may retain product residue and flammable vapors, observe precautions even after container is emptied. Do not cut, puncture, or weld on or near empty containers. Do not smoke where product is used or stored. Contents under pressure. Do not puncture, incinerate, or discard in a compactor. Do not store above 120°F, or in direct sunlight. Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal. Contents under pressure. Do not puncture, incinerate, or discard in a compactor. Do not store above 120°F, or in direct sunlight. Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal.

Storage:

Keep containers closed when not in use. Store in cool, well ventilated space away from incompatible materials. Store in areas/buildings designed to comply with OSHA 1910.106. Store away from sources of ignition and heat.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	CAS-No.	Z-1 PEL	Z-2 PEL	ACGIH TLV
Zinc	7440-66-6			
Toluene	108-88-3		200 PPM	20 PPM

Prop Coat Barnacle Barrier 1792 Aerosol

Propane/Isobutane/n-Butane	68476-86-8	1800 MGM3 (1000 PPM)	
Aliphatic petroleum distillates (mineral spirits)	64742-88-7		
Aliphatic Hydrocarbon (Stoddard type)	8052-41-3	2900 MGM3 (500 PPM)	100 PPM
Ethylbenzene	100-41-4	435 MGM3 (100 PPM)	100 PPM
Xylene	1330-20-7	435 MGM3 (100 PPM)	100 PPM

Engineering measures:

Use adequate ventilation to maintain airborne concentrations at levels below permissible or recommended occupational exposure limits. Supplementary local exhaust ventilation may be necessary in poorly ventilated spaces, during spraying, heating or other non-routine activities.

Eye/face protection:

Wear chemical-resistant glasses and/or goggles and a face shield when eye and face contact is possible due to splashing or spraying of material.

Skin protection:

Chemical-resistant, flexible-type gloves (Viton(R), neoprene, nitrile or equal) to prevent contact. Gloves should be rinsed and removed immediately after use. Wash hands after removing gloves. Applicators and other handlers working with the concentrate must wear coveralls over long-sleeved shirt and long pants, chemical-resistant apron, footwear and socks.

Respiratory protection:

Respiratory protection may be necessary under certain use conditions. Under such conditions, an appropriate, properly fitted NIOSH-approved respirator must be worn. If respirators are used, a program should be instituted to assure compliance with 29 CFR 1910.34 and 42 CFR 84.

General hygiene considerations:

Facilities utilizing this material should be equipped with an eyewash station and safety shower. Thoroughly clean shoes and wash contaminated clothes before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Aerosol
Appearance:	Liquid
Odor	Solvent Like
pH	Not applicable.
Boiling point	not determined
Flash point	- 156° deg F / - 104°C
Solubility in water:	Slight
Specific Gravity:	1.31
Weight per gallon (LB/GAL) :	11
Evaporation rate (n-Butyl acetate = 1):	Faster than Ether
Volatile by Weight (including water and exempt compounds) (%):	60%
Volatile Organic Content (VOC):	610 lb/gal

10. STABILITY AND REACTIVITY

Stability:

Stable under normal conditions.

Incompatibility:

Oxidizing and reducing agents. Oxidizing agents, acids and bases. Keep away from heat, sparks and open flames.

Hazardous decomposition products:

Carbon monoxide, carbon dioxide, oxides of nitrogen and other toxic organic compounds.

11. TOXICOLOGICAL INFORMATION

Toluene (CAS# 108-88-3): Prolonged intentional toluene abuse and overexposure to laboratory animals has been associated with central and peripheral nervous system, liver, kidney, blood, vision, hearing and heart damage. Overexposure to animals has been associated with adverse reproductive and developmental effects.

Xylene: Laboratory animals exposed to high levels of xylene showed evidence of effects on the liver, kidneys, lungs, spleen, and caused hearing loss. Rats exposed during pregnancy to xylene showed fetotoxic effects.

Ethylbenzene: Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice.

12. ECOLOGICAL INFORMATION

Ecological evaluation of this material has not been performed; however do not allow the product to be released to the environment without governmental approval/permits.

13. DISPOSAL CONSIDERATIONS

Waste from this material may be a listed and/or characteristic hazardous waste. Dispose of material, contaminated absorbent, container and unused contents in accordance with local, state, and federal regulations.

14. TRANSPORT INFORMATION

Transportation:

This product may be reclassified as Consumer Commodity, ORM-D, when shipped by ground; packaging quantity limitations apply.

By Ground:

DOT Hazard Class: See above.

DOT Proper Shipping Name:

DOT Packing Group:

DOT UN Number:

By Air:

IATA Hazard Class: 2.1

IATA Proper Shipping Name: Aerosols

IATA Packing Group: Not applicable.

IATA UN Number: UN1950

By Sea:

IMDG Hazard Class: 2.1
IMDG Proper Shipping Name: Aerosols
IMDG Packing Group: Not applicable.
IMDG UN Number: UN1950

15. REGULATORY INFORMATION

EPA registration number: Not applicable.

Pest Registration Act number: Not applicable.

Other:

This product is not registered for use or sale in the United States of America.

Chemical Name	CAS-No.	TSCA 12B	SARA 313	TSCA	DSL	EINECS	Prop.65	Whmis
Zinc	7440-66-6		*	*	*	*		
Toluene	108-88-3		*	*	*	*	*	*
Propane/Isobutane/n-Butane	68476-86-8			*	*	*		
Aliphatic petroleum distillates (mineral spirits)	64742-88-7			*	*	*		
Aliphatic Hydrocarbon (Stoddard type)	8052-41-3			*	*	*		*
Ethylbenzene	100-41-4		*	*	*	*	*	*
Xylene	1330-20-7		*	*	*	*		*

16. OTHER INFORMATION

HMIS Health: 2* **HMIS Flammability: 4** **HMIS Physical Hazard: 0**

NFPA Health: 2 **NFPA Flammability: 4** **NFPA Instability/Reactivity: 0**

NOTICE: This document is generated for the purpose of distributing health, safety, and environmental data. The information on this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed, or implied, regarding correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. Kop-Coat makes no warranty with respect thereto and disclaims all liability from reliance thereon.

Key:

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service Registry Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLA RQ	CERCLA Reportable Quantity
CFR	Code of Federal Regulations
CPR	Cardiopulmonary resuscitation
DSL	Domestic Substances List of Canada
EINECS	European Inventory of Existing Chemical Substances
EPCRA	Emergency Planning and Community Right-to-know Act
EPCRA EHS	EPCRA Extremely Hazardous Substance
EPCRA TPQ	EPCRA Threshold Planning Quantity
oF	Fahrenheit degrees
g/l	Grams per liter
gal	Gallons
Group A3	Carcinogen Category - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Group A4	Carcinogen Category - Not Classifiable as a Human Carcinogen
HMIS	Hazardous Materials Identification System - Chemical Rating
IARC	International Agency for Research on Cancer
lbs or LBS	Pounds
MGM3	Milligrams per cubic meter
MIR	Maximum Incremental Reactivity
MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PPM	Parts per million
Proposition 65	California's Safe Drinking Water and Toxic Enforcement Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
VOL	Volume
WT	Weight
WHMIS	Canadian Workplace Hazardous Materials Information System
UN	United Nations

ANSI KC 1.74



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Section 1

● PRODUCT AND COMPANY IDENTIFICATION ●

Section 1

Product Numbers 1
 Product Name *POR-15 Rust Preventive Paint*
 Synonyms *None*
 Products Uses *Paint*
 Revision Number 3
 Revision Date *September 30, 2011*
 Print Date *September 30, 2011*

**24 hr Emergency
Phone Number**

800-424-9300
(Chemtrec)

MANUFACTURER INFORMATION		DISTRIBUTOR INFORMATION	
Company Name	<i>POR-15, Inc.</i>	Company Name	
Address	<i>PO Box 1235 Morristown NJ 07962</i>	Address	
Phone Number	<i>973-887-1999</i>	Phone Number	
Fax Number	<i>973-887-8007</i>	Fax Number	

Section 2

● HAZARDS IDENTIFICATION ●

Section 2

EMERGENCY OVERVIEW	CAUTION! CONTENTS COMBUSTIBLE. AVOID CONTACT WITH SKIN AND EYES. VAPOR HARMFUL. SKIN AND RESPIRATORY SENSITIZER. SKIN AND RESPIRATORY IRRITANT. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.
-------------------------------	--

OSHA Classification *This product is a "hazardous chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.*

European Classification *Carc. Cat. 3
Xn, Xi
R 15-20-36/37/38-40-42/43-48/20-65
S 1/2-7/8-23-24-43-45-53-62*

WHMIS Classification *B3, D1A, D2A, D2B*

HEALTH	* 2
FLAMMABILITY	1
PHYSICAL HAZARD	1



HEALTH HAZARDS		PHYSICAL HAZARDS			
Irritant <input checked="" type="checkbox"/>	Sensitizer <input checked="" type="checkbox"/>	Combustible <input checked="" type="checkbox"/>	Explosive <input type="checkbox"/>	Pyrophoric <input type="checkbox"/>	
Toxic <input type="checkbox"/>	Highly Toxic <input checked="" type="checkbox"/>	Flammable <input type="checkbox"/>	Oxidizer <input type="checkbox"/>	Water Reactive <input type="checkbox"/>	
Corrosive <input type="checkbox"/>	Carcinogenic <input checked="" type="checkbox"/>	Compressed Gas <input type="checkbox"/>	Organic Peroxide <input type="checkbox"/>	Unstable <input type="checkbox"/>	

❖ See Section 11

LABELING REQUIREMENTS			
CANADA	UNITED STATES	EUROPE & AUSTRALIA	GHS
	CAUTION CONTENTS COMBUSTIBLE		



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POTENTIAL HEALTH EFFECTS AND SIGNS / SYMPTOMS OF EXPOSURE

Eye Contact	<i>Causes irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Prolonged vapor contact may cause conjunctivitis.</i>
Skin Contact	<i>Causes irritation with symptoms of reddening, itching, and swelling. Persons previously sensitized can experience allergic skin reaction. Cured material is difficult to remove. Contact with isocyanates can cause discoloration (staining) and hardening of the skin after repeated exposures.</i>
Ingestion	<i>May cause irritation. Symptoms may include abdominal pain, nausea, vomiting, and diarrhea.</i>
Inhalation	<i>Diisocyanate vapors or mist can irritate the mucous membranes in the respiratory tract causing running nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function. Persons with a preexisting, nonspecific bronchial hyper reactivity can respond to concentrations below the TLV or PEL with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the TLV/PEL may lead to bronchitis, bronchial spasm and pulmonary edema. Chemical or hypersensitivity pneumonitis, with flu-like symptoms, has also been reported. These symptoms can be delayed up to several hours after exposure.</i>
Effects of Chronic Exposure	<i>Prolonged skin contact can cause in some cases sensitization. Animal tests and other research indicate skin contact with isocyanates can play a roll in causing isocyanate sensitization and respiratory reaction. As a result of repeated overexposure, or a single large exposure, some individuals may develop sensitization to diisocyanates (asthma or asthma-like symptoms) that may cause them to react to a later exposure at levels well below the TLV/PEL. These symptoms could include chest tightness, wheezing, cough, shortness of breath or asthmatic attack, and could be immediate or delayed up to several hours after exposure. Extreme asthmatic reactions can be life threatening. This increased sensitivity can persist for weeks and in severe cases for several years. Sensitization can be permanent. Chronic overexposure to diisocyanates has also been reported to cause lung damage, including fibrosis and a decrease in lung function.</i>
Medical Conditions Aggravated	<i>Asthma, respiratory disorders, skin allergies, eczema</i>
Target Organs	<i>Eyes, Skin, Respiratory System, Central Nervous System</i>
Routes of Exposure	<i>Skin contact, eye contact, inhalation</i>
Potential Environmental Effects	<i>See Section 12 for environmental effects</i>

Section 3

• COMPOSITION / INFORMATION ON INGREDIENTS •

Section 3

ID	INGREDIENT	CAS NUMBER	EINECS	EU CLASSIFICATION	BLACK	SEMI	% WT CLEAR	SILVER	GRAY
1	<i>Oxirane, methyl-, polymer with .alpha.-hydro-omega-hydroxypoly[oxy(methyl-1,2-ethanediy)] J and 1,1'-methylenebis[isocyanatobenzene]</i>	<i>Trade Secret POR.01109301</i>	<i>Trade Secret</i>	<i>Xn, Xi; 20-36/37/38-40-42/43-48/20</i>	<i>30 - 60</i>	<i>—</i>	<i>30 - 60</i>	<i>—</i>	<i>30 - 60</i>
2	<i>Isocyanic acid, polymethylenepolyphenylene ester, polymer with 1,2-ethanediamine, methyloxirane and 1,2-propanediol</i>	<i>Trade Secret POR.01109302</i>	<i>Trade Secret</i>	<i>Xn, Xi; 20-36/37/38-40-42/43-48/20</i>	<i>—</i>	<i>30 - 60</i>	<i>—</i>	<i>30 - 60</i>	<i>—</i>
3	<i>Aromatic Naphtha</i>	<i>064742-95-6</i>	<i>265-199-0</i>	<i>45-65</i>	<i>10 - 30</i>	<i>10 - 30</i>	<i>15 - 40</i>	<i>15 - 40</i>	<i>15 - 40</i>
4	<i>Propanol, [(1-methyl-1, 2-ethanediy)]bis(oxy)] bis-, polymer with 1-isocyanato-2-[(4-isocyanatophenyl) methyl]benzene and 1,1'-methylenebis[4-isocyanatobenzene]</i>	<i>Trade Secret POR.01109303</i>	<i>Trade Secret</i>	<i>—</i>	<i>10 - 30</i>				
5	<i>Aliphatic Naphtha</i>	<i>064742-88-7</i>	<i>265-191-7</i>	<i>65</i>	<i>10 - 30</i>	<i>10 - 30</i>	<i>—</i>	<i>—</i>	<i>—</i>
6	<i>Methylene Bisphenyl Isocyanate (MDI)</i>	<i>000101-68-8</i>	<i>202-966-0</i>	<i>Xn, Xi; 20-36/37/38-40-42/43-48/20</i>	<i>7 - 13</i>				
7	<i>Aluminum</i>	<i>007429-90-5</i>	<i>231-072-3</i>	<i>F; 10-15</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>3 - 7</i>	<i>—</i>
8	<i>Carbon Black</i>	<i>001333-86-4</i>	<i>215-609-9</i>	<i>—</i>	<i>3 - 7</i>	<i>3 - 7</i>	<i>—</i>	<i>—</i>	<i>0.1 - 1</i>
9	<i>Methylene Diphenyl Diisocyanate (Crude MDI)</i>	<i>026447-40-5</i>	<i>247-714-0</i>	<i>Xn, Xi; 20-36/37/38-40-42/43-48/20</i>	<i>1 - 5</i>	<i>3 - 7</i>	<i>1 - 5</i>	<i>3 - 7</i>	<i>1 - 5</i>
10	<i>Titanium Dioxide</i>	<i>013463-67-7</i>	<i>236-675-5</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>1 - 5</i>
11	<i>Polymeric Diphenlmethane Polyisocyanate</i>	<i>009016-87-9</i>	<i>—</i>	<i>—</i>	<i>1 - 5</i>	<i>—</i>	<i>1 - 5</i>	<i>—</i>	<i>1 - 5</i>
12	<i>Hydrotreated Heavy Petroleum Naphtha</i>	<i>064742-48-9</i>	<i>265-149-8</i>	<i>Xn; 65</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>1 - 5</i>	<i>—</i>

Risk Phrases	<i>See Section 15 for risk phrase text</i>
LD50 and LC50 Information	<i>See Section 11 for toxicological information</i>
Occupational Exposure Limits	<i>See Section 8 for OELs</i>



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Rust Preventive Paint
Part No. 1
Revision 3 ❖ September 30, 2011

CONFORMS TO THE GLOBALLY HARMONIZED SYSTEM (GHS), ANSI Z400.1-2004, EU DIRECTIVE 91/155/EEC & 99/45/EC, OSHA 29 CFR 1910.1200, NOHSC:2011(2003), AND CANADIAN CPR

Section 4

● FIRST AID MEASURES ●

Section 4

Ingestion	<i>DO NOT INDUCE VOMITING! Wash mouth out with water. Do not give anything by mouth to an unconscious individual. Consult a physician.</i>
Skin Contact	<i>Remove with soap and water, rinsing and repeating for 15 minutes. Use skin cream to counter any resulting dryness. Consult a physician if irritation continues. If large skin area is affected, remove contaminated clothing.</i>
Eye Contact	<i>Immediately flush with clear water for at least 15 minutes, including under the eyelids. Consult a doctor.</i>
Inhalation	<i>Immediately move to an area free from exposure with fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. Asthmatic symptoms may develop and may be immediate or delayed up to several hours. Extreme asthmatic reactions can be life threatening.</i>
Notes to Physician	<i><u>Eyes:</u> Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparations as needed. Workplace vapors could produce reversible corneal epithelial edema impairing vision. <u>Skin:</u> This product is a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn. <u>Ingestion:</u> Treat symptomatically. Inducing vomiting is contraindicated because of the irritating nature of the compound. <u>Inhalation:</u> Treat symptomatically. An individual having a dermal or pulmonary sensitization reaction to this product should be removed from further exposure to any diisocyanate.</i>
Antidotes	<i>No specific antidote.</i>

Section 5

● FIRE FIGHTING MEASURES ●

Section 5

Flash Point	<i>> 106 °F (41.1 °C)</i>
Autoignition Temperature	<i>444 °F (229.0 °C)</i>
Explosive Limits	<i>0.60% to 6.50%</i>
Conditions of Flammability	<i>Heat, sparks, flame, red hot metal</i>
Extinguishing Media	<i>CO₂, dry chemical, or universal aqueous film forming foam</i>
Unsuitable Extinguishing Media	<i>Water jet or water-based fire extinguishers</i>
Hazardous Combustion Products	<i>Nitrogen oxides, hydrogen cyanide, oxides of carbon (CO, CO₂), smoke, and vapors</i>
Sensitivity to Mechanical Impact	<i>Probably not sensitive as material is stable.</i>
Sensitivity to Static Discharge	<i>Vapor within the flammable limits may be ignited by a static discharge of sufficient energy.</i>
Special Equipment and Precautions	<i>Use water spray to cool fire exposed containers, as contents can rupture violently from heat developed pressure. Firemen should wear self-contained breathing apparatus.</i>
Special Explosion Hazards	<i>COMBUSTIBLE LIQUID. Vapors can form an explosive mixture with air and can travel to a source of ignition (spark or flame) and flash back.</i>
Autoreactivity / Oxidizing Properties	<i>Not available</i>

Section 6

● ACCIDENTAL RELEASE MEASURES ●

Section 6

Personal Precautions	<i>Use personal protection recommended in Section 8. Isolate hazard area and deny entry to unnecessary and unprotected personnel.</i>
Environmental Precautions	<i>Keep out of drains, sewers, ditches, and waterways. Avoid use of water.</i>
Containment Procedures	<i>Released content may be contained with oil/solvent absorbent pads, booms, and/or absorbents.</i>
Cleanup Procedures	<i>Avoid breathing vapors and ventilate area well. Remove sources of ignition and use non-sparking equipment. Soak up material with inert absorbent and place in safety containers for proper disposal.</i>
Other Information	<i>The North American Emergency Response Guidebook, the Australian Dangerous Goods-Initial Emergency Response Guide (SAA/SNZ HB 76), or similar resources providing emergency response information for dealing with accidents, spills, leaks, and/or fires involving dangerous goods.</i>
Prohibited Materials	<i>Combustible absorbent material such as sawdust, use of equipment that may cause sparking.</i>



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Reporting Requirements

Report releases that reach surface water or groundwater in any amount. Spills, leaks, and overfills from a regulated underground storage tank should also be reported. Reportable quantities for spills onto the ground depend on site conditions, such as the type of soil and the type of material spilled, and Federal and local agencies often have different reportable quantities. If you are unsure of your reporting requirements contact the regulating agency in your area.

Section 7

● HANDLING AND STORAGE ●

Section 7

Precautions for Safe Handling and Use

KEEP OUT OF THE REACH OF CHILDREN. When using in spray application, conformance to NFPA 33 Spray Applications using Flammable and Combustible Materials is recommended.

Storage Requirements and Conditions

For storage of all materials, conform to NFPA 30 Flammable and Combustible Liquids. Keep containers tightly closed and stored in a well-ventilated place. Keep away from sources of ignition.

Store in a dry well-ventilated area out of direct sunlight and away from heat and ignition sources. Store within recommended temperature range. Store away from incompatible materials, such as amines, alcohols, acids, bases, metal compounds and water which may react vigorously and/or violently.

Special Packaging Materials

Not applicable.

Section 8

● EXPOSURE CONTROLS / PERSONAL PROTECTION ●

Section 8

Occupational Exposure Limits

ID	UNITED STATES OSHA PEL	UNITED STATES NIOSH REL	UNITED STATES NIOSH IDLH	UNITED STATES ACGIH TLV	AUSTRALIA TWA	GERMANY MAK	JAPAN OEL
1	N/E	N/E	N/E	N/E	N/E	N/E	N/E
2	N/E	N/E	N/E	N/E	N/E	N/E	N/E
3	N/E	N/E	N/E	N/E	N/E	N/E	N/E
4	N/E	N/E	N/E	N/E	N/E	N/E	N/E
5	500 ppm	350 mg/m3	20000 mg/m3	100 ppm	790 mg/m3	N/E	N/E
6	0.02 ppm (C)	0.005 ppm	75 mg/m3	0.005 ppm	0.02 mg/m3	0.05 mg/m3	0.05 mg/m3
7	15 mg/m3	10 mg/m3	N/E	10 mg/m3	2 mg/m3	N/E	2 mg/m3
8	3.5 mg/m3	3.5 mg/m3 1750	1750 mg/m3	3.5 mg/m3	3 mg/m3	N/E	1 mg/m3
9	N/E	N/E	N/E	N/E	N/E	N/E	N/E
10	15 mg/m3	N/E	5000 mg/m3	10 mg/m3	10 mg/m3	N/E	1 mg/m3
11	N/E	N/E	N/E	N/E	0.02 mg/m3	N/E	N/E
12	5 mg/m3	N/E	2500 mg/m3	5 mg/m3	10 mg/m3	N/E	3 mg/m3

ID	CANADA ALBERTA OEL	CANADA BC TWA	CANADA ONTARIO TWA EV	CANADA QUEBEC TWA	MEXICO MPEL-PTA	UNITED KINGDOM WEL	UNITED STATES AIHA WEEL
1	N/E	N/E	N/E	N/E	N/E	N/E	N/E
2	N/E	N/E	N/E	N/E	N/E	N/E	N/E
3	N/E	N/E	N/E	N/E	N/E	N/E	N/E
4	N/E	N/E	N/E	N/E	N/E	N/E	N/E
5	100 ppm	290 mg/m3	525 mg/m3	100 ppm	100 ppm	N/E	N/E
6	0.005 ppm	0.005 ppm	0.005 ppm	0.005 ppm	0.02 mg/m3	0.02 mg/m3	N/E
7	10 mg/m3	10 mg/m3	10 mg/m3	10 mg/m3	10 mg/m3	10 mg/m3	N/E
8	3.5 mg/m3	3.5 mg/m3	3.5 mg/m3	3.5 mg/m3	3.5 mg/m3	3.5 mg/m3	N/E
9	N/E	N/E	N/E	N/E	N/E	N/E	N/E
10	5 mg/m3	10 mg/m3	10 mg/m3	5 mg/m3	10 mg/m3	10 mg/m3	N/E
11	0.005 ppm	0.005 ppm	N/E	0.005 ppm	N/E	0.02 mg/m3	N/E
12	5 mg/m3	1 mg/m3	5 mg/m3	5 mg/m3	N/E	N/E	N/E

Engineering Measures

Because of the high potential hazard associated with isocyanates, consider the use of fully enclosed handling systems to control air concentration levels below the recommended exposure levels. Local exhaust ventilation may be necessary wherever materials containing isocyanates are handled, processed or cured, especially if heating or spraying is involved. Supply sufficient air to replace air removed by exhaust ventilation systems.

Biological Exposure Indices

None established.



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General Hygiene Considerations *Avoid breathing vapors and contact with the skin and eyes. Always replace lid when not in use. Keep out the reach of children. Wash hands after use.*

Thermal Hazards *This product does not present a thermal hazard.*

PERSONAL PROTECTIVE EQUIPMENT



Respiratory Protection *A NIOSH approved air-purifying respirator with an organic vapor cartridge approved for use in isocyanate containing environments may be permissible under certain circumstances where concentrations are expected to exceed exposure limits. In spray applications you must protect against exposure to both vapor and spray mist. Protection provided by air-purifying systems is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, where exposure levels are not known, or any other situation where air purifying respirators may not provide adequate protection. In the United States ensure compliance with OSHA standard 29 CFR 1910.134.*

Skin Protection *Ensure any exposed skin is covered by using chemical protective boots, gloves, coveralls, and/or other resistant protective clothing.*

Eye/Face Protection *Safety glasses with side shields are recommended as a minimum for any type of industrial chemical handling. Where eye contact with this material could occur, chemical splash proof goggles or a full face shield are recommended.*

Other Protective Equipment *Safety showers and eye-wash stations should be available in the workplace near where the material will be used.*

Section 9 • PHYSICAL AND CHEMICAL PROPERTIES • Section 9

Boiling Point	> 284 °F (140.0 °C)	Melting / Freezing Point	Not Available
Flash Point	> 106 °F (41.1 °C)	Autoignition Temperature, Liquid	444 °F (229.0 °C)
Explosive Limits	0.60% to 6.50%	Decomposition Temperature	Not Available
Flammability	Class II Liquid	Density (H ₂ O = 1)	1.029 - 1.053 g/cc
Molecular Weight	Not Available	Weight	8.584 - 8.784 lbs/gal
Vapor Pressure	38 mm Hg	pH	Not Available
Vapor Density	4.5 g/cc Maximum	Evaporation Rate (BuAC = 1)	4.5 for Solvent
Physical State	Liquid	Partition Coefficient	Not Available
Viscosity	200-500 cps @ 25 °C	Refractive Index	Not Available
Odor Threshold	Not Available	Heat of Combustion	Not Available
Odor	Paint-like	Water Solubility	Not Available
Appearance / Color	Colored liquid		

Percent Volatile	Black	30% Wt (36% Vol) Max	VOC Content	295 g/L
	Semi-Gloss	27% Wt (33% Vol) Max		270 g/L
	Clear	30% Wt (36% Vol) Max		301 g/L
	Silver	31% Wt (37% Vol) Max		317 g/L
	Gray	33% Wt (39% Vol) Max		333 g/L
Percent VOC	Black	30% Wt (36% Vol) Max	HAP Content	None
	Semi-Gloss	27% Wt (33% Vol) Max		None
	Clear	30% Wt (36% Vol) Max		None
	Silver	31% Wt (37% Vol) Max		None
	Gray	33% Wt (39% Vol) Max		None



MATERIAL SAFETY DATA SHEET

CONFORMS TO THE GLOBALLY HARMONIZED SYSTEM (GHS), ANSI Z400.1-2004, EU DIRECTIVE 91/155/EEC & 99/45/EC, OSHA 29 CFR 1910.1200, NOHSC:2011(2003), AND CANADIAN CPR

Solids Content	Black 71% Wt (65% Vol) Max	Maximum Incremental Reactivity	1.423
	Semi-Gloss 74% Wt (68% Vol) Max		1.279
	Clear 71% Wt (65% Vol) Max		2.245
	Silver 69% Wt (64% Vol) Max		2.174
	Gray 68% Wt (62% Vol) Max		2.433

Section 10 ● STABILITY AND REACTIVITY ● Section 10

Stability	<i>Stable</i>
Physical Hazards	<i>Combustible liquid</i>
Conditions to Avoid	<i>Moisture, heat, direct sunlight</i>
Hazard Polymerization	<i>May undergo uncontrolled exothermic polymerization upon contact with incompatible materials, especially strong bases, such as triethylamine and sodium hydroxide, trialkyl phosphines, potassium acetate, many metal compounds soluble in organic media, or if heated above 175 °C.</i>
Material Incompatibility	<i>Strong oxidizing agents, alcohols, halogenated hydrocarbons, acids, alkalis, alkali metals, water</i>
Conditions of Reactivity	<i>Heat, sparks, flame, red hot metal</i>
Decomposition Products	<i>4,4'-Methylene Dianiline (formed by reaction of isocyanates with water)</i>

Section 11 ● TOXICOLOGICAL INFORMATION ● Section 11

Irritancy of Product	<i>The following ingredients are skin irritants: Methylene Bisphenyl Isocyanate (MDI), Methylene Diphenyl Diisocyanate (Crude MDI), Polymeric Diphenlmethane Polyisocyanate. The following ingredients are respiratory irritants: Methylene Bisphenyl Isocyanate (MDI), Methylene Diphenyl Diisocyanate (Crude MDI), Polymeric Diphenlmethane Polyisocyanate.</i>
Sensitization to Product	<i>The following ingredients are considered skin and respiratory sensitizers: Methylene Bisphenyl Isocyanate (MDI), Methylene Diphenyl Diisocyanate, Polymeric Diphenlmethane Polyisocyanate.</i>
Carcinogen Data	<i>Carbon Black is listed with IARC as Class 2B (possible human carcinogen) and is listed with ACGIH as A4 (not classifiable as a human carcinogen). Carbon Black is also listed with the States of California and Minnesota as a known carcinogen.</i>
Reproductive Toxicity	<i>None of the ingredients are known or suspected reproductive toxins</i>
Teratogenicity	<i>None of the ingredients are known or suspected teratogens</i>
Mutagenicity	<i>The following ingredients are considered mutagens: Carbon Black</i>
Synergistic Products	<i>No known synergistic properties.</i>

LD₅₀ and LC₅₀ Information

ID	ORAL LD ₅₀	DERMAL LD ₅₀	INHALATION LC ₅₀
1	Not Available	Not Available	Not Available
2	Not Available	Not Available	Not Available
3	4700 mg/kg, rat	4000 mg/kg, rabbit	3670 ppm /8hr, rat
4	Not Available	Not Available	Not Available
5	Not Available	500 mg/kg, rabbit	Not Available
6	>10000 mg/kg, rat	> 10000 mg/kg, rabbit	490 mg/m ³ /4hr, rat
7	Not Available	Not Available	Not Available
8	> 8000 mg/kg, rat	>3000 mg/kg, rabbit	Not Available
9	9200 mg/kg, rat	>10000 mg/kg, rabbit	490 mg/m ³ /4hr, rat
10	>24000 mg/kg, rat	>10000 mg/kg, rabbit	>6.82 mg/L /4hr, rat
11	>10000 mg/kg, rat	>6200 mg/kg, rabbit	490 mg/m ³ /4hr, rat
12	>5000 mg/kg, rat	>2000 mg/kg, rabbit	Not Available



MATERIAL SAFETY DATA SHEET

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Section 12

• ECOLOGICAL INFORMATION •

Section 12

Mobility	Not Available	Degradability	Not Available
Persistence	Not Available	Bioaccumulation	Not Available
Other Ecologic Data	Do not allow to enter waters, waste water, or soil.		
Effects on the Ozone Layer	This product does not contain any ozone depleting ingredients.		

Ecotoxicity

ID	FISH	INVERTEBRATES	AQUATIC PLANTS	MICROORGANISMS
1	Not Available	Not Available	Not Available	Not Available
2	Not Available	Not Available	Not Available	Not Available
3	LC50: 320 mg/L /48 hr	EC50: 170 mg/L /24 hr	EC50: 56 mg/L /72 hr	Not Available
4	Not Available	Not Available	Not Available	Not Available
5	Not Available	Not Available	Not Available	Not Available
6	LC50: >500 mg/L /24 hr	EC50: >500 mg/L /24 hr	Not Available	Not Available
7	NOEC: >100 mg/L /48 hr	NOEC: >100 mg/L /48 hr	NOEC: >100 mg/L /72 hr	Not Available
8	NOEC: 1000 mg/L /96 hr	EC50: >5600 mg/L /24 hr	Not Available	EC0: >100 mg/L /3 hr
9	Not Available	Not Available	Not Available	Not Available
10	LC50: >1000 mg/L /48 hr	Not Available	Not Available	Not Available
11	Not Available	Not Available	Not Available	Not Available
12	Not Available	Not Available	Not Available	Not Available

Section 13

• DISPOSAL CONSIDERATIONS •

Section 13

Waste Disposal Hazard characteristics and regulatory waste stream classification can change with product use and location. It is the responsibility of the user to determine the proper storage, transportation, treatment, and/or disposal methodologies for spent materials and residues at the time of disposition. All waste material must be disposed of in compliance with the respective national, federal, state, and local codes.

Waste Disposal of Packaging Consult with your local landfill to determine if empty small containers can be disposed of regular trash pickup. – For disposal of large containers (typically 10 gallon or larger), or for containers not suitable for landfill, containers retain residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death. Do not attempt to clean since residue is difficult to remove. Empty drums should be completely drained, properly bunged, and promptly returned to a drum reconditioner. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Landfill Precautions	Not Available	Incineration Precautions	Not Available
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Section 14

• TRANSPORTATION INFORMATION •

Section 14

DOT SHIPPING INFORMATION (United States)	ICAO/IATA SHIPPING INFORMATION (International Air)
 <p>PROPER SHIPPING NAME: ... Consumer Commodity HAZARD CLASS: ... ORM-D PACKING GROUP: ... – UN or ID NUMBER: ... – NAERG GUIDE NUMBER: ... 171</p>	 <p>PROPER SHIPPING NAME: ... Consumer Commodity HAZARD CLASS: ... 9 PACKAGING GROUP: ... – UN or ID NUMBER: ... ID8000</p>
IMDG SHIPPING INFORMATION (International Ocean)	ADR SHIPPING INFORMATION (European Union)
 <p>PROPER SHIPPING NAME: ... Paint Related Material, Limited Quantity CLASS: ... 3 PACKAGING GROUP: ... III SUBSIDIARY RISK(S): ... – UN or ID NUMBER: ... UN1263 PACKING INSTRUCTIONS: ... P001 EmS NO.: ... F-E, S-E STOWAGE: ... Category B MFAG NO.: ... 310, 313</p>	 <p>PROPER SHIPPING NAME: ... Paint Related Material, Limited Quantity ADR CLASS: ... 3 PACKAGING GROUP: ... III UN or ID NUMBER: ... UN1263 CLASSIFICATION CODE: ... F1 HAZARD IDENTIFICATION NO: 33 EMERGENCY ACTION CODE: ... ●3YE</p>



MATERIAL SAFETY DATA SHEET

CONFORMS TO THE GLOBALLY HARMONIZED SYSTEM (GHS), ANSI Z400.1-2004, EU DIRECTIVE 91/155/EEC & 99/45/EC, OSHA 29 CFR 1910.1200, NOHSC:2011(2003), AND CANADIAN CPR

TDG SHIPPING INFORMATION (Canada)



PROPER SHIPPING NAME: ... *Paint Related Material, Limited Quantity*
HAZARD CLASS: ... 3
PACKAGING GROUP: ... III
UN or ID NUMBER: ... UN1263

NMFC DESCRIPTION (United States)

ITEM DESCRIPTION: *Paint Related Material*
ITEM NUMBER: *149980 Sub 2*
CLASS: *55*

Section 15

REGULATORY INFORMATION

Section 15

United States - Federal

ID	TSCA INVENTORY	SARA 302 EHS	RCRA	CERCLA	SARA 313	FIRE	REACTIVITY	SARA 311/312 ACUTE	CHRONIC	PRESSURE	CLEAN AIR ACT	CLEAN WATER ACT
1	✓	—	—	—	—	—	—	—	—	—	—	—
2	✓	—	—	—	—	—	—	—	—	—	—	—
3	✓	—	—	—	—	✓	—	✓	✓	—	—	—
4	✓	—	—	—	—	—	—	—	—	—	—	—
5	✓	—	—	—	—	✓	—	✓	✓	—	—	—
6	✓	—	—	5000#	10 %	—	—	✓	✓	—	—	—
7	✓	—	—	—	5 %	—	—	—	—	—	—	—
8	✓	—	—	—	—	—	—	✓	✓	—	—	—
9	✓	—	—	—	—	—	—	✓	✓	—	—	—
10	✓	—	—	—	—	—	—	—	—	—	—	—
11	✓	—	—	—	—	—	—	✓	✓	—	—	—
12	✓	—	—	—	—	—	—	✓	✓	—	—	—

United States - States

ID	CALIFORNIA	DELAWARE	FLORIDA	MASSACHUSETTS	PENNSYLVANIA	MINNESOTA	NEW JERSEY	NEW YORK	WASHINGTON
1	—	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—
5	—	—	✓	2,4	—	ANO	—	—	✓
6	—	✓	✓	2,4 F8 F9	E	ANO	—	✓	✓
7	—	✓	✓	4,5 F1 F9	E	A	✓	—	✓
8	C	—	—	2,4 F5	—	ANOR*	—	—	✓
9	—	—	—	—	—	—	—	—	—
10	—	—	—	4	—	A	—	—	✓
11	—	✓	—	—	—	—	—	—	—
12	—	—	—	—	—	—	—	—	—

United States - Massachusetts, Right-to-Know Extraordinarily Hazardous Substance List

TRACE CONTENT	TRACE COMPONENTS	CAS NUMBER
40-45 ppm	Hydrochloric Acid	007647-01-0
1 - 5 ppm	Furan	000110-00-9
1 - 5 ppm	Propylene Oxide	000075-56-9

United States - California, Proposition 65

TRACE CONTENT	TRACE COMPONENTS	CAS NUMBER
1 - 5 ppm	Furan	000110-00-9
1 - 5 ppm	Propylene Oxide	000075-56-9
< 1 ppm	Acetaldehyde	000075-07-0
< 1 ppm	Cobalt and Cobalt Compounds	007440-48-4

This product contains chemical(s) known to the State of California to be Carcinogenic. (see table above)

Canada

ID	WHMIS CATEGORIES									CHEMICAL LISTS			
	A	B	C	D1A	D1B	D2A	D2B	D3	E	DSL	NDSL	NPRI	CWC
1	—	—	—	—	—	—	—	—	—	✓	—	—	—
2	—	—	—	—	—	—	—	—	—	—	✓	—	—



MATERIAL SAFETY DATA SHEET

CONFORMS TO THE GLOBALLY HARMONIZED SYSTEM (GHS), ANSI Z400.1-2004, EU DIRECTIVE 91/155/EEC & 99/45/EC, OSHA 29 CFR 1910.1200, NOHSC:2011(2003), AND CANADIAN CPR

ID	WHMIS CATEGORIES									CHEMICAL LISTS			
	A	B	C	D1A	D1B	D2A	D2B	D3	E	DSL	NDSL	NPRI	CWC
3	—	B3	—	—	—	—	—	—	—	✓	—	5	—
4	—	—	—	—	—	—	—	—	—	—	✓	—	—
5	—	B3	—	—	—	✓	—	—	—	✓	—	5	—
6	—	—	—	✓	—	✓	✓	—	—	✓	—	1A	—
7	—	B6	—	—	—	—	—	—	—	✓	—	1A	—
8	—	—	—	—	—	✓	—	—	—	✓	—	—	—
9	—	—	—	—	—	—	—	—	—	✓	—	—	—
10	—	—	—	—	—	✓	—	—	—	✓	—	—	—
11	—	—	—	✓	—	✓	✓	—	—	✓	—	1A	—
12	—	—	—	—	—	—	—	—	—	✓	—	5	—

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

European Union

CODE	RISK PHRASES
R 15	Contact with water liberates extremely flammable gases
R 20	Harmful by inhalation
R 36/37/38	Irritating to eyes, respiratory system, and skin
R 40	Possible risks of irreversible effects
R 42/43	May cause sensitization by inhalation and skin contact
R 45	May cause cancer
R 48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation
R 65	Harmful: may cause lung damage if swallowed

CODE	SAFETY PHRASES
S 1/2	Keep locked up and out of the reach of children
S 7/9	Keep container tightly closed and in a well ventilated place
S 23	Do not breath gas/fumes/vapour/spray
S 43	In case of fire use dry chemical
S 53	Avoid exposure
S 62	If swallowed do not induce vomiting, seek medical advise immediately

RoHS Compliance



This product is RoHS compliant according to the definitions and restrictions given by Directive 2002/95/EC and The Council of January 27, 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Australia

Poisons Schedule Number

None of the ingredients are present at or above a concentration necessary for allocation of a Poisons Schedule Number.

Chemical Inventory Status

All of the ingredients are listed on the Australian Inventory of Chemical Substances (AICS) or are exempt.

Section 16

• OTHER INFORMATION •

Section 16

Disclaimer of Liability

The information contained herein is based upon data provided to us by our suppliers, and reflects our best judgement. However, no warranty of merchantability, fitness for any use, or any other warranty or guarantee is expressed or implied regarding the accuracy of such data, or the results to be obtained from use thereof. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar, we do not assume any responsibility for the results of such application. This information is furnished upon the condition that the persons receiving it shall make their own determinations of the suitability of the material for any particular use. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist.

Revision History

Revision 1, 08/11/2010, Original
Revision 2, 07/27/2011, Added CAS and EC Numbers for some of the ingredients
Revision 3, 09/30/2011, Corrected VOC Content values and trade secret information

Material Safety Data Sheet



Date of issue 23 September 2012

Version 5

1. Product and company identification

Product name : Delstar Acrylic Enamel
Code : DAR-2
Supplier : PPG Industries, Inc.
One PPG Place,
Pittsburgh, PA 15272
Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
Technical Phone Number : (740) 363-9610 (DELAWARE, OH) 8:00 a.m. - 5:00 p.m. EST

2. Hazards identification

Emergency overview : DANGER!
FLAMMABLE SOLID. MAY FORM EXPLOSIVE DUST-AIR MIXTURES. HARMFUL OR FATAL IF SWALLOWED. HARMFUL IF ABSORBED THROUGH SKIN. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC RESPIRATORY AND SKIN REACTION. MAY BE HARMFUL IF INHALED. CONTAINS LEAD. DRIED FILM OF THIS PAINT MAY BE HARMFUL IF EATEN OR CHEWED. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. ASPIRATION HAZARD. CAN ENTER LUNGS AND CAUSE DAMAGE. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER. DEVELOPMENTAL HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE ADVERSE DEVELOPMENTAL EFFECTS. Add this product only to water. Never add water to this product.
Keep away from heat, sparks and flame. Keep away from flames, such as a pilot light, and any object that sparks, such as an electric motor. Keep away from heat. Do not smoke. Prevent dust accumulation. Do not breathe dust. Do not swallow. Do not get in eyes or on skin or clothing. Avoid exposure during pregnancy. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Severely irritating to the respiratory system. Can irritate eyes, nose, mouth and throat. May cause sensitization by inhalation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion : Harmful or fatal if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage.
Skin : Toxic in contact with skin. Severely irritating to the skin. May cause an allergic skin reaction.
Eyes : Irritating to eyes.

Over-exposure signs/symptoms

1-component mixtures: formaldehyde is released during curing. Formaldehyde may cause irreversible effects, is irritating to the mucous membranes and may cause skin sensitization. Contains Lead. Lead poisoning is characterized by a metallic taste in the mouth, loss of appetite, indigestion, nausea, vomiting, constipation, abdominal cramps, disturbance of rest and sleep and weakness. Dryness, itching, cracking, burning, redness and swelling are conditions associated with excessive skin contact. Exposure to lead dust and fumes adversely affects blood and blood forming tissues, kidneys, liver, the central/peripheral nervous systems and male/female reproductive organs. Lead exposure causes adverse developmental effects including brain damage in children and unborn fetuses. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of

2. Hazards identification

exposure to dust from sanding surfaces or mist from spray applications. NTP, IARC, and OSHA have classified chromium (+6) compounds as carcinogenic. OSHA considers all Cr+6 compounds as potential occupational carcinogens capable of causing lung cancer above the recommended exposure limits.

Medical conditions aggravated by over-exposure : Pre-existing respiratory and skin disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (Section 11)

3. Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>%</u>
Xylene	1330-20-7	60 - 100
diron trioxide	1309-37-1	60 - 100
titanium dioxide	13463-67-7	40 - 70
Mica-group minerals	12001-26-2	40 - 70
Lead sulfochromate yellow	1344-37-2	30 - 60
Lead chromate molybdate sulfate red	12656-85-8	30 - 60
ethylbenzene	100-41-4	15 - 40
n-butyl acetate	123-86-4	15 - 40
Naphtha (petroleum), heavy alkylate	64741-65-7	10 - 30
heptan-2-one	110-43-0	10 - 30
cadmium sulfoselenide red	58339-34-7	7 - 13
Talc , not containing asbestiform fibres	14807-96-6	7 - 13
Aluminium powder (stabilized)	7429-90-5	7 - 13
butanone	78-93-3	5 - 10
ammonium iron(3+) hexakis(cyano-C)ferrate(4-)	25869-00-5	5 - 10
toluene	108-88-3	5 - 10
cadmium sulphide	1306-23-6	5 - 10
Silica gel, pptd., cryst.-free	112926-00-8	5 - 10
2-methoxy-1-methylethyl acetate	108-65-6	5 - 10
cadmium selenide	1306-24-7	3 - 7
barium sulfate	7727-43-7	3 - 7
lead sulphate	7446-14-2	3 - 7
zirconium dioxide	1314-23-4	1 - 5
tin dioxide	18282-10-5	1 - 5
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	1 - 5
Stoddard solvent	8052-41-3	1 - 5
propan-2-ol	67-63-0	1 - 5
Solvent naphtha (petroleum), light arom.	64742-95-6	1 - 5
silicon dioxide	7631-86-9	1 - 5
polychloro copper phthalocyanine	1328-53-6	1 - 5
antimony trioxide	1309-64-4	1 - 5
copper chlorophthalocyanine	12239-87-1	1 - 5
[1,3,8,16,18,24-hexabromo-2,4,9,10,11,15,17,22,23,25-decachloro-29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]copper	14302-13-7	1 - 5
Carbon black	1333-86-4	1 - 5
aluminium oxide	1344-28-1	1 - 5
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	41556-26-7	1 - 5
Resin acids and Rosin acids, calcium salts	9007-13-0	0.5 - 1.5
quino[2,3-b]acridine-6,7,13,14(5H,12H)-tetrone	1503-48-6	0.5 - 1.5
Naphtha (petroleum), hydrotreated heavy	64742-48-9	0.5 - 1.5
aluminium hydroxide	21645-51-2	0.5 - 1.5
BBP	85-68-7	0.1 - 1
2-butanone oxime	96-29-7	0.1 - 1
Kaolin	1332-58-7	0.1 - 1
Quartz (SiO2) (<10 microns)	14808-60-7	0.1 - 1
2-ethylhexanoic acid	149-57-5	0.1 - 1

3 . Composition/information on ingredients

lead 7439-92-1 < 0.1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5 . Fire-fighting measures

Flammability of the product : Flammable solid. Fine dust clouds may form explosive mixtures with air. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Extinguishing media

- Suitable** : Use dry chemical powder.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
nitrogen oxides
sulfur oxides
oxides of lead
halogenated compounds
metal oxide/oxides
Formaldehyde.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

6 . Accidental release measures

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
- Large spill** : Move containers from spill area. Approach release from upwind. Use spark-proof tools and explosion-proof equipment. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
- Small spill** : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

- Handling** : Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite. To avoid the risks of fires, all contaminated materials should be placed in a metal container filled with water and sealed. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside. Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not breathe dust. Ingestion of product or cured coating may be harmful. Do not swallow. Do not get in eyes or on skin or clothing. Avoid exposure during pregnancy. Fine dust clouds may form explosive mixtures with air. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Use non-sparking tools. Take precautionary measures against electrostatic discharges. Vapors are heavier than air and may spread along floors. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Add this product only to water. Never add water to this product. Empty containers retain product residue and can be hazardous. Do not apply on toys and other children's articles, furniture, or interior surfaces of any dwelling or facility which may be occupied or used by children. Do not apply on exterior surfaces of dwelling units, such as window sills, porches, stairs, or railings, to which children may be commonly exposed. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.
- Storage** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store above the following temperature: 120F / 49C.

8. Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
xylene	TWA	100 ppm	100 ppm	100 ppm	100 ppm	Not established
	STEL	150 ppm	Not established	150 ppm	150 ppm	Not established
diiron trioxide	TWA	5 mg/m ³ R	10 mg/m ³	5 mg/m ³ R	5 mg/m ³ (as Fe)	Not established
	STEL	Not established	Not established	Not established	10 mg/m ³ (as Fe)	Not established
titanium dioxide	TWA	10 mg/m ³	15 mg/m ³ TD	10 mg/m ³ TD	10 mg/m ³ (as Ti)	Not established
	STEL	Not established	Not established	Not established	20 mg/m ³ (as Ti)	Not established
Mica-group minerals	TWA	3 mg/m ³ R	20 mppcf Z	3 mg/m ³ R	3 mg/m ³	Not established
Lead sulfochromate yellow	TWA	0.05 mg/m ³ (as Pb) 0.05 MG/M3 () TD 0.05 mg/m ³ (measured as Cr)	5 mg/m ³ 50 ug/m ³ 5 µg/m ³	0.05 mg/m ³ (as Cr) 0.05 mg/m ³ (as Pb)	0.15 mg/m ³ (as Pb)	0.005 mg/m ³
	STEL	Not established	0.1 mg/m ³ C	Not established	Not established	Not established
Lead chromate molybdate sulfate red	TWA	0.05 mg/m ³ (as Pb) 0.05 MG/M3 TD 3 MG/M3 R 0.05 mg/m ³ (measured as Cr)	5 µg/m ³ 10 mg/m ³ 5 mg/m ³ 50 ug/m ³	0.05 mg/m ³ (as Cr) 0.05 mg/m ³ (as Pb)	0.15 mg/m ³ (as Pb)	0.005 mg/m ³
	STEL	Not established	1 mg/10m ³ Z C	Not established	Not established	Not established
ethylbenzene	TWA	20 ppm	100 ppm	100 ppm	100 ppm	Not established
	STEL	Not established	Not established	125 ppm	125 ppm	Not established
n-butyl acetate	TWA	150 ppm	150 ppm	150 ppm	150 ppm	Not established
	STEL	200 ppm	Not established	200 ppm	200 ppm	Not established
heptan-2-one	TWA	50 ppm	100 ppm	25 ppm	50 ppm	Not established
	STEL	Not established	Not established	Not established	100 ppm	Not established
cadmium sulfoselenide red	TWA	0.002 MG/M3 (as Cd) R 0.01 mg/m ³ (as Cd) 0.2 mg/m ³	0.2 mg/m ³ (as Se) TD 0.2 mg/m ³ (as Se)	Not established	0.002 mg/m ³ (as Cd) R 0.01 mg/m ³ (as Cd) TD	Not established

8 . Exposure controls/personal protection

		(as Se)				
Talc , not containing asbestiform fibres	TWA	2 mg/m ³ R	20 mppcf Z	2 mg/m ³ R	2 mg/m ³ R	Not established
Aluminium powder (stabilized)	TWA	1 mg/m ³ R	5 mg/m ³ (as Al) R 15 mg/m ³ (as Al) TD	1 mg/m ³ R	5 mg/m ³ 5 mg/m ³	Not established
butanone	TWA	200 ppm	200 ppm	200 ppm	200 ppm	Not established
	STEL	300 ppm	Not established	300 ppm	300 ppm	Not established
ammonium iron(3+) hexakis (cyano-C)ferrate(4-)	TWA	1 mg/m ³ (as Fe)	5 mg/m ³ (as CN) S	1 mg/m ³ (as Fe)	1 mg/m ³ (as Fe) 5 mg/m ³ (as Cn)	Not established
	STEL	Not established	Not established	Not established	2 mg/m ³ (as Fe)	Not established
toluene	TWA	20 ppm	200 ppm Z	20 ppm	50 ppm S	Not established
	STEL	Not established	500 ppm Z A 300 ppm Z C	Not established	Not established	Not established
cadmium sulphide	TWA	0.002 mg/m ³ (as Cd) R 0.002 MG/M3 (as Cd) R 0.01 mg/m ³ (as Cd) 0.01 mg/m ³ (as Cd)	Not established	0.002 mg/m ³ (as Cd) R 0.01 mg/m ³ (as Cd)	0.002 mg/m ³ (as Cd) R 0.01 mg/m ³ (as Cd) TD	Not established
Silica gel, pptd., cryst.-free	TWA	Not established	Not established	10 mg/m ³	10 mg/m ³	Not established
2-methoxy-1-methylethyl acetate	TWA	Not established	Not established	50 ppm	Not established	50 ppm
cadmium selenide	TWA	0.002 mg/m ³ (as Cd) R 0.2 mg/m ³ (as Se) 0.002 MG/M3 R 0.01 mg/m ³ (as Cd)	0.2 mg/m ³ (as Se) 0.2 mg/m ³ (as Se)	0.2 mg/m ³ (as Se) 0.002 mg/m ³ (as Cd) R 0.01 mg/m ³ (as Cd)	0.2 mg/m ³ (as Se) 0.002 mg/m ³ (as Cd) R 0.01 mg/m ³ (as Cd) TD	Not established
barium sulfate	TWA	10 mg/m ³	5 mg/m ³ R 15 mg/m ³ TD	10 mg/m ³ TD	Not established	Not established
lead sulphate	TWA	0.05 mg/m ³ (as Pb)	50 ug/m ³	0.05 mg/m ³ (as Pb)	0.15 mg/m ³ (as Pb)	Not established
zirconium dioxide	TWA	5 mg/m ³ (as Zr)	5 mg/m ³ (as Zr) 5 mg/m ³ (as Zr)	5 mg/m ³ (as Zr)	5 mg/m ³ (as Zi)	Not established

8 . Exposure controls/personal protection

	STEL	10 mg/m ³ (as Zr)	10 mg/m ³ (as Zr)	10 mg/m ³ (as Zr)	10 mg/m ³ (as Zi)	Not established
tin dioxide	TWA	2 mg/m ³ (as Sn)	2 mg/m ³ TD 2 mg/m ³	2 mg/m ³ (as Sn)	2 mg/m ³ (as Sn)	Not established
	STEL	Not established	Not established	Not established	4 mg/m ³ (as Sn)	Not established
Stoddard solvent	TWA	100 ppm	500 ppm	100 ppm	100 ppm	Not established
	STEL	Not established	Not established	Not established	200 ppm	Not established
propan-2-ol	TWA	200 ppm	400 ppm	200 ppm	400 ppm	Not established
	STEL	400 ppm	Not established	400 ppm	500 ppm	Not established
silicon dioxide	TWA	Not established	Not established	Not established	10 mg/m ³ 3 mg/m ³ R	Not established
antimony trioxide	TWA	0.5 mg/m ³ (as Sb)	0.5 mg/m ³ (as Sb) 0.5 mg/m ³ (as Sb)	0.5 mg/m ³ (as Sb)	0.5 mg/m ³ (as Sb) 1 mg/m ³	Not established
Carbon black	TWA	3 mg/m ³	3.5 mg/m ³	3.5 mg/m ³	3.5 mg/m ³	Not established
	STEL	Not established	Not established	Not established	7 mg/m ³	Not established
aluminium oxide	TWA	3 mg/m ³ R 10 mg/m ³ 1 mg/m ³ R	5 mg/m ³ R 15 mg/m ³ TD	10 mg/m ³ 10 mg/m ³ TD 10 mg/m ³ R 1 mg/m ³ R	10 mg/m ³	Not established
aluminium hydroxide	TWA	1 mg/m ³	Not established	Not established	2 mg/m ³	Not established
2-butanone oxime	TWA	Not established	Not established	Not established	Not established	3 ppm
	STEL	Not established	Not established	Not established	Not established	10 ppm
Kaolin	TWA	2 mg/m ³ R	5 mg/m ³ R 15 mg/m ³ TD	2 mg/m ³ R	10 mg/m ³	Not established
	STEL	Not established	Not established	Not established	20 mg/m ³	Not established
Quartz (SiO ₂) (<10 microns)	TWA	0.025 mg/m ³ R	10 mg/m ³ R Z 30 mg/m ³ TD Z 250 mppcf R Z	0.1 mg/m ³ R	0.1 mg/m ³ R	Not established
2-ethylhexanoic acid	TWA	5 mg/m ³	Not established	5 mg/m ³	Not established	Not established
lead	TWA	0.05 mg/m ³ (as Pb)	50 µg/m ³ (as Pb)	0.05 mg/m ³ (as Pb)	Not established	Not established

8 . Exposure controls/personal protection

50 ug/m3

Key to abbreviations

A	= Acceptable Maximum Peak	S	= Potential skin absorption
ACGIH	= American Conference of Governmental Industrial Hygienists.	SR	= Respiratory sensitization
C	= Ceiling Limit	SS	= Skin sensitization
F	= Fume	STEL	= Short term Exposure limit values
IPEL	= Internal Permissible Exposure Limit	TD	= Total dust
OSHA	= Occupational Safety and Health Administration.	TLV	= Threshold Limit Value
R	= Respirable	TWA	= Time Weighted Average
Z	= OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances		

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- Engineering measures** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection**
- Eyes** : Safety glasses with side shields.
- Hands** : chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Gloves** : nitrile, neoprene
- Respiratory** : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state	: Liquid.
Flash point	: Closed cup: -6.11°C (21°F)
Color	: Not available.
Odor	: Not available.
pH	: Not available.
Boiling/condensation point	: >37.78°C (>100°F)
Melting/freezing point	: Not available.
Specific gravity	: 0.99
Density (lbs / gal)	: 8.26
Vapor pressure	: Not available.
Vapor density	: Not available.
Volatility	: 59% (v/v), 52% (w/w)
Evaporation rate	: Not available.
Partition coefficient: n-octanol/water	: Not available.
% Solid. (w/w)	: 47.92

Physical property values shown in this section are calculated averages. For specific product information, contact your PPG Sales Representative.

10 . Stability and reactivity

Stability	: The product may not be stable under certain conditions of storage or use.
Conditions to avoid	: Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Avoid increased storage temperature. Pressure hazard
Materials to avoid	: Reactive or incompatible with the following materials: water, acids, oxidizing materials, strong alkalis
Hazardous decomposition products	: Formaldehyde.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
xylene	LD50 Oral	Rat	4.3 g/kg	-
	LD50 Dermal	Rabbit	>1.7 g/kg	-
	LC50 Inhalation Vapor	Rat	5000 ppm	4 hours
diiron trioxide	LD50 Oral	Rat	10 g/kg	-
titanium dioxide	LD50 Oral	Rat	>10 g/kg	-
Lead sulfochromate yellow	LD50 Oral	Rat	1.2 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
ethylbenzene	LC50 Inhalation Vapor	Rat	4000 ppm	4 hours
	LD50 Oral	Rat	10.768 g/kg	-
	LD50 Dermal	Rabbit	>17600 mg/kg	-
n-butyl acetate	LC50 Inhalation Vapor	Rat	>21.1 mg/l	4 hours
	LD50 Oral	Rat	1.6 g/kg	-
	LD50 Dermal	Rabbit	10.206 g/kg	-
heptan-2-one	LD50 Oral	Rat	2737 mg/kg	-
	LD50 Dermal	Rabbit	6480 mg/kg	-
	LC50 Inhalation Vapor	Rat	11243 ppm	4 hours

11 . Toxicological information

toluene	LD50 Oral	Rat	636 mg/kg	-
	LD50 Dermal	Rabbit	8.39 g/kg	-
	LC50 Inhalation	Rat	49 g/m ³	4 hours
cadmium sulphide	LD50 Oral	Rat	7080 mg/kg	-
2-methoxy-1-methylethyl acetate	LD50 Oral	Rat	8532 mg/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
tin dioxide	LD50 Oral	Rat	>20 g/kg	-
29H,31H-phthalocyaninato(2-)-N29,N30, N31,N32 copper	LD50 Oral	Rat	5.1 g/kg	-
Stoddard solvent	LD50 Oral	Rat	>5 g/kg	-
propan-2-ol	LD50 Oral	Rat	4.396 g/kg	-
	LD50 Dermal	Rabbit	12800 mg/kg	-
	LC50 Inhalation	Rat	72600 mg/m ³	4 hours
	Vapor			
Solvent naphtha (petroleum), light arom.	LD50 Oral	Rat	8400 mg/kg	-
	LD50 Dermal	Rabbit	3.48 g/kg	-
polychloro copper phthalocyanine	LD50 Oral	Rat	>5000 mg/kg	-
Carbon black	LD50 Oral	Rat	>15400 mg/kg	-
	LD50 Dermal	Rabbit	>3 g/kg	-
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	LD50 Oral	Rat	3.125 g/kg	-
Naphtha (petroleum), hydrotreated heavy	LD50 Oral	Rat	>6 g/kg	-
	LC50 Inhalation	Rat	8500 mg/m ³	4 hours
BBP	LD50 Oral	Rat	2.33 g/kg	-
	LD50 Dermal	Rabbit	>10 g/kg	-
	LC50 Inhalation	Rat	>6700 mg/m ³	4 hours
	Vapor			
2-butanone oxime	LD50 Oral	Rat	930 mg/kg	-
	LD50 Dermal	Rabbit	200 uL/kg	-
Kaolin	LD50 Oral	Rat	>5000 mg/kg	-
2-ethylhexanoic acid	LD50 Oral	Rat	1600 mg/kg	-
	LD50 Dermal	Rabbit	1.26 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Defatting irritant

: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Target organs

: Contains material which causes damage to the following organs: lungs, brain, central nervous system (CNS), eye, lens or cornea.
Contains material which may cause damage to the following organs: blood, kidneys, the nervous system, the reproductive system, liver, mucous membranes, heart, spleen, digestive system, peripheral nervous system, gastrointestinal tract, cardiovascular system, upper respiratory tract, skin, bones, ears, nose/sinuses, testes, throat, thyroid.

Carcinogenicity**Carcinogenicity**

: Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	NTP	OSHA
Xylene	A4	3	-	-
diiiron trioxide	A4	3	-	-
titanium dioxide	A4	2B	-	-
Lead sulfochromate yellow	A1	1	Possible	-
Lead chromate molybdate sulfate red	A1	1	Possible	-
ethylbenzene	A3	2B	-	-
cadmium sulfoselenide red	A2	1	Proven.	-
Aluminium powder (stabilized)	A4	-	-	-
toluene	A4	3	-	-

11 . Toxicological information

cadmium sulphide	A2	1	Proven.	+
Silica gel, pptd., cryst.-free	-	3	-	-
cadmium selenide	A2	1	Proven.	+
lead sulphate	A3	2A	Possible	-
zirconium dioxide	A4	-	-	-
propan-2-ol	A4	3	-	-
silicon dioxide	-	3	-	-
antimony trioxide	A2	2B	-	-
Carbon black	A3	2B	-	-
aluminium oxide	A4	-	-	-
aluminium hydroxide	A4	-	-	-
BBP	-	3	-	-
Quartz (SiO ₂) (<10 microns)	A2	1	Proven.	-

Carcinogen Classification code: ACGIH: A1, A2, A3, A4, A5
 IARC: 1, 2A, 2B, 3, 4
 NTP: Proven, Possible
 OSHA: +
 Not listed or regulated as a carcinogen: -

Mutagenicity

Teratogenicity

Reproductive toxicity

Developmental effects

: Contains material which can cause developmental abnormalities.

Fertility effects

: Contains material which may impair male fertility, based on animal data. Contains material which may impair female fertility, based on animal data.

12 . Ecological information

Environmental effects : Water polluting material. May be harmful to the environment if released in large quantities.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
xylene	Acute LC50 3300 to 4093 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
ethylbenzene	Acute LC50 4200 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
	Acute LC50 5100 to 5700 ug/L Marine water	Fish - Atlantic silverside - Menidia menidia	96 hours
	Acute EC50 2930 to 4400 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 3300 ug/L Marine water	Fish - Atlantic silverside - Menidia menidia	96 hours
	Chronic NOEC 6800 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
n-butyl acetate	Acute LC50 18000 to 19000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
heptan-2-one	Acute LC50 131000 to 137000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
Aluminium powder (stabilized)	Acute LC50 120 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
butanone	Acute LC50 3220000 to 3320000 ug/L	Fish - Fathead minnow - Pimephales	96 hours

12 . Ecological information

	Fresh water	promelas	
	Acute LC50 >400 ppm Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
	Acute LC50 >520000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 400 ppm Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
	Chronic NOEC <70000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
toluene	Acute LC50 5800 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
	Acute EC50 6000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 28000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
cadmium sulphide	Acute LC50 108 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Acute LC50 11 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
barium sulfate	Acute EC50 32000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
lead sulphate	Acute LC50 6240 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Acute IC50 82 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
propan-2-ol	Acute LC50 >1400000 ug/L	Fish - Bluegill - Lepomis macrochirus	96 hours
antimony trioxide	Acute LC50 >80000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Acute EC50 423450 to 496000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
BBP	Acute LC50 >780 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Acute LC50 >680 ug/L Fresh water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
	Acute EC50 >0.76 mg/L Fresh water	Daphnia - Water flea - Daphnia magna	2 days
	Chronic NOEC 360 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours
	Chronic NOEC 680 ug/L Fresh water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
	Chronic NOEC 620 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
2-butanone oxime	Acute LC50 843000 to 914000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
lead	Acute LC50 0.44 ppm Fresh water	Fish - common carp - Cyprinus carpio	96 hours
	Acute LC50 4400 to 5300 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	1263	PAINT	3	II	-
IMDG	1263	PAINT. Marine pollutant (Lead chromate molybdate sulfate red, Lead sulfochromate yellow)	3	II	-
DOT	1263	PAINT	3	II	Reportable quantity 1.6934 lbs / 0.76879 kg [0.024707 gal / 0.093527 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: [N,N,N',N',N",N"-hexaethyl-29H,31H-phthalocyaninetrimethylamino(2-)-N29,N30,N31,N32]copper; [1-[[[(2-hydroxyphenyl)imino]methyl]-2-naphtholato(2-)-N,O,O']copper; chromium (III) oxide: 1 lb. (0.454 kg); BBP: 100 lbs. (45.4 kg); [1,3,8,16,18,24-hexabromo-2,4,9,10,11,15,17,22,23,25-decachloro-29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]copper; copper chlorophthalocyanine; antimony trioxide: 1000 lbs. (454 kg); polychloro copper phthalocyanine; 29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper; lead sulphate: 10 lbs. (4.54 kg); cadmium selenide: 1 lb. (0.454 kg); cadmium sulphide: 1 lb. (0.454 kg); toluene: 1000 lbs. (454 kg); ammonium iron(3+) hexakis (cyano-C)ferrate(4-); butanone: 5000 lbs. (2270 kg); cadmium sulfoselenide red: 1 lb. (0.454 kg); n-butyl acetate: 5000 lbs. (2270 kg); ethylbenzene: 1000 lbs. (454 kg); Lead chromate molybdate sulfate red: 1 lb. (0.454 kg); Lead sulfochromate yellow: 1 lb. (0.454 kg); xylene: 100 lbs. (45.4 kg);

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.

Australia inventory (AICS) : Not determined.

Canada inventory (DSL) : All components are listed or exempted.

China inventory (IECSC) : Not determined.

Europe inventory (REACH) : Please contact your supplier for information on the inventory status of this material.

Japan inventory (ENCS) : Not determined.

Korea inventory (KECI) : At least one component is not listed.

15. Regulatory information

New Zealand (NZIoC) : Not determined.

Philippines inventory (PICCS) : At least one component is not listed.

United States

United States - TSCA 12(b) - Chemical export notification:

Lead sulfochromate yellow Annual notification
Lead chromate molybdate sulfate red One time notification

United States - TSCA 5(a)2 - Final significant new use rules:

Lead chromate molybdate sulfate red Listed
lead sulphate Listed

United States - TSCA 5(a)2 - Proposed significant new use rules:

Lead chromate molybdate sulfate red Listed
lead sulphate Listed

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: aluminium hydroxide; Resin acids and Rosin acids, calcium salts; aluminium oxide; Carbon black; antimony trioxide; propan-2-ol; Stoddard solvent; lead sulphate; barium sulfate; cadmium selenide; 2-methoxy-1-methylethyl acetate; cadmium sulphide; toluene; butanone; Aluminium powder (stabilized); Talc , not containing asbestiform fibres; heptan-2-one; n-butyl acetate; ethylbenzene; Mica-group minerals; titanium dioxide; diiron trioxide; xylene

CERCLA: Hazardous substances.: [N,N,N',N',N",N"-hexaethyl-29H,31H-phthalocyaninetrimethylaminato(2-)-N29,N30,N31,N32]copper; [1-[[[(2-hydroxyphenyl)imino]methyl]-2-naphtholato(2-)-N,O,O']]copper; chromium (III) oxide: 1 lb. (0.454 kg); BBP: 100 lbs. (45.4 kg); [1,3,8,16,18,24-hexabromo-2,4,9,10,11,15,17,22,23,25-decachloro-29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]copper; copper chlorophthalocyanine; antimony trioxide: 1000 lbs. (454 kg); polychloro copper phthalocyanine; 29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper; lead sulphate: 10 lbs. (4.54 kg); cadmium selenide: 1 lb. (0.454 kg); cadmium sulphide: 1 lb. (0.454 kg); toluene: 1000 lbs. (454 kg); ammonium iron(3+) hexakis(cyano-C)ferrate(4-); butanone: 5000 lbs. (2270 kg); cadmium sulfoselenide red: 1 lb. (0.454 kg); n-butyl acetate: 5000 lbs. (2270 kg); ethylbenzene: 1000 lbs. (454 kg); Lead chromate molybdate sulfate red: 1 lb. (0.454 kg); Lead sulfochromate yellow: 1 lb. (0.454 kg); xylene: 100 lbs. (45.4 kg);

SARA 311/312 MSDS Distribution - Chemical Inventory - Hazard Identification:

Chemical name	CAS #	Acute	Chronic	Fire	Reactive	Pressure
xylene	1330-20-7	Y	N	Y	N	N
diiron trioxide	1309-37-1	N	N	N	N	N
titanium dioxide	13463-67-7	N	Y	N	N	N
Mica-group minerals	12001-26-2	N	N	N	N	N
Lead sulfochromate yellow	1344-37-2	Y	Y	N	N	N
Lead chromate molybdate sulfate red	12656-85-8	Y	Y	N	N	N
ethylbenzene	100-41-4	Y	Y	Y	N	N
n-butyl acetate	123-86-4	Y	N	Y	N	N
Naphtha (petroleum), heavy alkylate	64741-65-7	Y	N	Y	N	N
heptan-2-one	110-43-0	Y	N	Y	N	N
cadmium sulfoselenide red	58339-34-7	Y	Y	N	N	N
Talc , not containing asbestiform fibres	14807-96-6	Y	N	N	N	N
Aluminium powder (stabilized)	7429-90-5	N	N	N	Y	N
butanone	78-93-3	Y	N	Y	N	N
ammonium iron(3+) hexakis(cyano-C)ferrate(4-)	25869-00-5	N	N	N	Y	N
toluene	108-88-3	Y	Y	Y	N	N
cadmium sulphide	1306-23-6	Y	Y	N	N	N
Silica gel, pptd., cryst.-free	112926-00-8	N	N	N	N	N
2-methoxy-1-methylethyl acetate	108-65-6	Y	N	Y	N	N
cadmium selenide	1306-24-7	Y	Y	N	N	N
barium sulfate	7727-43-7	N	N	N	N	N
lead sulphate	7446-14-2	Y	Y	N	N	N
zirconium dioxide	1314-23-4	N	N	N	N	N
tin dioxide	18282-10-5	N	N	N	N	N
Stoddard solvent	8052-41-3	Y	N	Y	N	N

15 . Regulatory information

propan-2-ol	67-63-0	Y	N	Y	N	N
Solvent naphtha (petroleum), light arom.	64742-95-6	Y	N	Y	N	N
silicon dioxide	7631-86-9	N	N	N	N	N
antimony trioxide	1309-64-4	Y	Y	N	N	N
[1,3,8,16,18,24-hexabromo-2,4,9,10,11,15,17,22,23,25-decachloro-29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]copper	14302-13-7	Y	N	N	N	N
Carbon black	1333-86-4	N	Y	N	N	N
aluminium oxide	1344-28-1	N	N	N	N	N
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	41556-26-7	Y	N	N	N	N
quino[2,3-b]acridine-6,7,13,14(5H,12H)-tetrone	1503-48-6	Y	N	N	N	N
Resin acids and Rosin acids, calcium salts	9007-13-0	Y	N	N	N	N
Naphtha (petroleum), hydrotreated heavy	64742-48-9	Y	N	Y	N	N
aluminium hydroxide	21645-51-2	N	N	N	N	N
BBP	85-68-7	Y	Y	N	N	N
2-butanone oxime	96-29-7	Y	Y	Y	Y	N
Quartz (SiO2) (<10 microns)	14808-60-7	N	Y	N	N	N
2-ethylhexanoic acid	149-57-5	Y	Y	N	N	N
Product as-supplied :		Y	Y	Y	Y	N

SARA 313**Supplier notification****Chemical name**

xylene
 Lead sulfochromate yellow
 Lead chromate molybdate sulfate red
 ethylbenzene
 cadmium sulfoselenide red
 Aluminium powder (stabilized)
 toluene
 cadmium sulphide
 cadmium selenide
 lead sulphate
 propan-2-ol
 polychloro copper phthalocyanine
 antimony trioxide
 copper chlorophthalocyanine
 [1,3,8,16,18,24-hexabromo-2,4,9,10,11,15,17,22,23,25-decachloro-29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]copper

CAS number

1330-20-7
 1344-37-2
 12656-85-8
 100-41-4
 58339-34-7
 7429-90-5
 108-88-3
 1306-23-6
 1306-24-7
 7446-14-2
 67-63-0
 1328-53-6
 1309-64-4
 12239-87-1
 14302-13-7

Concentration

60 - 100
 30 - 60
 30 - 60
 15 - 40
 7 - 13
 7 - 13
 5 - 10
 5 - 10
 3 - 7
 3 - 7
 1 - 5
 1 - 5
 1 - 5
 1 - 5
 1 - 5

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Canada**WHMIS (Canada)**

: Class D-1B: Material causing immediate and serious toxic effects (Toxic). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico**Classification**

15. Regulatory information

Flammability : 3 Health : 3 Reactivity : 1

16. Other information

Hazardous Material Information System (U.S.A.)

Health : 3 * Flammability : 3 Physical hazards : 1

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 3 Flammability : 3 Instability : 1

Date of previous issue : 5/19/2012.

Organization that prepared the MSDS : EHS

✔ Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

Material Safety Data Sheet



Date of issue 23 September 2012

Version 8.01

1. Product and company identification

Product name : DELTRON 2000 BASECOAT
Code : DBC-2
Supplier : PPG Industries, Inc.
One PPG Place,
Pittsburgh, PA 15272
Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
Technical Phone Number : (740) 363-9610 (DELAWARE, OH) 8:00 a.m. - 5:00 p.m. EST

2. Hazards identification

Emergency overview : DANGER!
FLAMMABLE LIQUID AND VAPOR. HARMFUL OR FATAL IF SWALLOWED. HARMFUL IF ABSORBED THROUGH SKIN. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC RESPIRATORY AND SKIN REACTION. MAY BE HARMFUL IF INHALED. CONTAINS LEAD. DRIED FILM OF THIS PAINT MAY BE HARMFUL IF EATEN OR CHEWED. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. ASPIRATION HAZARD. CAN ENTER LUNGS AND CAUSE DAMAGE. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER. DEVELOPMENTAL HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE ADVERSE DEVELOPMENTAL EFFECTS. Add this product only to water. Never add water to this product.
Keep away from flames, such as a pilot light, and any object that sparks, such as an electric motor. Keep away from heat. Do not smoke. Do not breathe vapor or mist. Do not swallow. Do not get in eyes or on skin or clothing. Avoid exposure during pregnancy. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Irritating to respiratory system. Can irritate eyes, nose, mouth and throat. May cause sensitization by inhalation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion : Harmful or fatal if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage.
Skin : Toxic in contact with skin. Irritating to skin. May cause an allergic skin reaction.
Eyes : Severely irritating to eyes. Risk of serious damage to eyes.

Over-exposure signs/symptoms

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. **1-component mixtures:** formaldehyde is released during curing. Formaldehyde may cause irreversible effects, is irritating to the mucous membranes and may cause skin sensitization. Contains Lead. Lead poisoning is characterized by a metallic taste in the mouth, loss of appetite, indigestion, nausea, vomiting, constipation, abdominal cramps, disturbance of rest and sleep and weakness. Dryness, itching, cracking, burning, redness and swelling are conditions associated with excessive skin contact. Exposure to lead dust and fumes adversely affects blood and blood forming tissues, kidneys, liver, the central/peripheral nervous systems and male/female reproductive organs.

Product name DELTRON 2000 BASECOAT

2. Hazards identification

Lead exposure causes adverse developmental effects including brain damage in children and unborn fetuses. NTP, IARC, and OSHA have classified chromium (+6) compounds as carcinogenic. OSHA considers all Cr+6 compounds as potential occupational carcinogens capable of causing lung cancer above the recommended exposure limits.

Medical conditions aggravated by over-exposure : Pre-existing respiratory and skin disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (Section 11)

3. Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>%</u>
n-butyl acetate	123-86-4	60 - 100
titanium dioxide	13463-67-7	60 - 100
2-methoxy-1-methylethyl acetate	108-65-6	15 - 40
xylene	1330-20-7	15 - 40
diiiron trioxide	1309-37-1	15 - 40
Mica-group minerals	12001-26-2	10 - 30
butanone	78-93-3	10 - 30
Lead sulfochromate yellow	1344-37-2	10 - 30
4-methylpentan-2-one	108-10-1	10 - 30
aluminium oxide	1344-28-1	10 - 30
butan-1-ol	71-36-3	10 - 30
glass, oxide, chemicals	65997-17-3	10 - 30
Amorphous Silicate	Not available.	10 - 30
Lead chromate molybdate sulfate red	12656-85-8	10 - 30
toluene	108-88-3	10 - 30
heptan-2-one	110-43-0	10 - 30
lead chromate	7758-97-6	10 - 30
Aluminium powder (stabilized)	7429-90-5	7 - 13
Ligroine	8032-32-4	7 - 13
zirconium dioxide	1314-23-4	7 - 13
Solvent naphtha (petroleum), light arom.	64742-95-6	5 - 10
Naphtha (petroleum), heavy alkylate	64741-65-7	5 - 10
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	3 - 7
silicon dioxide	7631-86-9	3 - 7
Naphtha (petroleum), hydrotreated heavy	64742-48-9	3 - 7
ethylbenzene	100-41-4	3 - 7
Silica gel, pptd., cryst.-free	112926-00-8	3 - 7
Natural graphite	7782-42-5	3 - 7
polychloro copper phthalocyanine	1328-53-6	3 - 7
[1-[(2-hydroxyphenyl)imino]methyl]-2-naphtholato(2-)-N,O,O']copper	15680-42-9	1 - 5
2-ethoxy-1-methylethyl acetate	54839-24-6	1 - 5
Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, brominated chlorinated	68512-13-0	1 - 5
Carbon black	1333-86-4	1 - 5
Stoddard solvent	8052-41-3	1 - 5
barium sulfate	7727-43-7	1 - 5
tin dioxide	18282-10-5	1 - 5
Silica, amorphous, fumed, cryst.-free	112945-52-5	1 - 5
Solvent naphtha (petroleum), light aliph.	64742-89-8	1 - 5
aluminium hydroxide	21645-51-2	1 - 5
Block Copolymer with Pigment Affinic Groups	Not available.	1 - 5
2-methylpropan-1-ol	78-83-1	1 - 5
Additive	Not available.	1 - 5
chromium (III) oxide	1308-38-9	1 - 5
1,2,4-trimethylbenzene	95-63-6	1 - 5
ammonium iron(3+) hexakis(cyano-C)ferrate(4-)	25869-00-5	1 - 5
2-butoxyethyl acetate	112-07-2	0.5 - 1.5

3 . Composition/information on ingredients

Resin acids and Rosin acids, calcium salts	9007-13-0	0.5 - 1.5
quino[2,3-b]acridine-6,7,13,14(5H,12H)-tetrone	1503-48-6	0.5 - 1.5
Zinc Salt	Not available.	0.5 - 1.5
antimony trioxide	1309-64-4	0.5 - 1.5
calcium molybdate	7789-82-4	0.5 - 1.5
lead sulphate	7446-14-2	0.1 - 1
acrylic acid, monoester with propane-1,2-diol	25584-83-2	0.1 - 1
BBP	85-68-7	0.1 - 1
styrene	100-42-5	0.1 - 1
methyl methacrylate	80-62-6	0.1 - 1
2-methoxypropyl acetate	70657-70-4	0.1 - 1
2-ethylhexyl acrylate	103-11-7	0.1 - 1
mesitylene	108-67-8	0.1 - 1
rosin	8050-09-7	0.1 - 1
lead	7439-92-1	< 0.1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5 . Fire-fighting measures

Flammability of the product : Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Extinguishing media

- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

5 . Fire-fighting measures

- Hazardous combustion products** : Decomposition products may include the following materials:
carbon oxides
nitrogen oxides
sulfur oxides
oxides of lead
halogenated compounds
metal oxide/oxides
Formaldehyde.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Use spark-proof tools and explosion-proof equipment. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not breathe vapor or mist. Ingestion of product or cured coating may be harmful. Do not swallow. Do not get in eyes or on skin or clothing. Avoid exposure during pregnancy. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. Vapors are heavier than air and may spread along floors. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Add this product only to water. Never add water to this product. Empty containers retain product residue and can be hazardous. Do not apply on toys and other children's articles, furniture, or interior surfaces of any dwelling or facility which may be occupied or used by children. Do not apply on exterior surfaces of dwelling units, such as window sills, porches, stairs, or railings, to which children may be commonly exposed. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s)

7. Handling and storage

for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage

- Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store above the following temperature: 120F / 49C.

8. Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
n-butyl acetate	TWA	150 ppm	150 ppm	150 ppm	150 ppm	Not established
	STEL	200 ppm	Not established	200 ppm	200 ppm	Not established
titanium dioxide	TWA	10 mg/m ³	15 mg/m ³ TD	10 mg/m ³ TD	10 mg/m ³ (as Ti)	Not established
	STEL	Not established	Not established	Not established	20 mg/m ³ (as Ti)	Not established
2-methoxy-1-methylethyl acetate	TWA	Not established	Not established	50 ppm	Not established	50 ppm
xylene	TWA	100 ppm	100 ppm	100 ppm	100 ppm	Not established
	STEL	150 ppm	Not established	150 ppm	150 ppm	Not established
diiron trioxide	TWA	5 mg/m ³ R	10 mg/m ³	5 mg/m ³ R	5 mg/m ³ (as Fe)	Not established
	STEL	Not established	Not established	Not established	10 mg/m ³ (as Fe)	Not established
Mica-group minerals	TWA	3 mg/m ³ R	20 mppcf Z	3 mg/m ³ R	3 mg/m ³	Not established
butanone	TWA	200 ppm	200 ppm	200 ppm	200 ppm	Not established
	STEL	300 ppm	Not established	300 ppm	300 ppm	Not established
Lead sulfochromate yellow	TWA	0.05 mg/m ³ (as Pb) 0.05 MG/M3 () TD 0.05 mg/m ³ (measured as Cr)	5 mg/m3 50 ug/m3 5 µg/m ³	0.05 mg/m ³ (as Cr) 0.05 mg/m ³ (as Pb)	0.15 mg/m ³ (as Pb)	0.005 mg/m ³
	STEL	Not established	0.1 mg/m ³ C	Not established	Not established	Not established
4-methylpentan-2-one	TWA	20 ppm	100 ppm	50 ppm	50 ppm	Not established
	STEL	75 ppm	Not established	75 ppm	75 ppm	Not established

8 . Exposure controls/personal protection

aluminium oxide	TWA	3 mg/m ³ R 10 mg/m ³ 1 mg/m ³ R	5 mg/m ³ R 15 mg/m ³ TD	10 mg/m ³ 10 mg/m ³ TD 10 mg/m ³ R 1 mg/m ³ R	10 mg/m ³	Not established
butan-1-ol	TWA	20 ppm	100 ppm	20 ppm	Not established	Not established
	STEL	Not established	Not established	Not established	50 ppm S C	Not established
glass, oxide, chemicals	TWA	10 MG/M3 TD 3 MG/M3 R 1 f/cc 5 mg/m ³ (Inhalable) 1 f/cc 5 mg/m ³	15 mg/m ³ TD 5 mg/m ³ R 15 mg/m ³	1 f/cc R 5 mg/m ³	Not established	Not established
Amorphous Silicate	TWA	10 MG/M3 R	Not established	Not established	Not established	Not established
Lead chromate molybdate sulfate red	TWA	0.05 mg/m ³ (as Pb) 0.05 MG/M3 TD 3 MG/M3 R 0.05 mg/m ³ (measured as Cr)	5 µg/m ³ 10 mg/m ³ 5 mg/m ³ 50 ug/m ³	0.05 mg/m ³ (as Cr) 0.05 mg/m ³ (as Pb)	0.15 mg/m ³ (as Pb)	0.005 mg/m ³
	STEL	Not established	1 mg/10m ³ Z C	Not established	Not established	Not established
toluene	TWA	20 ppm	200 ppm Z	20 ppm	50 ppm S	Not established
	STEL	Not established	500 ppm Z A 300 ppm Z C	Not established	Not established	Not established
heptan-2-one	TWA	50 ppm	100 ppm	25 ppm	50 ppm	Not established
	STEL	Not established	Not established	Not established	100 ppm	Not established
lead chromate	TWA	0.01 mg/m ³ (measured as Cr) 0.05 mg/m ³ (as Pb) 0.05 MG/M3 TD	5 µg/m ³ 5 mg/m ³ 50 ug/m ³	0.012 mg/m ³ (as Cr) 0.05 mg/m ³ (as Pb)	0.15 mg/m ³ (as Pb)	0.005 mg/m ³
	STEL	Not established	1 mg/10m ³ Z C	Not established	Not established	Not established
Aluminium powder (stabilized)	TWA	1 mg/m ³ R	5 mg/m ³ (as Al) R 15 mg/m ³ (as Al) TD	1 mg/m ³ R	5 mg/m ³ 5 mg/m ³	Not established
Ligroine	TWA	Not established	Not established	Not established	300 ppm	Not established

8 . Exposure controls/personal protection

	STEL	Not established	Not established	Not established	400 ppm	Not established
zirconium dioxide	TWA	5 mg/m ³ (as Zr)	5 mg/m ³ (as Zr)	5 mg/m ³ (as Zr)	5 mg/m ³ (as Zi)	Not established
	STEL	10 mg/m ³ (as Zr)	10 mg/m ³ (as Zr)	10 mg/m ³ (as Zr)	10 mg/m ³ (as Zi)	Not established
silicon dioxide	TWA	Not established	Not established	Not established	10 mg/m ³ 3 mg/m ³ R	Not established
ethylbenzene	TWA	20 ppm	100 ppm	100 ppm	100 ppm	Not established
	STEL	Not established	Not established	125 ppm	125 ppm	Not established
Silica gel, pptd., cryst.-free	TWA	Not established	Not established	10 mg/m ³	10 mg/m ³	Not established
Natural graphite	TWA	2 mg/m ³ R	15 mppcf Z 5 mg/m ³ R 10 mg/m ³	2 mg/m ³ R	2 mg/m ³	Not established
Carbon black	TWA	3 mg/m ³	3.5 mg/m ³	3.5 mg/m ³	3.5 mg/m ³	Not established
	STEL	Not established	Not established	Not established	7 mg/m ³	Not established
Stoddard solvent	TWA	100 ppm	500 ppm	100 ppm	100 ppm	Not established
	STEL	Not established	Not established	Not established	200 ppm	Not established
barium sulfate	TWA	10 mg/m ³	5 mg/m ³ R 15 mg/m ³ TD	10 mg/m ³ TD	Not established	Not established
tin dioxide	TWA	2 mg/m ³ (as Sn)	2 mg/m ³ TD 2 mg/m ³	2 mg/m ³ (as Sn)	2 mg/m ³ (as Sn)	Not established
	STEL	Not established	Not established	Not established	4 mg/m ³ (as Sn)	Not established
Silica, amorphous, fumed, cryst.-free	TWA	Not established	Not established	Not established	10 mg/m ³ 3 mg/m ³ R	Not established
aluminium hydroxide	TWA	1 mg/m ³	Not established	Not established	2 mg/m ³	Not established
2-methylpropan-1-ol	TWA	50 ppm	100 ppm	50 ppm	50 ppm	Not established
	STEL	Not established	Not established	Not established	75 ppm	Not established
chromium (III) oxide	TWA	0.5 mg/m ³ (measured as Cr) 0.1 MG/M3 () TD	0.5 mg/m ³ 0.5 mg/m ³ (as Cr)	0.5 mg/m ³ (as Cr)	0.5 mg/m ³ ()	Not established
1,2,4-trimethylbenzene	TWA	25 ppm	Not established	25 ppm	25 ppm	Not established

8 . Exposure controls/personal protection

	STEL	Not established	Not established	Not established	35 ppm	Not established
ammonium iron(3+) hexakis (cyano-C)ferrate(4-)	TWA	1 mg/m ³ (as Fe)	5 mg/m ³ (as CN) S	1 mg/m ³ (as Fe)	1 mg/m ³ (as Fe) 5 mg/m ³ (as Cn)	Not established
	STEL	Not established	Not established	Not established	2 mg/m ³ (as Fe)	Not established
2-butoxyethyl acetate	TWA	20 ppm	Not established	20 ppm	Not established	Not established
antimony trioxide	TWA	0.5 mg/m ³ (as Sb)	0.5 mg/m ³ (as Sb) 0.5 mg/m ³ (as Sb)	0.5 mg/m ³ (as Sb)	0.5 mg/m ³ (as Sb) 1 mg/m ³	Not established
calcium molybdate	TWA	0.5 mg/m ³ (as Mo) R 10 MG/M3 TD 3 MG/M3 R	5 mg/m ³ (as Mo) 10 mg/m ³	0.5 mg/m ³ (as Mo) R	5 mg/m ³ (as Mo)	Not established
	STEL	Not established	Not established	Not established	10 mg/m ³ (as Mo)	Not established
lead sulphate	TWA	0.05 mg/m ³ (as Pb)	50 ug/m ³	0.05 mg/m ³ (as Pb)	0.15 mg/m ³ (as Pb)	Not established
styrene	TWA	20 ppm S	100 ppm Z	35 ppm	50 ppm S	Not established
	STEL	40 ppm S	600 ppm Z A 200 ppm Z C	100 ppm	100 ppm S	Not established
methyl methacrylate	TWA	50 ppm SS	100 ppm	50 ppm SS	100 ppm	Not established
	STEL	100 ppm SS	Not established	100 ppm SS	125 ppm	Not established
mesitylene	TWA	25 ppm	Not established	25 ppm	25 ppm	Not established
	STEL	Not established	Not established	Not established	35 ppm	Not established
lead	TWA	0.05 mg/m ³ (as Pb)	50 µg/m ³ (as Pb) 50 ug/m ³	0.05 mg/m ³ (as Pb)	Not established	Not established

Key to abbreviations

A	= Acceptable Maximum Peak	S	= Potential skin absorption
ACGIH	= American Conference of Governmental Industrial Hygienists.	SR	= Respiratory sensitization
C	= Ceiling Limit	SS	= Skin sensitization
F	= Fume	STEL	= Short term Exposure limit values
IPEL	= Internal Permissible Exposure Limit	TD	= Total dust
OSHA	= Occupational Safety and Health Administration.	TLV	= Threshold Limit Value
R	= Respirable	TWA	= Time Weighted Average
Z	= OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances		

Consult local authorities for acceptable exposure limits.

8 . Exposure controls/personal protection

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- Engineering measures** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection**
- Eyes** : Chemical splash goggles.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Gloves** : butyl rubber
- Respiratory** : By spraying: air-fed respirator. By other operations than spraying, in well ventilated areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

- Physical state** : Liquid.
- Flash point** : Closed cup: -1.11°C (30°F)
- Color** : Not available.
- Odor** : Not available.
- pH** : Not available.
- Boiling/condensation point** : >37.78°C (>100°F)
- Melting/freezing point** : Not available.
- Specific gravity** : 0.99
- Density (lbs / gal)** : 8.26
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Volatility** : 80% (v/v), 71% (w/w)

9 . Physical and chemical properties

Evaporation rate	: Not available.
Partition coefficient: n-octanol/water	: Not available.
% Solid. (w/w)	: 28.59

Physical property values shown in this section are calculated averages. For specific product information, contact your PPG Sales Representative.

10 . Stability and reactivity

Stability	: The product may not be stable under certain conditions of storage or use.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Avoid increased storage temperature. Pressure hazard
Materials to avoid	: Reactive or incompatible with the following materials: water, acids, oxidizing materials, strong alkalis
Hazardous decomposition products	: Formaldehyde.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
n-butyl acetate	LD50 Oral	Rat	10.768 g/kg	-
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LC50 Inhalation	Rat	>21.1 mg/l	4 hours
titanium dioxide	LD50 Oral	Rat	>10 g/kg	-
	LD50 Oral	Rat	8532 mg/kg	-
2-methoxy-1-methylethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
xylene	LD50 Dermal	Rabbit	>1.7 g/kg	-
	LC50 Inhalation	Rat	5000 ppm	4 hours
	Vapor			
diiron trioxide	LD50 Oral	Rat	10 g/kg	-
	LD50 Oral	Rat	2737 mg/kg	-
butanone	LD50 Dermal	Rabbit	6480 mg/kg	-
	LC50 Inhalation	Rat	11243 ppm	4 hours
	Vapor			
Lead sulfochromate yellow	LD50 Oral	Rat	1.2 g/kg	-
	LD50 Oral	Rat	2.08 g/kg	-
	LC50 Inhalation	Rat	32772 mg/m3	4 hours
4-methylpentan-2-one	Vapor			
	LD50 Oral	Rat	0.79 g/kg	-
	LD50 Dermal	Rabbit	3400 mg/kg	-
butan-1-ol	LC50 Inhalation	Rat	8000 ppm	4 hours
	Vapor			
toluene	LD50 Oral	Rat	636 mg/kg	-
	LD50 Dermal	Rabbit	8.39 g/kg	-
	LC50 Inhalation	Rat	49 g/m3	4 hours
heptan-2-one	LD50 Oral	Rat	1.6 g/kg	-
	LD50 Dermal	Rabbit	10.206 g/kg	-
lead chromate	LD50 Oral	Rat	1.2 g/kg	-
Ligroine	LC50 Inhalation	Rat	3400 ppm	4 hours
Solvent naphtha (petroleum), light arom.	LD50 Oral	Rat	8400 mg/kg	-
	LD50 Dermal	Rabbit	3.48 g/kg	-
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	LD50 Oral	Rat	5.1 g/kg	-
Naphtha (petroleum), hydrotreated heavy	LD50 Oral	Rat	>6 g/kg	-
	LC50 Inhalation	Rat	8500 mg/m3	4 hours

11 . Toxicological information

ethylbenzene	LD50 Oral	Rat	3.5 g/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LC50 Inhalation Vapor	Rat	4000 ppm	4 hours
polychloro copper phthalocyanine 2-ethoxy-1-methylethyl acetate	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	4.705 g/kg	-
	LC50 Inhalation Vapor	Rat	6990 mg/m3	4 hours
Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, brominated chlorinated	LD50 Oral	Rat	>5 g/kg	-
	Carbon black	LD50 Oral	Rat	>15400 mg/kg
Stoddard solvent	LD50 Dermal	Rabbit	>3 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
tin dioxide	LD50 Oral	Rat	>20 g/kg	-
	LD50 Oral	Rat	3160 mg/kg	-
Silica, amorphous, fumed, cryst.-free	LD50 Oral	Rat	2460 mg/kg	-
	LD50 Dermal	Rabbit	2 g/kg	-
	LC50 Inhalation Vapor	Rat	6500 mg/m3	4 hours
1,2,4-trimethylbenzene	LD50 Oral	Rat	5 g/kg	-
	LC50 Inhalation	Rat	18000 mg/m3	4 hours
2-butoxyethyl acetate	LD50 Oral	Rat	1.6 g/kg	-
	LD50 Dermal	Rabbit	1.48 g/kg	-
	LD50 Oral	Rat	>0.552 g/kg	-
Zinc Salt calcium molybdate	LD50 Oral	Rat	0.101 g/kg	-
	LD50 Oral	Rat	0.17 g/kg	-
	LD50 Dermal	Rabbit	0.17 g/kg	-
acrylic acid, monoester with propane-1,2-diol BBP	LD50 Oral	Rat	2.33 g/kg	-
	LD50 Dermal	Rabbit	>10 g/kg	-
	LC50 Inhalation Vapor	Rat	>6700 mg/m3	4 hours
styrene	LD50 Oral	Rat	1 g/kg	-
	LC50 Inhalation Vapor	Rat	2700 ppm	4 hours
methyl methacrylate	LD50 Oral	Rat	7872 mg/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
	LC50 Inhalation Vapor	Rat	78000 mg/m3	4 hours
2-methoxypropyl acetate	LD50 Oral	Rat	8532 mg/kg	-
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LC50 Inhalation	Rat	>5320 ppm	4 hours
2-ethylhexyl acrylate	LD50 Oral	Rat	5.7 g/kg	-
	LD50 Dermal	Rabbit	8.5 g/kg	-
mesitylene	LD50 Oral	Rat	5000 mg/kg	-
	LC50 Inhalation	Rat	24000 mg/m3	4 hours
rosin	LD50 Oral	Rat	7600 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Defatting irritant

: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Target organs

: Contains material which causes damage to the following organs: lungs, brain, central nervous system (CNS), eye, lens or cornea.
Contains material which may cause damage to the following organs: blood, kidneys, the nervous system, the reproductive system, liver, mucous membranes, heart, lymphatic system, peripheral nervous system, gastrointestinal tract, cardiovascular system, upper respiratory tract, skin, bone marrow, ears, muscle tissue, nose/sinuses, testes, throat, thyroid.

11 . Toxicological information

Carcinogenicity

Carcinogenicity : Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	NTP	OSHA
Titanium dioxide	A4	2B	-	-
xylene	A4	3	-	-
diron trioxide	A4	3	-	-
Lead sulfochromate yellow	A1	1	Possible	-
4-methylpentan-2-one	A3	2B	-	-
aluminium oxide	A4	-	-	-
glass, oxide, chemicals	A4	3	-	-
Lead chromate molybdate sulfate red	A1	1	Possible	-
toluene	A4	3	-	-
lead chromate	A2	1	Possible	-
Aluminium powder (stabilized)	A4	-	-	-
zirconium dioxide	A4	-	-	-
silicon dioxide	-	3	-	-
ethylbenzene	A3	2B	-	-
Silica gel, pptd., cryst.-free	-	3	-	-
Carbon black	A3	2B	-	-
Silica, amorphous, fumed, cryst.-free	-	3	-	-
aluminium hydroxide	A4	-	-	-
chromium (III) oxide	A4	3	-	-
2-butoxyethyl acetate	A3	-	-	-
antimony trioxide	A2	2B	-	-
lead sulphate	A3	2A	Possible	-
BBP	-	3	-	-
styrene	A4	2B	Possible	-
methyl methacrylate	A4	3	-	-
2-ethylhexyl acrylate	-	3	-	-

Carcinogen Classification code:
 ACGIH: A1, A2, A3, A4, A5
 IARC: 1, 2A, 2B, 3, 4
 NTP: Proven, Possible
 OSHA: +
 Not listed or regulated as a carcinogen: -

Teratogenicity

Teratogenicity : Contains material which may cause birth defects, based on animal data.

Reproductive toxicity

Developmental effects : Contains material which can cause developmental abnormalities.

Fertility effects : Contains material which may impair male fertility, based on animal data. Contains material which may impair female fertility, based on animal data.

12 . Ecological information

Environmental effects : Water polluting material. May be harmful to the environment if released in large quantities.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
n-butyl acetate	Acute LC50 18000 to 19000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
xylene	Acute LC50 3300 to 4093 ug/L Fresh water	Fish - Rainbow trout, donaldson trout - Oncorhynchus mykiss	96 hours
butanone	Acute LC50 3220000 to 3320000 ug/L	Fish - Fathead minnow - Pimephales	96 hours

12 . Ecological information

	Fresh water	promelas	
	Acute LC50 >400 ppm Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
	Acute LC50 >520000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 400 ppm Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
	Chronic NOEC <70000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
4-methylpentan-2-one	Acute LC50 505000 to 514000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
butan-1-ol	Acute LC50 100 to 500 mg/L Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours
	Acute EC50 1983000 to 2072000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
toluene	Acute LC50 5800 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
	Acute EC50 6000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 28000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
heptan-2-one	Acute LC50 131000 to 137000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
Aluminium powder (stabilized)	Acute LC50 120 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
ethylbenzene	Acute LC50 4200 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
	Acute LC50 5100 to 5700 ug/L Marine water	Fish - Atlantic silverside - Menidia menidia	96 hours
	Acute EC50 2930 to 4400 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 3300 ug/L Marine water	Fish - Atlantic silverside - Menidia menidia	96 hours
	Chronic NOEC 6800 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
barium sulfate	Acute EC50 32000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
2-methylpropan-1-ol	Acute LC50 1330000 to 1520000 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
	Acute LC50 1030000 to 1200000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
1,2,4-trimethylbenzene	Acute LC50 7720 to 8280 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
antimony trioxide	Acute LC50 >80000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours

12 . Ecological information

	Acute EC50 423450 to 496000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
lead sulphate	Acute LC50 6240 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Acute IC50 82 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
BBP	Acute LC50 >780 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Acute LC50 >680 ug/L Fresh water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
	Acute EC50 >0.76 mg/L Fresh water	Daphnia - Water flea - Daphnia magna	2 days
	Chronic NOEC 360 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours
	Chronic NOEC 680 ug/L Fresh water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
	Chronic NOEC 620 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
styrene	Acute LC50 4020 to 4990 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Acute LC50 9.1 to 16 ppm Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
	Acute EC50 4700 to 7400 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 4000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Chronic NOEC 5.1 to 16000 ppm Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
	Chronic NOEC 1900 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
methyl methacrylate	Acute LC50 130000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
lead	Acute LC50 0.44 ppm Fresh water	Fish - common carp - Cyprinus carpio	96 hours
	Acute LC50 4400 to 5300 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

13 . Disposal considerations

Waste disposal

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues.

13 . Disposal considerations

Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	1263	PAINT	3	II	-
IMDG	1263	PAINT. Marine pollutant (Lead chromate molybdate sulfate red, Lead sulfochromate yellow)	3	II	-
DOT	1263	PAINT	3	II	Reportable quantity 3.9608 lbs / 1.7982 kg [0.057378 gal / 0.2172 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: copper chlorophthalocyanine; methyl methacrylate: 1000 lbs. (454 kg); styrene: 1000 lbs. (454 kg); BBP: 100 lbs. (45.4 kg); 2-butoxyethanol; Naphthenic acids: 100 lbs. (45.4 kg); Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, chlorinated; lead sulphate: 10 lbs. (4.54 kg); antimony trioxide: 1000 lbs. (454 kg); 2-butoxyethyl acetate; ammonium iron(3+) hexakis(cyano-C)ferrate(4-); chromium (III) oxide: 1 lb. (0.454 kg); 2-methylpropan-1-ol: 5000 lbs. (2270 kg); Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, brominated chlorinated; [1-[(2-hydroxyphenyl)imino]methyl]-2-naphtholato(2-)-N,O,O']copper; polychloro copper phthalocyanine; ethylbenzene: 1000 lbs. (454 kg); 29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper; lead chromate: 1 lb. (0.454 kg); toluene: 1000 lbs. (454 kg); Lead chromate molybdate sulfate red: 1 lb. (0.454 kg); glass, oxide, chemicals; butan-1-ol: 5000 lbs. (2270 kg); 4-methylpentan-2-one: 5000 lbs. (2270 kg); Lead sulfochromate yellow: 1 lb. (0.454 kg); butanone: 5000 lbs. (2270 kg); xylene: 100 lbs. (45.4 kg); n-butyl acetate: 5000 lbs. (2270 kg);

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.

Australia inventory (AICS) : At least one component is not listed.

Canada inventory (DSL) : At least one component is not listed. Unlisted component(s) have been notified and volumes are being tracked.

China inventory (IECSC) : At least one component is not listed.

Europe inventory (REACH) : Please contact your supplier for information on the inventory status of this material.

Japan inventory (ENCS) : Not determined.

Korea inventory (KECI) : At least one component is not listed.

New Zealand (NZIoC) : Not determined.

Philippines inventory (PICCS) : At least one component is not listed.

United States

United States - TSCA 12(b) - Chemical export notification:

15. Regulatory information

Lead sulfochromate yellow Annual notification
Lead chromate molybdate sulfate red One time notification

United States - TSCA 5(a)2 - Final significant new use rules:

Lead chromate molybdate sulfate red Listed
lead chromate Listed
lead sulphate Listed
2-ethoxyethyl acetate Listed
2-ethoxyethanol Listed

United States - TSCA 5(a)2 - Proposed significant new use rules:

Lead chromate molybdate sulfate red Listed
lead chromate Listed
lead sulphate Listed

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: calcium molybdate; antimony trioxide; Resin acids and Rosin acids, calcium salts; 2-butoxyethyl acetate; 1,2,4-trimethylbenzene; chromium (III) oxide; 2-methylpropan-1-ol; aluminium hydroxide; barium sulfate; Stoddard solvent; Carbon black; Natural graphite; ethylbenzene; Ligroine; Aluminium powder (stabilized); lead chromate; heptan-2-one; toluene; butan-1-ol; aluminium oxide; 4-methylpentan-2-one; butanone; Mica-group minerals; diiron trioxide; xylene; 2-methoxy-1-methylethyl acetate; titanium dioxide; n-butyl acetate

CERCLA: Hazardous substances.: copper chlorophthalocyanine; methyl methacrylate: 1000 lbs. (454 kg); styrene: 1000 lbs. (454 kg); BBP: 100 lbs. (45.4 kg); 2-butoxyethanol; Naphthenic acids: 100 lbs. (45.4 kg); Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, chlorinated; lead sulphate: 10 lbs. (4.54 kg); antimony trioxide: 1000 lbs. (454 kg); 2-butoxyethyl acetate; ammonium iron(3+) hexakis(cyano-C)ferrate(4-); chromium (III) oxide: 1 lb. (0.454 kg); 2-methylpropan-1-ol: 5000 lbs. (2270 kg); Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, brominated chlorinated; [1-[[[(2-hydroxyphenyl)imino]methyl]-2-naphtholato(2-)-N,O,O']copper; polychloro copper phthalocyanine; ethylbenzene: 1000 lbs. (454 kg); 29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper; lead chromate: 1 lb. (0.454 kg); toluene: 1000 lbs. (454 kg); Lead chromate molybdate sulfate red: 1 lb. (0.454 kg); glass, oxide, chemicals; butan-1-ol: 5000 lbs. (2270 kg); 4-methylpentan-2-one: 5000 lbs. (2270 kg); Lead sulfochromate yellow: 1 lb. (0.454 kg); butanone: 5000 lbs. (2270 kg); xylene: 100 lbs. (45.4 kg); n-butyl acetate: 5000 lbs. (2270 kg);

SARA 311/312 MSDS Distribution - Chemical Inventory - Hazard Identification:

<u>Chemical name</u>	<u>CAS #</u>	<u>Acute</u>	<u>Chronic</u>	<u>Fire</u>	<u>Reactive</u>	<u>Pressure</u>
n-butyl acetate	123-86-4	Y	N	Y	N	N
titanium dioxide	13463-67-7	N	Y	N	N	N
2-methoxy-1-methylethyl acetate	108-65-6	Y	N	Y	N	N
xylene	1330-20-7	Y	N	Y	N	N
diiron trioxide	1309-37-1	N	N	N	N	N
Mica-group minerals	12001-26-2	N	N	N	N	N
butanone	78-93-3	Y	N	Y	N	N
Lead sulfochromate yellow	1344-37-2	Y	Y	N	N	N
4-methylpentan-2-one	108-10-1	Y	Y	Y	N	N
aluminium oxide	1344-28-1	N	N	N	N	N
butan-1-ol	71-36-3	Y	N	Y	N	N
glass, oxide, chemicals	65997-17-3	N	N	N	N	N
Amorphous Silicate	Not available.	N	N	N	N	N
Lead chromate molybdate sulfate red	12656-85-8	Y	Y	N	N	N
toluene	108-88-3	Y	Y	Y	N	N
heptan-2-one	110-43-0	Y	N	Y	N	N
lead chromate	7758-97-6	Y	Y	N	N	N
Aluminium powder (stabilized)	7429-90-5	N	N	N	Y	N
Ligroine	8032-32-4	Y	N	Y	N	N
zirconium dioxide	1314-23-4	N	N	N	N	N
Solvent naphtha (petroleum), light arom.	64742-95-6	Y	N	Y	N	N
Naphtha (petroleum), heavy alkylate	64741-65-7	Y	N	Y	N	N
silicon dioxide	7631-86-9	N	N	N	N	N
Naphtha (petroleum), hydrotreated heavy	64742-48-9	Y	N	Y	N	N

15. Regulatory information

ethylbenzene	100-41-4	Y	Y	Y	N	N
Silica gel, pptd., cryst.-free	112926-00-8	N	N	N	N	N
Natural graphite	7782-42-5	N	N	N	N	N
2-ethoxy-1-methylethyl acetate	54839-24-6	Y	N	Y	N	N
Carbon black	1333-86-4	N	Y	N	N	N
Stoddard solvent	8052-41-3	Y	N	Y	N	N
barium sulfate	7727-43-7	N	N	N	N	N
tin dioxide	18282-10-5	N	N	N	N	N
Silica, amorphous, fumed, cryst.-free	112945-52-5	N	N	N	N	N
Solvent naphtha (petroleum), light aliph.	64742-89-8	Y	N	Y	N	N
aluminium hydroxide	21645-51-2	N	N	N	N	N
Block Copolymer with Pigment	Not available.	Y	N	N	N	N
Affinic Groups						
2-methylpropan-1-ol	78-83-1	Y	N	Y	N	N
Additive	Not available.	Y	N	N	N	N
chromium (III) oxide	1308-38-9	N	N	N	N	N
1,2,4-trimethylbenzene	95-63-6	Y	N	Y	N	N
ammonium iron(3+) hexakis(cyano-C)ferrate(4-)	25869-00-5	N	N	N	Y	N
2-butoxyethyl acetate	112-07-2	Y	Y	Y	N	N
quino[2,3-b]acridine-6,7,13,14(5H,12H)-tetrone	1503-48-6	Y	N	N	N	N
Resin acids and Rosin acids, calcium salts	9007-13-0	Y	N	N	N	N
Zinc Salt	Not available.	N	N	N	N	N
antimony trioxide	1309-64-4	Y	Y	N	N	N
calcium molybdate	7789-82-4	Y	N	N	N	N
lead sulphate	7446-14-2	Y	Y	N	N	N
acrylic acid, monoester with propane-1,2-diol	25584-83-2	Y	Y	N	Y	N
BBP	85-68-7	Y	Y	N	N	N
styrene	100-42-5	Y	Y	Y	Y	N
methyl methacrylate	80-62-6	Y	Y	Y	Y	N
2-methoxypropyl acetate	70657-70-4	Y	Y	Y	N	N
2-ethylhexyl acrylate	103-11-7	Y	Y	Y	Y	N
rosin	8050-09-7	Y	N	N	N	N
Product as-supplied :		Y	Y	Y	Y	N

SARA 313

Supplier notification

<u>Chemical name</u>	<u>CAS number</u>	<u>Concentration</u>
xylene	1330-20-7	15 - 40
bismuth vanadium tetraoxide	14059-33-7	15 - 40
Lead sulfochromate yellow	1344-37-2	10 - 30
4-methylpentan-2-one	108-10-1	10 - 30
butan-1-ol	71-36-3	10 - 30
Lead chromate molybdate sulfate red	12656-85-8	10 - 30
toluene	108-88-3	10 - 30
lead chromate	7758-97-6	10 - 30
Aluminium powder (stabilized)	7429-90-5	7 - 13
ethylbenzene	100-41-4	3 - 7
polychloro copper phthalocyanine	1328-53-6	3 - 7
[1-[(2-hydroxyphenyl)imino]methyl]-2-naphtholato (2-)-N,O,O']copper	15680-42-9	1 - 5
Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, brominated chlorinated	68512-13-0	1 - 5
chromium (III) oxide	1308-38-9	1 - 5
1,2,4-trimethylbenzene	95-63-6	1 - 5
2-butoxyethyl acetate	112-07-2	0.5 - 1.5

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antimony trioxide	1309-64-4	0.5 - 1.5
lead sulphate	7446-14-2	0.1 - 1
styrene	100-42-5	0.1 - 1

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Canada

WHMIS (Canada) : Class B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). Class D-1B: Material causing immediate and serious toxic effects (Toxic). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 3 **Health** : 3 **Reactivity** : 1

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 3 * **Flammability** : 3 **Physical hazards** : 1

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 3 **Flammability** : 3 **Instability** : 1

Date of previous issue : 7/31/2012.

Organization that prepared the MSDS : EHS

✔ Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

MATERIAL SAFETY DATA SHEET



SECTION 1 - PRODUCT AND COMPANY INFORMATION

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

EMERGENCY PHONE NUMBERS (412) 434-4515 (U.S.)
(24 hours/day):

(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
0532-83889090 (China)

TECHNICAL INFORMATION: (740) 363-9610 (DELAWARE, OH) 8:00 a.m. - 5:00 p.m. EST
PRODUCT SAFETY/MSDS INFORMATION: (412) 492-5555 7:00 a.m. - 4:30 p.m. EST
Product ID: JBX-1 (0808-T0)
PRODUCT NAME: SHOPLINE 3.5
SYNONYMS: None
ISSUE DATE: 12/12/2008
EDITION NO.: 1
CHEMICAL FAMILY: ACRYLIC

EMERGENCY OVERVIEW:
Flammable. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone. CAUSES SEVERE EYE IRRITATION. MAY CAUSE MODERATE SKIN IRRITATION. MAY BE ABSORBED THROUGH THE SKIN. DUST MAY BE HARMFUL IF INHALED. VAPOR AND/OR SPRAY MIST MAY BE HARMFUL IF INHALED. VAPOR IRRITATES EYES, NOSE, AND THROAT. VAPOR GENERATED AT ELEVATED TEMPERATURES IRRITATES EYES, NOSE AND THROAT. DUST IRRITATES EYES, NOSE AND THROAT. HARMFUL IF SWALLOWED. HIGH CONCENTRATIONS OF AIRBORNE DUST MAY IGNITE EXPLOSIVELY.

SECTION 2 - COMPOSITION INFORMATION

The following ingredient(s) marked with an "x" are considered hazardous under applicable U.S. OSHA and/or Canadian WHMIS regulations. If no ingredients are listed, then there are no U.S. OSHA and/or Canadian WHMIS hazardous ingredients in this product.

Material/ CAS Number	Percent	Hazardous	
XYLENES 1330-20-7	40 - 70	X	
TITANIUM DIOXIDE 13463-67-7	15 - 40	X	
MICA 12001-26-2	15 - 40	X	
ACETONE 67-64-1	10 - 30	X	
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	X	
RED IRON OXIDE 1309-37-1	10 - 30	X	
TITANIUM DIOXIDE 1317-80-2	7 - 13	X	
ETHYL BENZENE 100-41-4	5 - 10	X	
PETROLEUM DISTILLATES 64741-65-7	5 - 10	X	
N-BUTYL ACETATE 123-86-4	1 - 5	X	
METHYL ETHYL KETONE 78-93-3	1 - 5	X	
TIN OXIDE 18282-10-5	1 - 5	X	
ZIRCONIUM DIOXIDE 1314-23-4	1 - 5	X	
CARBON BLACK 1333-86-4	0.5-1.5	X	
(As inorganic Tin Cmpnds) 18282-10-5	*	X	See Sections 8 and 15 for information.
(As Tin Cmpnds) 18282-10-5	*	X	See Sections 8 and 15 for information.
(As Zirconium Cmpnds) 1314-23-4	*	X	See Sections 8 and 15 for information.
(As Nuisance Particulates) 1317-80-2	*	X	See Sections 8 and 15 for information.

SECTION 3 - HAZARDS IDENTIFICATION

ACUTE OVEREXPOSURE EFFECTS

EYE CONTACT:
Causes severe eye irritation. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact.

SKIN CONTACT:
May cause moderate skin irritation. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

SKIN ABSORPTION:
May be absorbed through the skin.

INHALATION:
Dust may be harmful if inhaled. Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat. Vapor generated at elevated temperatures irritates eyes, nose and throat. Dust irritates eyes, nose and throat.

INGESTION:
Harmful if swallowed.

SIGNS & SYMPTOMS OF OVEREXPOSURE:
Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

CHRONIC OVEREXPOSURE EFFECTS

Avoid long-term and repeated contact.

Repeated exposure to vapors above recommended exposure limits (see Section 8) may cause irritation of the respiratory system and permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Prolonged exposure to an ingredient(s) in this product may cause kidney and/or liver damage. High exposures to xylenes in some animal studies have been reported to cause health effects on the developing embryo and fetus. These effects were often at levels toxic to the mother. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. An ingredient in this product has caused fetal toxicity in experimental animals. The significance of these findings for humans is unknown.

The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures. See Section 11, of this MSDS for a detailed list of chronic health effects information available on individual ingredients in this product.

SECTION 4 - FIRST AID MEASURES

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available.

EYE CONTACT:

Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.

SKIN CONTACT:

Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.

INHALATION:

Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

INGESTION:

Gently wipe or rinse the inside of the mouth with water. Sips of water may be given. Never give anything by mouth to an unconscious person. Contact a poison control center, emergency room or physician right away as further treatment may be necessary.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASHPOINT: 79 Degrees F (26 Degrees C)

FLASHPOINT TEST METHOD:

Pensky-Martens Closed Cup

UEL: Not Available.

LEL: 2.3

AUTOIGNITION TEMPERATURE:

Not Available.

EXTINGUISHING MEDIA:

Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IC flammable liquid fires. Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

PROTECTION OF FIREFIGHTERS:

Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

When this product is used, the overspray and other combustible materials such as paint booth filters, rags, masking materials, etc., contaminated by coating material are subject to spontaneous combustion. Wetting the contaminated materials and not packing them tightly together in refuse containers will minimize the potential for this to occur. Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat. May produce hazardous decomposition products when exposed to extreme heat. Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 6 - ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:

Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

STORAGE:

Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class IC flammable liquids.

SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 8 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

PERSONAL PROTECTIVE EQUIPMENT

EYES:

Wear chemical-type splash goggles and full face shield when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.

SKIN/GLOVES:

Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: nitrile rubber. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment. Clean contaminated clothing and shoes.

RESPIRATOR:

Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used. Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

GENERAL HYGIENE - ESTABLISHED EXPOSURE LIMITS

If Threshold Limit Values (TLVs) have been established by ACGIH, OSHA, Ontario or PPG, they will be listed below. These limits are intended for use in the practice of industrial hygiene as guidelines or recommendations in the control of potential workplace health hazards. These limits are not a relative index of toxicity and should not be used by anyone without industrial hygiene training.

Material/ CAS Number	Percent	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
XYLENES 1330-20-7	40 - 70	100 ppm	150 PPM	100 ppm	150 ppm
TITANIUM DIOXIDE 13463-67-7	15 - 40	10 mg/m ³	Not established	10 mg/m ³	Not established
MICA 12001-26-2	15 - 40	R- 3 MG/m ³	Not established	R- 3 mg/m ³	Not established
ACETONE 67-64-1	10 - 30	500 ppm	750 ppm	750 ppm	1000 ppm
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	50 ppm	Not established	100 ppm	Not established
RED IRON OXIDE 1309-37-1	10 - 30	5 MG/m ³	Not established	10 mg/m ³	Not established
ETHYL BENZENE 100-41-4	5 - 10	100 ppm	125 ppm	100 ppm	125 ppm
N-BUTYL ACETATE 123-86-4	1 - 5	150 PPM	200 ppm	150 ppm	200 ppm
METHYL ETHYL KETONE 78-93-3	1 - 5	200 ppm	300 ppm	200 ppm	300 ppm
CARBON BLACK 1333-86-4	0.5-1.5	3.5 mg/m ³	Not established	3.5 mg/m ³	Not established
(As inorganic Tin Cmpnds) 18282-10-5	*	2 MG/m ³	Not established	2 mg/m ³	Not established
(As Zirconium Cmpnds) 1314-23-4	*	5 MG/m ³	10 MG/m ³	5.0 mg/m ³	10 mg/m ³
(As Nuisance Particulates) 1317-80-2	*	R- 3 MG/m ³	Not established	R- 5 mg/m ³	Not established

Material/ CAS Number	Percent	Ontario TWA	Ontario STEL	PPG IPEL	PPG STEL
XYLENES 1330-20-7	40 - 70	100 ppm	150 ppm	Not established	Not established
TITANIUM DIOXIDE 13463-67-7	15 - 40	10 MG/m ³	Not established	Not established	Not established
MICA 12001-26-2	15 - 40	R- 3 MG/m ³	Not established	Not established	Not established
ACETONE 67-64-1	10 - 30	500 PPM	750 PPM	Not established	Not established
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	25 ppm	Not established	Not established	Not established
RED IRON OXIDE 1309-37-1	10 - 30	5 MG/m ³	Not established	Not established	Not established
ETHYL BENZENE 100-41-4	5 - 10	100 PPM	125 PPM	Not established	Not established
N-BUTYL ACETATE 123-86-4	1 - 5	150 ppm	200 ppm	Not established	Not established
METHYL ETHYL KETONE 78-93-3	1 - 5	200 ppm	300 ppm	Not established	Not established
CARBON BLACK 1333-86-4	0.5-1.5	3.5 mg/m ³	Not established	Not established	Not established
(As inorganic Tin Cmpnds) 18282-10-5	*	2 MG/m ³	Not established	Not established	Not established
(As Zirconium Cmpnds) 1314-23-4	*	5 MG/m ³	10 MG/m ³	Not established	Not established
(As Nuisance Particulates) 1317-80-2	*	R- 3 MG/m ³	Not established	Not established	Not established

Key: ACGIH=American Conference of Governmental Industrial Hygienists; OSHA=Occupational Safety and Health Administration; TLV=Threshold Limit Value; TWA=Time Weighted Average; PEL=Permissible Exposure Limit (1989 Vacated values); IPEL=Internal Permissible Exposure Limit; Ceiling=TLV or PEL Ceiling Limit; STEL=TLV or PEL Short-Term Exposure Limit; Skin= Skin Absorption Designation. [C- Ceiling Limit; S-Potential Skin Absorption; R-Respirable Dust]
Additional Information Not applicable.

**SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES
(FORMULA VALUES, NOT SALES SPECIFICATIONS)**

SPECIFIC GRAVITY: 1.122
PHYSICAL STATE: Liquid
Percent Solids: 43-72
Percent Volatile by Volume: 52-63
pH: Not available.
ODOR THRESHOLD: Not available.
Vapour Pressure: 67.2 mmHg
ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.
VAPOR DENSITY: HEAVIER THAN AIR
Evaporation Rate: 304
BOILING POINT OR RANGE: 133- 399Degrees F
Freezing Point or Range: Not Applicable.
Melting Point or Range(°C): Not Applicable.
Partition coefficient (n-octanol/water): Not Applicable.
WEIGHT PER GALLON: 9.35 (U.S.) / 11.2 (IMPERIAL)

SECTION 10 - STABILITY AND REACTIVITY

STABILITY:
This product is normally stable and will not undergo hazardous reactions.
CONDITIONS TO AVOID:
None Known.

INCOMPATIBLE MATERIALS:

High concentrations of airborne dust may ignite explosively. All ignition sources should be eliminated when this product is dispersed in air. Avoid contact with strong alkalis, strong mineral acids, or strong oxidizing agents.

HAZARDOUS POLYMERIZATION:

None Known.

HAZARDOUS DECOMPOSITION PRODUCTS:

- Carbon monoxide - Carbon dioxide - Oxides of nitrogen - Oxides of aluminum - Iron oxides - Hydrogen cyanide - Ammonia

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Material/ CAS Number	Percent	ORAL LD50 (g/kg)	DERMAL LD50 (g/kg)	INHALATION LC50 (mg/l)
XYLENES 1330-20-7	40 - 70	4.30 g/kg	1.70 g/kg	21.88 mg/l 4 hr
TITANIUM DIOXIDE 13463-67-7	15 - 40	10.00 g/kg	Not Available	Not Available
ACETONE 67-64-1	10 - 30	1.80 g/kg	20.00 g/kg	76.00 mg/l 4 hr
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	1.60 g/kg	10.21 g/kg	Not Available
RED IRON OXIDE 1309-37-1	10 - 30	10.00 g/kg	Not Available	Not Available
ETHYL BENZENE 100-41-4	5 - 10	3.50 g/kg	17.80 g/kg	Not Available
N-BUTYL ACETATE 123-86-4	1 - 5	10.77 g/kg	17.60 g/kg	Not Available
METHYL ETHYL KETONE 78-93-3	1 - 5	2.74 g/kg	13.00 g/kg	Not Available
CARBON BLACK 1333-86-4	0.5-1.5	15.40 g/kg	3.00 g/kg	Not Available

CHRONIC TOXICITY

Ingredient Target Organ/Chronic Effects:

- Fetotoxin - Ear - Kidney - Liver - Carcinogen - Embryotoxin - Teratogen
- Brain - Central nervous system - Lung

Mutagenicity Toxicity:

This has not been tested for this product.

Reproductive Toxicity:

This has not been tested for this product.

SUPPLEMENTAL HEALTH INFORMATION:

Material/ CAS Number	Percent	Ingredient Specific Animal Data:
TITANIUM DIOXIDE 13463-67-7	15 - 40	This product contains titanium dioxide. Animals inhaling massive quantities of titanium dioxide dust in a long-term study developed lung tumors. Studies with humans involved in manufacture of this pigment indicate no increased risk of cancer from exposure.
TITANIUM DIOXIDE 1317-80-2	7 - 13	This product contains titanium dioxide. Animals inhaling massive quantities of titanium dioxide dust in a long-term study developed lung tumors. Studies with humans involved in manufacture of this pigment indicate no increased risk of cancer from exposure.
ETHYL BENZENE 100-41-4	5 - 10	Ethylbenzene has been reported by NTP to cause cancer in laboratory animals following a chronic (2 year) inhalation exposure. Dose levels of 75, 250 and 750 ppm were used, with evidence of carcinogenicity found in the kidneys of rats and the lung and liver of mice at 750 ppm. The No Observed Effect Level (NOEL) was 75 ppm. The relevance of these findings to humans is uncertain, but appropriate safeguards should be employed to reduce or eliminate inhalation exposure to ethylbenzene.
METHYL ETHYL KETONE 78-93-3	1 - 5	This product contains methyl ethyl ketone (MEK). MEK has been shown to cause minor embryotoxic/fetotoxic effects in laboratory animals exposed for prolonged periods at high concentrations via inhalation. The potential for human exposure to high concentrations is expected to be low due to the irritating effects of MEK at low concentrations.
CARBON BLACK 1333-86-4	0.5-1.5	This product contains carbon black which has been rated an IARC 2B carcinogen due to animal data.

SECTION 12 - ECOLOGICAL INFORMATION

POTENTIAL ENVIRONMENTAL EFFECTS

Ecotoxicity: No Information Available.

ENVIRONMENTAL FATE

Mobility: No information available.

Biodegradation: No information available.

Bioaccumulation: No Information Available.

PHYSICAL/CHEMICAL

Hydrolysis: No information available.

Photolysis: No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Provide maximum ventilation, only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Take up spilled material with sawdust, vermiculite, or other absorbent material and place in containers for disposal.

Waste material must be disposed of in accordance with federal, state, provincial and local environmental control regulations. Empty containers should be recycled by an appropriately licensed reconditioner/salvager or disposed of through a permitted waste management facility. Additional disposal information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name: NOT AVAILABLE

NOS Technical Name: NOT AVAILABLE

Hazard Class: N.A.

Subsidiary Class(es): N.A.

UN Number: N.A.

Packing Group: N.A.

USA - RQ Hazardous Substances: NOT AVAILABLE

USA-RQ Hazardous Substance NOT AVAILABLE
Threshold Ship Weight:
Marine Pollutant Name: NOT AVAILABLE

SECTION 15 - REGULATORY INFORMATION

INVENTORY STATUS

U.S. TSCA: This product and/or all of its components are listed on the U.S. TSCA Inventory or is otherwise exempt from TSCA Inventory reporting requirements.

FEDERAL REGULATIONS

US Regulations

Material/ CAS Number	Percent	CERCLA HS - RQ (LBS)	SARA EHS- TPQ (LBS)	SARA 313
XYLENES 1330-20-7	40 - 70	100 lbs	Not Listed	Listed
TITANIUM DIOXIDE 13463-67-7	15 - 40	Not Listed	Not Listed	Not Listed
MICA 12001-26-2	15 - 40	Not Listed	Not Listed	Not Listed
ACETONE 67-64-1	10 - 30	5000 lbs	Not Listed	Not Listed
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	Not Listed	Not Listed	Not Listed
RED IRON OXIDE 1309-37-1	10 - 30	Not Listed	Not Listed	Not Listed
TITANIUM DIOXIDE 1317-80-2	7 - 13	Not Listed	Not Listed	Not Listed
ETHYL BENZENE 100-41-4	5 - 10	1000 lbs	Not Listed	Listed
PETROLEUM DISTILLATES 64741-65-7	5 - 10	Not Listed	Not Listed	Not Listed
N-BUTYL ACETATE 123-86-4	1 - 5	5000 lbs	Not Listed	Not Listed
METHYL ETHYL KETONE 78-93-3	1 - 5	5000 lbs	Not Listed	Not Listed
TIN OXIDE 18282-10-5	1 - 5	Not Listed	Not Listed	Not Listed
ZIRCONIUM DIOXIDE 1314-23-4	1 - 5	Not Listed	Not Listed	Not Listed
CARBON BLACK 1333-86-4	0.5-1.5	Not Listed	Not Listed	Not Listed

SARA 311/312

Health (acute): Yes
Health (chronic): Yes
Fire (flammable): Yes
Pressure: No
Reactivity: No

WHMIS HAZARD CLASS: - Class B, Division 6 - Class D, Division 2, Subdivision A - Class D, Division 2, Subdivision B

STATE/PROVINCIAL REGULATIONS

CALIFORNIA PROP. 65: WARNING: This product contains a chemical known to the State of California to cause cancer.

Additional Information

Material/ CAS Number	Percent	IARC Group 1(Kno wn Human Carc.)	IARC Group 2A (Proba ble Carc.)	IARC 2B (Suspec ted Carc.)	ACGIH Carc.	NTP Known Carc.	OSHA Carc.
TITANIUM DIOXIDE 13463-67-7	15 - 40	N	N	Y	N	N	N
ETHYL BENZENE 100-41-4	5 - 10	N	N	Y	N	N	Y
CARBON BLACK 1333-86-4	0.5-1.5	N	N	Y	N	N	Y

Key: IARC- International Agency on the Research of Cancer; ACGIH- American Conference of Governmental Industrial Hygienists; NTP- National Toxicology Program *Denotes chemical as NTP Known Carcinogen; + Denotes NTP Possible Carcinogen; OSHA- Occupational Safety and Health Administration.

SECTION 16 - OTHER INFORMATION

Hazard Rating Systems

NFPA Rating: 2 30

HMIS Rating: 2*30

Rating System: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

HMIS=Hazardous Materials Identification System; NFPA=National Fire Protection Association;

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

PREPARED BY: Product Safety Department

REASON FOR REVISION: Date. Edition.

Updated MSDS format.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200), the supplier notification requirements of SARA Title III, Section 313 and other applicable right-to-know regulations.

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

JBX-1 000000 (00543634.001)(12/11/08)
081209, 000, 0808

*** END OF MSDS ***



Chemical Name: Prism Acrylic Urethane 6591

Manufacturer: Napa

Container size: 12oz.

Location: VLA

Disposal: Place empty container in trash.

MATERIAL SAFETY DATA SHEET

6591
11 00

DATE OF PREPARATION
Apr 5, 2012

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

6591

PRODUCT NAME

PRISM® 3.5 VOC Hardener

MANUFACTURER'S NAME

MARTIN SENOUR PAINTS
4440 Warrensville Center Road
Warrensville Hts., OH 44128-2837

Telephone Numbers and Websites

Product Information	(800) 526-6704 www.martinsenour-autopaint.com
Regulatory Information	(216) 566-2902
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300

**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
4	110-43-0	Methyl n-Amyl Ketone		
		ACGIH TLV	50 PPM	3.855 mm
		OSHA PEL	100 PPM	
7	763-69-9	Ethyl 3-Ethoxypropionate		
		ACGIH TLV	Not Available	1.11 mm
		OSHA PEL	Not Available	
8	123-86-4	n-Butyl Acetate		
		ACGIH TLV	150 PPM	10 mm
		ACGIH TLV	200 PPM STEL	
		OSHA PEL	150 PPM	
		OSHA PEL	200 PPM STEL	
4	112-07-2	2-Butoxyethyl Acetate		
		ACGIH TLV	Not Available	1 mm
		OSHA PEL	Not Available	
3	108-65-6	1-Methoxy-2-Propanol Acetate		
		ACGIH TLV	Not Available	1.8 mm
		OSHA PEL	Not Available	
0.1	822-06-0	Hexamethylene Diisocyanate (max.)		
		ACGIH TLV	0.005 PPM	0.05 mm
		OSHA PEL	Not Available	
75	28182-81-2	Hexamethylene Diisocyanate Polymer		
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

HMIS Codes

Health	2*
Flammability	3
Reactivity	1

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver

- the urinary system
- the hematopoietic (blood-forming) system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists. Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

May cause allergic respiratory and/or skin reaction in susceptible persons or sensitization. This effect may be delayed several hours after exposure.

Persons sensitive to isocyanates will experience increased allergic reaction on repeated exposure.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.
If irritation persists or occurs later, get medical attention.
Remove contaminated clothing and laundry before re-use.

INHALATION: If any breathing problems occur during use, **LEAVE THE AREA** and get fresh air. If problems remain or occur later, **IMMEDIATELY** get medical attention.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES**FLASH POINT**

90 °F PMCC

LEL

0.5

UEL

13.1

FLAMMABILITY CLASSIFICATION

RED LABEL -- Flammable, Flash below 100 °F (38 °C)

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Remove all sources of ignition. Ventilate the area.

All personnel in the area should be protected as in Section 8.

Cover spill with absorbent material. Deactivate spilled material with a 10% ammonium hydroxide solution (household ammonia). After 10 minutes, collect in open containers and add more ammonia. Cover loosely. Wash spill area with soap and water.

SECTION 7 — HANDLING AND STORAGE**STORAGE CATEGORY**

DOL Storage Class IC

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are **FLAMMABLE**. Keep away from heat, sparks, and open flame.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION**PRECAUTIONS TO BE TAKEN IN USE**

NO PERSON SHOULD USE THIS PRODUCT, OR BE IN THE AREA WHERE IT IS BEING USED, IF THEY HAVE CHRONIC (LONG-TERM) LUNG OR BREATHING PROBLEMS OR IF THEY EVER HAD A REACTION TO ISOCYANATES.

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

Where overspray is present, a positive pressure air supplied respirator (TC19C NIOSH/MSHA approved) should be worn. If unavailable, a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2 may be effective. Follow respirator manufacturers directions for use. Wear the respirator for the whole time of spraying and until all vapors and mists are gone. **NO PERSONS SHOULD BE ALLOWED IN THE AREA WHERE THIS PRODUCT IS BEING USED UNLESS EQUIPPED WITH THE SAME RESPIRATOR PROTECTION RECOMMENDED FOR THE PAINTERS.**

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

To prevent skin contact, wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PROTECTIVE EQUIPMENT

Use barrier cream on exposed skin.

OTHER PRECAUTIONS

This product must be mixed with other components before use. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS.

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	9.08 lb/gal	1087 g/l
SPECIFIC GRAVITY	1.09	
BOILING POINT	255 - 384 °F	123 - 195 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	30%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
2.27 lb/gal	272 g/l	Less Water and Federally Exempt Solvents
2.27 lb/gal	272 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

Contamination with Water, Alcohols, Amines and other compounds which react with isocyanates, may result in dangerous pressure in, and possible bursting of, closed containers.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

CAS No.	Ingredient Name			
110-43-0	Methyl n-Amyl Ketone	LC50 RAT LD50 RAT	4HR	Not Available 1670 mg/kg
763-69-9	Ethyl 3-Ethoxypropionate	LC50 RAT LD50 RAT	4HR	Not Available 5000 mg/kg
123-86-4	n-Butyl Acetate	LC50 RAT LD50 RAT	4HR	2000 ppm 13100 mg/kg
112-07-2	2-Butoxyethyl Acetate	LC50 RAT LD50 RAT	4HR	Not Available 2400 mg/kg
108-65-6	1-Methoxy-2-Propanol Acetate	LC50 RAT LD50 RAT	4HR	Not Available 8500 mg/kg
822-06-0	Hexamethylene Diisocyanate (max.)	LC50 RAT LD50 RAT	4HR	Not Available 738 mg/kg
28182-81-2	Hexamethylene Diisocyanate Polymer	LC50 RAT LD50 RAT	4HR	Not Available Not Available

SECTION 12 — ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL INFORMATION**

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS**WASTE DISPOSAL METHOD**

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers. Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

5 Liters (1.3 Gallons) and Less may be Classed as LTD. QTY. OR ORM-D

Larger Containers are Regulated as:

UN1263, PAINT RELATED MATERIAL, 3, PG III, (ERG#128)

Bulk Containers may be Shipped as:

UN1263, PAINT RELATED MATERIAL, 3, PG III, (ERG#128)

Canada (TDG)

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG III, LIMITED QUANTITY, (ERG#128)

IMO

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG III, (32 C c.c.), EmS

F-E, S-E, ADR (D/E)

IATA/ICAO

UN1263, PAINT RELATED MATERIAL, 3, PG III

SECTION 15 — REGULATORY INFORMATION**SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION**

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Glycol Ethers	4	

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

EU Safety Datasheet in accordance with Decree (EU) No. 1907/2006

1. DESIGNATION OF THE MATERIAL OR PREPARATION AND THE COMPANY

Product designation

BAUER COMPRESSOR OIL

Order No.: N22138

Use of the product

Compressor and vacuum pump oil

Designation of the company

BAUER KOMPRESSOREN GmbH, Postfach 710260, D-81452 Munich

Tel.+49(0)89-78049-0, Fax +49(0)89-78049-167

Emergency contact number for the company:

Tel +49(0)89-78049-0

2. POSSIBLE HAZARDS

EU classification

Classified as non-hazardous in accordance with EU criteria.

Dangers to human health

Danger to health is not to be expected when handling under normal conditions. Extended or repeated contact with the skin without proper cleaning can block the pores in the skin and can lead to conditions such as oil acne/folliculitis. Waste oil can contain damaging contaminants.

Indications and symptoms

Indications and symptoms of oil acne/folliculitis can include the appearance of blackheads and spots in the areas of the skin that are exposed to the medium. Swallowing can lead to nausea, vomiting and/or diarrhoea.

Safety hazards

Not classified as flammable, but will burn.

Dangers to the environment

Not classified as environmentally hazardous.

3. COMPOSITION/DETAILS OF CONSTITUENTS

Description of preparation

Highly refined mineral oils and additives.

Additional information The highly refined mineral oil contains an DMSO-extractable content of less than 3% (w/w), in accordance with IP 346.

4. FIRST AID MEASURES

General information Danger to health is not to be expected when handling under normal conditions.

Breathing in No treatment required under normal conditions of use. If symptoms persist, consult a doctor.

Skin contact Remove contaminated clothing. The exposed area must be flushed with water and then washed using soap if there is soap available. In the event of persistent irritation, consult a doctor.

Contact with the eyes Flush your eyes with a large volume of water. In the event of persistent irritation, consult a doctor.

Swallowing In general, no treatment is required unless large quantities are swallowed; however, you should seek medical assistance.

Notes for the doctor Symptomatic treatment.

5. MEASURES FOR FIREFIGHTING

Allow access to the fire area only to the emergency rescue services.

Specific dangers Dangerous products of decomposition: complex mixtures of solid and fluid particles and gases can be produced, including carbon monoxide. Non-identified organic and inorganic compounds.

Extinguishing media Foam, spray water or water mist. Dry powder, carbon dioxide, sand or earth can only be used on small fires.

Unsuitable extinguishing media Do not use a powerful water jet.

Protection equipment for firemen Suitable protection equipment, including fresh-air breathing unit must be worn if the fire is to be fought in enclosed spaces.

6. MEASURES TO BE TAKEN IN THE EVENT OF INADVERTENT RELEASE

Avoid contact with material that has been dumped or released.
For instructions concerning the selection of personal protection equipment see Item 8 on the safety datasheet.
Item 13 for disposal instructions to be observed.
Observe all official and international regulations.

Protection measures Avoid contact with the eyes and skin. Take appropriate retention measures to prevent environmental contamination. Release into the waste

water system, into rivers or surface waters to be prevented by erection of barriers of sand or earth, or by other suitable isolation measures.

Cleaning methods

Danger of slipping when spilt. Prevent accidents, clean up immediately. Prevent spreading by a barrier of sand, earth or other retention material. Dispose of the fluid directly or in absorbent material. Soak up the residue with an adsorber, such as earth, sand or a different suitable material and dispose of properly.

Additional notes

Inform the authorities in the event of larger spillages that cannot be contained.

7. HANDLING AND STORAGE

General safety measures

Use the existing ventilation systems if there is a danger of breathing in the vapours, mists or aerosols. Proper disposal of any contaminated rags or cleaning utensils to prevent fires.

The information provided in this datasheet should be used as the basis for risk assessment of the conditions on site, in order to specify suitable checks for safe handling, storage and disposal of this product.

Handling

Avoid prolonged or repeated contact with the skin. Avoid breathing in of vapours and/or mists. Wear safety shoes and use suitable working equipment when handling the product in drums.

Storage

Keep the containers tightly closed and store in a cool well-ventilated location. Use properly marked and sealable containers. Storage temperature: 0–50°C / 32–122°F.

Recommended materials

Use mild steel or High-Density-Polyethylene (HDPE) for the containers or container lining.

Unsuitable materials

PVC

Additional information

Polyethylene containers must not be exposed to higher temperatures because of the risk of possible deformation.

VCI storage classification: 10

Fire class: B

8. EXPOSURE LIMITS AND PERSONAL PROTECTION EQUIPMENT

Workplace limiting values

Exposure limits

The scope of protection and the type of necessary tests vary depending on the potential exposure conditions. Select the tests on the basis of risk assessment or the local conditions. Suitable measures include: appropriate ventilation to control the concentration in the air. If material is heated up or sprayed, or if a mist forms, a higher concentration in the air can be created.

Personal protection equipment	The personal protection equipment (PSA) should comply with national standards. Enquire at the PSA supplier.
Breathing protection	Breathing protection is normally not required for normal handling. In the interests of good industrial hygiene practice, you should take measures to prevent breathing the material in. If technical controls of the air toxin concentration cannot keep it below the critical value for safety at work, the suitable breathing protection should be chosen with consideration of the special working conditions and the specific individual legal regulations. This should be discussed with the manufacturers of breathing protection equipment. If normal filter systems are suitable, you must always use the suitable combination of filter and mask. Use a combination filter for particles, gases and vapours (boiling point > 65°C, 149°F; as per EN141).
Hand protection	<p>In the event of possible skin contact with the product, adequate protection is provided by the use of gloves (tested in accordance with, e.g. EN374, Europa or F739, USA): Gloves made from PVC, neoprene or nitrile rubber. The suitability and durability of the glove depends on the application, e.g. frequency and duration of the contact, chemical resilience of the glove material, glove thickness, dexterity. Always consult the glove manufacturer. Contaminated gloves should be replaced.</p> <p>Personal hand care is an indispensable prerequisite for effective skin protection. Protective gloves should be worn on clean hands. After use, you should wash your hands and dry them thoroughly. We recommend using a non-perfumed moisturising cream.</p>
Eye protection	Protective goggles or a full facemask should be worn if splashes can easily be produced. Tested in accordance with EN166.
Protective clothing	Skin protection which extends beyond normal clothing is normally not required.
Monitoring and/or observance processes	Monitoring of the concentration of the materials in the breathing protection area of the employees or generally within the workspace can be required in order to confirm the compliance with the OEL value and the suitability of the exposure limits. With certain materials it may also be appropriate to have biological monitoring.
Environmental monitoring measures	Minimise any release to the environment. An environmental assessment must be carried out in order to guarantee compliance with local environmental regulations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear and light brown, fluid
Smell	Slight hydrocarbon smell
pH	Not applicable
Boiling point/boiling range	> 280°C/536°F (estimated)
Flow point	Typically -12°C/10°F
Flashpoint	Typically 240°C/464°F (COC)
Upper/lower flammability or explosion limits	Typically 1–10 % (V) (on mineral oil basis)
Self-igniting temperature	> 320°C/608°F
Vapour pressure	< 0.5 Pa at 20°C/68°F (estimated)
Density	Typically 836 kg/m ³ at 15°C/59°F
Water solubility	Negligible
Distribution coefficient n-octanol/water	> 6 (referred to information concerning comparable products)
Kinematic viscosity	Typically 155 mm ² /s at 40°C/104°F
Vapour density (air = 1)	> 1 (estimated)
Vapourisation speed (nBuAc = 1)	No information available

10. STABILITY AND REACTIVITY

Stability	Stable.
Conditions to be avoided	Extreme temperatures and extreme sunlight.
Materials to be avoided	Strong oxidising agents.
Dangerous products of decomposition	The formation of dangerous products of decomposition is not to be expected with normal storage.

11. TOXICOLOGICAL DETAILS

Fundamentals for the assessment	The assessment was extrapolated from the toxicological data of the individual components or similar products.
Acute oral toxicity	Practically non-toxic (estimated): LD50 > 5000 mg/kg, rat.
Acute dermal toxicity	Practically non-toxic (estimated): LD50 > 5000 mg/kg, rabbit.
Acute inhalation toxicity	Under normal conditions of use, not classified as dangerous when inhaled.
Skin irritation	Is classified as slightly irritant. Extended or repeated contact with the skin without proper cleaning can block the pores in the skin and can lead to conditions such as oil acne/folliculitis.
Eye irritation	Is classified as slightly irritant.

Irritation effect on the organs of breathing	Inhalation of vapours or mists can cause irritation.
Sensitisation	No sensitisation by skin contact.
Toxicity with repeated administration	Does not presumably present any danger.
Mutagenicity	Not considered as mutagenic.
Carcinogenicity	The product contains mineral oil types which, in animal experiments, have not proved to be carcinogenic with skin painting. Highly-refined mineral oils have not been classified as carcinogenic by the International Agency for Research on Cancer (IARC). Carcinogenic effects of the other constituents are not known.
Reproductive and developmental toxicity	Does not presumably present any danger.
Additional information	Waste oil can contain damaging contaminants which have accumulated during use. The concentration of these contaminants depends on the application and can lead to dangers to health and the environment when disposed of. All waste oil must be handled carefully, contact with the skin should be avoided where possible.

12. ENVIRONMENTAL DETAILS

Ecotoxicological details have not been determined specially for this product. The information provided is based on the knowledge of the components and the ecotoxicology of similar products.

Acute toxicity	Slightly soluble mixture. Floating on the water can cause contamination (sticking together) of water life. Practically no toxic effect (estimated): LL/EL/IL50 >100 mg/l (for water organisms) (LL/EL50 expressed as the nominal volume of the product that is required for the preparation of an aqueous test extract). Mineral oil presumably has no longterm effects on water organisms at concentration less than 1 mg/l.
Mobility	Is present in fluid form. Floats on the surface of water. Will be immobilised by adsorption onto ground particles.
Persistence/degradability	No slight biological degradability (estimated). The main constituents are probably biologically degradable, but some constituents can be persistent in the environment.
Bioaccumulation	Contains constituents with potential bioaccumulation.
Other detrimental effects	The product is a mixture of non-volatile constituents which, presumably, are not emitted in large quantities to the air. Presumably has no potential for ozone degradation, photochemical ozone production or global warming.

13. DISPOSAL INSTRUCTIONS

Product disposal

Re-use or recycling where possible. It is the responsibility of the waste producer to stipulate the toxicity and the physical properties of the material produced in order to determine the correct classification of the waste and disposal methods whilst maintaining the regulations that are to be used. Do not allow escape to the environment, sewerage system or water courses.

Disposal of uncleaned packaging materials

Dispose in agreement with the existing authority regulations; preferably by an authorised waste collection service or recycler, whose suitability has first been established.

National regulations

The disposal should be carried out in accordance with the regional, national and local laws and regulations.
EU waste classification: 13 02 05 non-chlorinated machine, gearbox and lubrication oils, mineral oil based. The classification of waste is always the responsibility of the end-user.

14. TRANSPORT INSTRUCTIONS

ADR

This material is not classified as hazardous in accordance with ADR regulations.

RID

This material is not classified as hazardous in accordance with RID regulations.

ADNR

This material is not classified as hazardous in accordance with ADNR regulations.

IMDG

This material is not classified as hazardous in accordance with IMDG regulations.

IATA (country-specific deviations are possible)

This material is not classified as hazardous in accordance with IATA regulations.

15. REGULATIONS

The information concerning legal regulations do not make any statements regarding completeness. There can be other regulations applicable to the product.

EU classification	Classified as non-hazardous in accordance with EU criteria.
EU hazard symbol	No hazard symbol required.
R sets	Not classified.
S sets	Not classified.
EINECS	All constituents listed or excepted (polymer).

TSCA	All constituents listed.
National legal statements	
Water hazard classification	WGK 2 – water hazardous (Appendix 2, VwVwS, preparations).
Other details	Technical Instruction air: product not listed by name. Section 5.2.5 and Section 5.4.9 to be observed.

16. OTHER DETAILS

Safety data sheet guideline	Statute 1907/2006/EU
Distribution of safety data sheets	The information in this safety datasheet is to be provided to all persons who handle the product.
Stipulation	The data is based on the current state of our knowledge, they do not, however, provide any guarantee of the properties of the product and do not form the basis of contractual legal relationship. The product is only intended for commercial use/processing, unless specified otherwise in Item 16.

MATERIAL SAFETY DATA SHEET

530-K58
08 00

DATE OF PREPARATION
Oct 7, 2013

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

530-K58

PRODUCT NAME

Reducer #58, 530-8705 530-8713 530-8721

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
7	100-41-4	Ethylbenzene		
		ACGIH TLV	20 PPM	7.1 mm
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
42	1330-20-7	Xylene		
		ACGIH TLV	100 PPM	5.9 mm
		ACGIH TLV	150 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	150 PPM STEL	
23	110-43-0	Methyl n-Amyl Ketone		
		ACGIH TLV	50 PPM	3.855 mm
		OSHA PEL	100 PPM	
28	108-65-6	1-Methoxy-2-Propanol Acetate		
		ACGIH TLV	Not Available	1.8 mm
		OSHA PEL	Not Available	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the hematopoietic (blood-forming) system
- the reproductive system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

HMIS Codes

Health	2*
Flammability	3
Reactivity	0

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and laundry before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES**FLASH POINT**

80 °F PMCC

LEL

1.0

UEL

13.1

FLAMMABILITY CLASSIFICATION

RED LABEL -- Flammable, Flash below 100 °F (38 °C)

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE**STORAGE CATEGORY**

DOL Storage Class IC

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are FLAMMABLE. Keep away from heat, sparks, and open flame.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION**PRECAUTIONS TO BE TAKEN IN USE**

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	7.28 lb/gal	872 g/l
SPECIFIC GRAVITY	0.88	
BOILING POINT	277 - 308 °F	136 - 153 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	100%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
	7.28 lb/gal	872 g/l
	7.28 lb/gal	872 g/l
		Less Water and Federally Exempt Solvents
		Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

TOXICOLOGY DATA

CAS No.	Ingredient Name			
100-41-4	Ethylbenzene	LC50 RAT	4HR	Not Available
		LD50 RAT		3500 mg/kg
1330-20-7	Xylene	LC50 RAT	4HR	5000 ppm
		LD50 RAT		4300 mg/kg
110-43-0	Methyl n-Amyl Ketone	LC50 RAT	4HR	Not Available
		LD50 RAT		1670 mg/kg
108-65-6	1-Methoxy-2-Propanol Acetate	LC50 RAT	4HR	Not Available
		LD50 RAT		8500 mg/kg

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

5 Liters (1.3 Gallons) and Less may be Classed as LTD. QTY. OR ORM-D

Larger Containers are Regulated as:

UN1263, PAINT RELATED MATERIAL, 3, PG III, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities

Ethylbenzene 1000 lb RQ

Xylenes (isomers and mixture) 100 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):

RQ, UN1263, PAINT RELATED MATERIAL, 3, PG III, (XYLENES (ISOMERS AND MIXTURE)), (ERG#128)

Canada (TDG)

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG III, LIMITED QUANTITY, (ERG#128)

IMO

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG III, (27 C c.c.), EmS

F-E, S-E

IATA/ICAO

UN1263, PAINT RELATED MATERIAL, 3, PG III

SECTION 15 — REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
100-41-4	Ethylbenzene	7	
1330-20-7	Xylene	42	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

R7K130
03 00

DATE OF PREPARATION
Aug 30, 2011

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

R7K130

PRODUCT NAME

SEAGUARD™ Solvent #130

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300

*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure	
1	95-63-6	1,2,4-Trimethylbenzene	ACGIH TLV	25 PPM	2.03 mm
			OSHA PEL	25 PPM	
44	64742-94-5	Medium Aromatic Hydrocarbons	ACGIH TLV	Not Available	0.12 mm
			OSHA PEL	Not Available	
7	91-20-3	Naphthalene	ACGIH TLV	10 PPM	1 mm
			ACGIH TLV	15 PPM STEL	
			OSHA PEL	10 PPM	
			OSHA PEL	15 PPM STEL	
48	71-36-3	1-Butanol	ACGIH TLV	20 PPM	5.5 mm
			OSHA PEL	50 ppm (Skin) CEILING	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

HMIS Codes

Health	3*
Flammability	3
Reactivity	0

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the reproductive system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and laundry before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT 95 °F PMCC	LEL 0.8	UEL 11.2	FLAMMABILITY CLASSIFICATION RED LABEL -- Flammable, Flash below 100 °F (38 °C)
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EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class IC

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are FLAMMABLE. Keep away from heat, sparks, and open flame.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally.

Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits.

Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	7.07 lb/gal	846 g/l
SPECIFIC GRAVITY	0.85	
BOILING POINT	243 - 425 °F	117 - 218 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	100%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
	7.06 lb/gal	846 g/l
	7.06 lb/gal	846 g/l
		Less Water and Federally Exempt Solvents
		Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Naphthalene is listed by IARC as a possible human carcinogen based upon "sufficient evidence" in animals and "insufficient evidence in humans. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

CAS No.	Ingredient Name	LC50 RAT	4HR	LD50 RAT	Not Available
95-63-6	1,2,4-Trimethylbenzene	LC50 RAT	4HR	Not Available	
		LD50 RAT		Not Available	
64742-94-5	Medium Aromatic Hydrocarbons	LC50 RAT	4HR	Not Available	
		LD50 RAT		Not Available	
91-20-3	Naphthalene	LC50 RAT	4HR	Not Available	
		LD50 RAT		Not Available	
71-36-3	1-Butanol	LC50 RAT	4HR	8000 ppm	
		LD50 RAT		790 mg/kg	

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

5 Liters (1.3 Gallons) and Less may be Classed as CONSUMER COMMODITY, ORM-D

Larger Containers are Regulated as:

UN1263, PAINT RELATED MATERIAL, 3, PG III, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities

1-Butanol 5000 lb RQ

Naphthalene 100 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):

RQ, UN1263, PAINT RELATED MATERIAL, 3, PG III, (NAPHTHALENE),
(ERG#128)

Canada (TDG)

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG III, LIMITED QUANTITY,
(ERG#128)

IMO

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG III, (35 C c.c.), EmS

F-E, S-E, ADR (D/E)

IATA/ICAO

UN1263, PAINT RELATED MATERIAL, 3, PG III

SECTION 15 — REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
95-63-6	1,2,4-Trimethylbenzene	1	
91-20-3	Naphthalene	7	
71-36-3	1-Butanol	48	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

K20879
13 00

DATE OF PREPARATION
Dec 20, 2013

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

K20879

PRODUCT NAME

KRYLON® Industrial RUST TOUGH® UTILI-COAT Rust Preventive Enamel (Aerosol), Meter Gray (ASA-49)

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
KRYLON PRODUCTS GROUP
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 247-3266 www.kpg-industrial.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
<i>*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)</i>	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
15	74-98-6	Propane		
		ACGIH TLV	1000 PPM	760 mm
		OSHA PEL	1000 PPM	
7	106-97-8	Butane		
		ACGIH TLV	1000 PPM	760 mm
		OSHA PEL	800 PPM	
5	64742-89-8	V. M. & P. Naphtha		
		ACGIH TLV	300 PPM	12 mm
		OSHA PEL	300 PPM	
		OSHA PEL	400 PPM STEL	
12	108-88-3	Toluene		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
0.2	100-41-4	Ethylbenzene		
		ACGIH TLV	20 PPM	7.1 mm
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
1	1330-20-7	Xylene		
		ACGIH TLV	100 PPM	5.9 mm
		ACGIH TLV	150 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	150 PPM STEL	
32	67-64-1	Acetone		
		ACGIH TLV	500 PPM	180 mm
		ACGIH TLV	750 PPM STEL	
		OSHA PEL	1000 PPM	
4	108-10-1	Methyl Isobutyl Ketone		
		ACGIH TLV	50 PPM	16 mm
		ACGIH TLV	75 PPM STEL	
		OSHA PEL	50 PPM	
		OSHA PEL	75 PPM STEL	
5	13463-67-7	Titanium Dioxide		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	
0.2	1333-86-4	Carbon Black		
		ACGIH TLV	3.5 MG/M3	
		OSHA PEL	3.5 MG/M3	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the cardiovascular system
- the reproductive system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

HMIS Codes

Health	2*
Flammability	3
Reactivity	0

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and laundry before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	EXTINGUISHING MEDIA
Propellant < 0 °F	0.9	12.8	Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	6.55 lb/gal	784 g/l
SPECIFIC GRAVITY	0.79	
BOILING POINT	<0 - 325 °F	<-18 - 162 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	88%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	7.0	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
	Volatile Weight 47.12%	Less Water and Federally Exempt Solvents

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

Carbon Black is classified by IARC as possibly carcinogenic to humans (group 2B) based on experimental animal data, however, there is insufficient evidence in humans for its carcinogenicity.

TOXICOLOGY DATA

CAS No.	Ingredient Name			
74-98-6	Propane	LC50 RAT LD50 RAT	4HR	Not Available Not Available
106-97-8	Butane	LC50 RAT LD50 RAT	4HR	Not Available Not Available
64742-89-8	V. M. & P. Naphtha	LC50 RAT LD50 RAT	4HR	Not Available Not Available
108-88-3	Toluene	LC50 RAT LD50 RAT	4HR	4000 ppm 5000 mg/kg
100-41-4	Ethylbenzene	LC50 RAT LD50 RAT	4HR	Not Available 3500 mg/kg
1330-20-7	Xylene	LC50 RAT LD50 RAT	4HR	5000 ppm 4300 mg/kg
67-64-1	Acetone	LC50 RAT LD50 RAT	4HR	Not Available 5800 mg/kg
108-10-1	Methyl Isobutyl Ketone	LC50 RAT LD50 RAT	4HR	Not Available 2080 mg/kg
13463-67-7	Titanium Dioxide	LC50 RAT LD50 RAT	4HR	Not Available Not Available
1333-86-4	Carbon Black	LC50 RAT LD50 RAT	4HR	Not Available Not Available

SECTION 12 — ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL INFORMATION**

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS**WASTE DISPOSAL METHOD**

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

May be classed as LTD. QTY. OR ORM-D

UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as LTD. QTY. OR ORM-D

UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity

UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, EmS F-D, S-U

IATA/ICAO

UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

SECTION 15 — REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	12	
100-41-4	Ethylbenzene	0.1	
1330-20-7	Xylene	1	
108-10-1	Methyl Isobutyl Ketone	4	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

B65W15
27 00

DATE OF PREPARATION
Nov 26, 2013

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

B65W15

PRODUCT NAME

COROTHANE® I-ALIPHATIC Moisture Cure Urethane, White

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 524-5979 www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
<i>*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)</i>	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
0.5	100-41-4	Ethylbenzene		7.1 mm
		ACGIH TLV	20 PPM	
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
3	1330-20-7	Xylene		5.9 mm
		ACGIH TLV	100 PPM	
		ACGIH TLV	150 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	150 PPM STEL	
1	64742-95-6	Light Aromatic Hydrocarbons		3.8 mm
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
2	64742-94-5	Medium Aromatic Hydrocarbons		0.12 mm
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
0.3	91-20-3	Naphthalene		1 mm
		ACGIH TLV	10 PPM	
		ACGIH TLV	15 PPM STEL	
		OSHA PEL	10 PPM	
		OSHA PEL	15 PPM STEL	
10	110-43-0	Methyl n-Amyl Ketone		3.855 mm
		ACGIH TLV	50 PPM	
		OSHA PEL	100 PPM	
1	108-94-1	Cyclohexanone		2 mm
		ACGIH TLV	25 ppm (Skin)	
		OSHA PEL	25 ppm (Skin)	
4	763-69-9	Ethyl 3-Ethoxypropionate		1.11 mm
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
0.1	822-06-0	Hexamethylene Diisocyanate (max.)		0.05 mm
		ACGIH TLV	0.005 PPM	
		OSHA PEL	Not Available	
3	4083-64-1	p-Toluenesulfonyl Isocyanate		
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
28	28182-81-2	Hexamethylene Diisocyanate Polymer		
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
5	14808-60-7	Quartz		
		ACGIH TLV	0.025 mg/m3 as Resp. Dust	
		OSHA PEL	0.1 mg/m3 as Resp. Dust	
4	14807-96-6	Talc		
		ACGIH TLV	2 mg/m3 as Resp. Dust	
		OSHA PEL	2 mg/m3 as Resp. Dust	
25	13463-67-7	Titanium Dioxide		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the reproductive system

SKIN AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

HMIS Codes

Health	3*
Flammability	3
Reactivity	2

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

May cause allergic respiratory and/or skin reaction in susceptible persons or sensitization. This effect may be delayed several hours after exposure.

Persons sensitive to isocyanates will experience increased allergic reaction on repeated exposure.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.

If irritation persists or occurs later, get medical attention.

Remove contaminated clothing and laundry before re-use.

INHALATION: If any breathing problems occur during use, **LEAVE THE AREA** and get fresh air. If problems remain or occur later, **IMMEDIATELY** get medical attention.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT

93 °F PMCC

LEL

0.7

UEL

8.1

FLAMMABILITY CLASSIFICATION

RED LABEL -- Flammable, Flash below 100 °F (38 °C)

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

All personnel in the area should be protected as in Section 8.

Cover spill with absorbent material. Deactivate spilled material with a 10% ammonium hydroxide solution (household ammonia). After 10 minutes, collect in open containers and add more ammonia. Cover loosely. Wash spill area with soap and water.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class IC

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are **FLAMMABLE**. Keep away from heat, sparks, and open flame.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally.

Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

NO PERSON SHOULD USE THIS PRODUCT, OR BE IN THE AREA WHERE IT IS BEING USED, IF THEY HAVE CHRONIC (LONG-TERM) LUNG OR BREATHING PROBLEMS OR IF THEY EVER HAD A REACTION TO ISOCYANATES.

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

Where overspray is present, a positive pressure air supplied respirator (TC19C NIOSH/MSHA approved) should be worn. If unavailable, a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2 may be effective. Follow respirator manufacturers directions for use. Wear the respirator for the whole time of spraying and until all vapors and mists are gone. **NO PERSONS SHOULD BE ALLOWED IN THE AREA WHERE THIS PRODUCT IS BEING USED UNLESS EQUIPPED WITH THE SAME RESPIRATOR PROTECTION RECOMMENDED FOR THE PAINTERS.**

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

To prevent skin contact, wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PROTECTIVE EQUIPMENT

Use barrier cream on exposed skin.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	11.30 lb/gal	1354 g/l
SPECIFIC GRAVITY	1.36	
BOILING POINT	281 - 415 °F	138 - 212 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	39%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
2.83 lb/gal	339 g/l	Less Water and Federally Exempt Solvents
2.83 lb/gal	339 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY
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STABILITY — Stable**CONDITIONS TO AVOID**

None known.

INCOMPATIBILITY

Contamination with Water, Alcohols, Amines and other compounds which react with isocyanates, may result in dangerous pressure in, and possible bursting of, closed containers.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide, Oxides of Nitrogen, possibility of Hydrogen Cyanide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Naphthalene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name			
100-41-4	Ethylbenzene	LC50 RAT LD50 RAT	4HR	Not Available 3500 mg/kg
1330-20-7	Xylene	LC50 RAT LD50 RAT	4HR	5000 ppm 4300 mg/kg
64742-95-6	Light Aromatic Hydrocarbons	LC50 RAT LD50 RAT	4HR	Not Available Not Available
64742-94-5	Medium Aromatic Hydrocarbons	LC50 RAT LD50 RAT	4HR	Not Available Not Available
91-20-3	Naphthalene	LC50 RAT LD50 RAT	4HR	Not Available Not Available
110-43-0	Methyl n-Amyl Ketone	LC50 RAT LD50 RAT	4HR	Not Available 1670 mg/kg
108-94-1	Cyclohexanone	LC50 RAT LD50 RAT	4HR	8000 ppm 1535 mg/kg
763-69-9	Ethyl 3-Ethoxypropionate	LC50 RAT LD50 RAT	4HR	Not Available Not Available
822-06-0	Hexamethylene Diisocyanate (max.)	LC50 RAT LD50 RAT	4HR	Not Available 738 mg/kg
4083-64-1	p-Toluenesulfonyl Isocyanate	LC50 RAT LD50 RAT	4HR	Not Available Not Available
28182-81-2	Hexamethylene Diisocyanate Polymer	LC50 RAT LD50 RAT	4HR	Not Available Not Available
14808-60-7	Quartz	LC50 RAT LD50 RAT	4HR	Not Available Not Available
14807-96-6	Talc	LC50 RAT LD50 RAT	4HR	Not Available Not Available
13463-67-7	Titanium Dioxide	LC50 RAT LD50 RAT	4HR	Not Available Not Available

SECTION 12 — ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL INFORMATION**

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS**WASTE DISPOSAL METHOD**

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers. Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

5 Liters (1.3 Gallons) and Less may be Classed as LTD. QTY. OR ORM-D
Larger Containers are Regulated as:
UN1263, PAINT, 3, PG III, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities

Naphthalene 100 lb RQ

Xylenes (isomers and mixture) 100 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):

UN1263, PAINT, 3, PG III, (ERG#128)

Canada (TDG)

UN1263, PAINT, CLASS 3, PG III, LIMITED QUANTITY, (ERG#128)

IMO

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.

UN1263, PAINT, CLASS 3, PG III, (34 C c.c.), EmS F-E, S-E**IATA/CAO**

UN1263, PAINT, 3, PG III

SECTION 15 — REGULATORY INFORMATION**SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION**

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
100-41-4	Ethylbenzene	0.5	
1330-20-7	Xylene	3	
91-20-3	Naphthalene	0.3	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.



Material Safety Data Sheet

1 - Chemical Product and Company Identification

Manufacturer: WD-40 Company Address: 1061 Cudahy Place (92110) P.O. Box 80607 San Diego, California, USA 92138 -0607 Telephone: Emergency only: 1-888-324-7596 (PROSAR) Information: 1-888-324-7596 Chemical Spills: 1-800-424-9300 (Chemtrec) 1-703-527-3887 (International Calls)	Chemical Name: Organic Mixture Trade Name: WD-40 Aerosol Product Use: Lubricant, Penetrant, Drives Out Moisture, Removes and Protects Surfaces From Corrosion MSDS Date Of Preparation: 3/11/10
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2 – Hazards Identification

Emergency Overview: DANGER! Flammable aerosol. Contents under pressure. Harmful or fatal if swallowed. If swallowed, may be aspirated and cause lung damage. May cause eye irritation. Avoid eye contact. Use with adequate ventilation. Keep away from heat, sparks and all other sources of ignition. Symptoms of Overexposure: Inhalation: High concentrations may cause nasal and respiratory irritation and central nervous system effects such as headache, dizziness and nausea. Intentional abuse may be harmful or fatal. Skin Contact: Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis. Eye Contact: Contact may be irritating to eyes. May cause redness and tearing. Ingestion: This product has low oral toxicity. Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product is an aspiration hazard. If swallowed, can enter the lungs and may cause chemical pneumonitis, severe lung damage and death. Chronic Effects: None expected. Medical Conditions Aggravated by Exposure: Preexisting eye, skin and respiratory conditions may be aggravated by exposure. Suspected Cancer Agent: Yes No <input checked="" type="checkbox"/>
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3 - Composition/Information on Ingredients

Ingredient	CAS #	Weight Percent
Aliphatic Hydrocarbon	64742-47-8	45-50
Petroleum Base Oil	64742-58-1 64742-53-6 64742-56-9 64742-65-0	<25
LVP Aliphatic Hydrocarbon	64742-47-8	12-18
Carbon Dioxide	124-38-9	2-3
Surfactant	Proprietary	<2
Non-Hazardous Ingredients	Mixture	<10

4 – First Aid Measures

Ingestion (Swallowed): Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately. Eye Contact: Flush thoroughly with water. Remove contact lenses if present after the first 5 minutes and continue flushing for several more minutes. Get medical attention if irritation persists.
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Skin Contact: Wash with soap and water. If irritation develops and persists, get medical attention.
Inhalation (Breathing): If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.

5 – Fire Fighting Measures

Extinguishing Media: Use water fog, dry chemical, carbon dioxide or foam. Do not use water jet or flooding amounts of water. Burning product will float on the surface and spread fire.
Special Fire Fighting Procedures: Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water. Use shielding to protect against bursting containers.
Unusual Fire and Explosion Hazards: Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

6 – Accidental Release Measures

Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area. Leaking cans should be placed in a plastic bag or open pail until the pressure has dissipated. Contain and collect liquid with an inert absorbent and place in a container for disposal. Clean spill area thoroughly. Report spills to authorities as required.

7 – Handling and Storage

Handling: Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use only with adequate ventilation. Keep away from heat, sparks, pilot lights, hot surfaces and open flames. Unplug electrical tools, motors and appliances before spraying or bringing the can near any source of electricity. Electricity can burn a hole in the can and cause contents to burst into flames. To avoid serious burn injury, do not let the can touch battery terminals, electrical connections on motors or appliances or any other source of electricity. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children. Do not puncture, crush or incinerate containers, even when empty.
Storage: Store in a cool, well-ventilated area, away from incompatible materials Do not store above 120°F or in direct sunlight. U.F.C (NFPA 30B) Level 3 Aerosol.

8 – Exposure Controls/Personal Protection

Chemical	Occupational Exposure Limits
Aliphatic Hydrocarbon	1200 mg/m ³ TWA (manufacturer recommended)
Petroleum Base Oil	5 mg/m ³ TWA, 10 mg/m ³ STEL ACGIH TLV 5 mg/m ³ TWA OSHA PEL
LVP Aliphatic Hydrocarbon	1200 mg/m ³ TWA (manufacturer recommended)
Carbon Dioxide	5000 ppm TWA (OSHA/ACGIH), 30,000 ppm STEL (ACGIH)
Surfactant	None Established
Non-Hazardous Ingredients	None Established

The Following Controls are Recommended for Normal Consumer Use of this Product

Engineering Controls: Use in a well-ventilated area.

Personal Protection:

Eye Protection: Avoid eye contact. Always spray away from your face.

Skin Protection: Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.

Respiratory Protection: None needed for normal use with adequate ventilation.

For Bulk Processing or Workplace Use the Following Controls are Recommended

Engineering Controls: Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.

Personal Protection:**Eye Protection:** Safety goggles recommended where eye contact is possible.**Skin Protection:** Wear chemical resistant gloves.**Respiratory Protection:** None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.**Work/Hygiene Practices:** Wash with soap and water after handling.**9 – Physical and Chemical Properties**

Boiling Point:	361 - 369°F (183 - 187°C)	Specific Gravity:	0.8 – 0.82 @ 60°F
Solubility in Water:	Insoluble	pH:	Not Applicable
Vapor Pressure:	95-115 PSI @ 70°F	Vapor Density:	Greater than 1
Percent Volatile:	70-75%	VOC:	412 grams/liter (49.5%)
Coefficient of Water/Oil Distribution:	Not Determined	Appearance/Odor	Light amber liquid/mild odor
Flash Point:	122°F (49°C) Tag Open Cup (concentrate)	Flammable Limits: (Solvent Portion)	LEL: 0.6% UEL: 8.0%
Pour Point:	-63°C (-81.4°F) ASTM D-97	Kinematic Viscosity:	2.79-2.96cSt @ 100°F

10 – Stability and Reactivity**Stability:** Stable**Hazardous Polymerization:** Will not occur.**Conditions to Avoid:** Avoid heat, sparks, flames and other sources of ignition. Do not puncture or incinerate containers.**Incompatibilities:** Strong oxidizing agents.**Hazardous Decomposition Products:** Carbon monoxide and carbon dioxide.**11 – Toxicological Information**

The oral toxicity of this product is estimated to be greater than 5,000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard. None of the components of this product is listed as a carcinogen or suspected carcinogen or is considered a reproductive hazard.

12 – Ecological Information

No data is currently available.

13 - Disposal Considerations

If this product becomes a waste, it would be expected to meet the criteria of a RCRA ignitable hazardous waste (D001). However, it is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Dispose in accordance with federal, state, and local regulations.

14 – Transportation Information

DOT Surface Shipping Description: Consumer Commodity, ORM-D

IMDG Shipping Description: Un1950, Aerosols, 2.1, LTD QTY

15 – Regulatory Information**U.S. Federal Regulations:**

CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA TITLE III:

Hazard Category For Section 311/312: Acute Health, Fire Hazard, Sudden Release of Pressure

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None

Section 302 Extremely Hazardous Substances (TPQ): None

EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): This product does not contain chemicals regulated under California Proposition 65.

VOC Regulations: This product complies with the consumer product VOC limits of CARB, the US EPA and states adopting the OTC VOC rules.

Canadian Environmental Protection Act: One of the components is listed on the NDSL. All of the other ingredients are listed on the Canadian Domestic Substances List or exempt from notification.

Canadian WHMIS Classification: Class B-5 (Flammable Aerosol)

This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

16 – Other Information:

HMIS Hazard Rating:

Health – 1 (slight hazard), Fire Hazard – 4 (severe hazard), Reactivity – 0 (minimal hazard)

SIGNATURE:  _____

TITLE: Director of Global Quality Assurance

REVISION DATE: March 2010

SUPERSEDES: August 2009



Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Chevron Delo® Extended Life Coolant/Antifreeze

Product Use: Antifreeze/Coolant

Product Number(s): CPS227804

Company Identification

Chevron Products Company
a division of Chevron U.S.A. Inc.
6001 Bollinger Canyon Road
San Ramon, CA 94583
United States of America
www.chevronlubricants.com

Transportation Emergency Response

CHEMTREC: (800) 424-9300 or (703) 527-3887

Health Emergency

Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

Product Information

email : lubemsds@Chevron.com
Product Information: (800) LUBE TEK
MSDS Requests: (800) 414-6737

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Ethylene Glycol	107-21-1	80 - 95 %weight
Sodium 2-ethylhexanoate	19766-89-3	1 - 5 %weight
Diethylene glycol	111-46-6	1 - 5 %weight

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

- HARMFUL OR FATAL IF SWALLOWED
- CONTAINS MATERIAL THAT MAY CAUSE ADVERSE REPRODUCTIVE EFFECTS BASED ON ANIMAL DATA
- POSSIBLE BIRTH DEFECT HAZARD - CONTAINS MATERIAL THAT MAY CAUSE BIRTH DEFECTS BASED ON ANIMAL DATA
- CAUSES DAMAGE TO:
- KIDNEY

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Toxic; may be harmful or fatal if swallowed.

Inhalation: The vapor or fumes from this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty breathing. Breathing this material at concentrations above the recommended exposure limits may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

DELAYED OR OTHER HEALTH EFFECTS:

Reproduction and Birth Defects: Contains material that may cause adverse reproductive effects if swallowed based on animal data. Contains material that may cause birth defects based on animal data.

Target Organs: Contains material that causes damage to the following organ(s) if swallowed: Kidney
See Section 11 for additional information. Risk depends on duration and level of exposure.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue.

SECTION 5 FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

NFPA RATINGS: Health: 2 Flammability: 1 Reactivity: 0

FLAMMABLE PROPERTIES:

Flashpoint: (Pensky-Martens Closed Cup) 127 °C (260 °F)

Autoignition: No Data Available

Flammability (Explosive) Limits (% by volume in air): Lower: 3.2 Upper:

EXTINGUISHING MEDIA: Dry Chemical, CO2, AFFF Foam or alcohol resistant foam.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds

will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: Do not get in eyes, on skin, or on clothing. Do not breathe vapor or fumes. Wash thoroughly after handling.

General Handling Information: Do not taste or swallow antifreeze or solution. Keep out of the reach of children and animals.

Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

General Storage Information: Do not store in open or unlabeled containers.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: Natural rubber, Neoprene, Nitrile Rubber, Polyvinyl Chloride (PVC or Vinyl).

Respiratory Protection: Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors, Dusts and Mists.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Ethylene Glycol	ACGIH	--	--	100 mg/m3	--

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Red

Physical State: Liquid

Odor: Faint or Mild

pH: 8 - 8.6

Vapor Pressure: 0.12 mmHg (Typical) @ 20 °C (68 °F)

Vapor Density (Air = 1): 2.1

Boiling Point: 108.9°C (228°F)

Solubility: Miscible

Freezing Point: -36.7°C (-34°F)

Specific Gravity: 1.12 @ 15.6°C (60.1°F) / 15.6°C (60.1°F)

Volatile Organic

Compounds (VOC) : 91.2 %weight

Viscosity: No data available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Hazardous Decomposition Products: Aldehydes (Elevated temperatures), Ketones (Elevated temperatures)

Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product

components.

Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.

Skin Sensitization: No product toxicology data available.

Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains diethylene glycol (DEG). The estimated oral lethal dose is about 50 cc (1.6 oz) for an adult human. DEG has caused the following effects in laboratory animals: liver abnormalities, kidney damage and blood abnormalities. It has been suggested as a cause of the following effects in humans: liver abnormalities, kidney damage, lung damage and central nervous system damage.

This product contains ethylene glycol (EG). The toxicity of EG via inhalation or skin contact is expected to be slight at room temperature. The estimated oral lethal dose is about 100 cc (3.3 oz.) for an adult human. Ethylene glycol is oxidized to oxalic acid which results in the deposition of calcium oxalate crystals mainly in the brain and kidneys. Early signs and symptoms of EG poisoning may resemble those of alcohol intoxication. Later, the victim may experience nausea, vomiting, weakness, abdominal and muscle pain, difficulty in breathing and decreased urine output. When EG was heated above the boiling point of water, vapors formed which reportedly caused unconsciousness, increased lymphocyte count, and a rapid, jerky movement of the eyes in persons chronically exposed. When EG was administered orally to pregnant rats and mice, there was an increase in fetal deaths and birth defects. Some of these effects occurred at doses that had no toxic effects on the mothers. We are not aware of any reports that EG causes reproductive toxicity in human beings.

2-Ethylhexanoic acid (2-EXA) caused an increase in liver size and enzyme levels when repeatedly administered to rats via the diet. When administered to pregnant rats by gavage or in drinking water, 2-EXA caused teratogenicity (birth defects) and delayed postnatal development of the pups. Additionally, 2-EXA impaired female fertility in rats. Birth defects were seen in the offspring of mice who were administered sodium 2-ethylhexanoate via intraperitoneal injection during pregnancy.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.

ENVIRONMENTAL FATE

This material is expected to be readily biodegradable.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: Anti-freeze Preparations, Proprietary

Additional Information: Bulk shipments with a reportable quantity (5000 pounds) of ethylene glycol are a hazardous material. The Proper Shipping Name is: Environmentally Hazardous Substance, Liquid, N.O.S. (ethylene glycol), 9, UN3082, III, RQ (ethylene glycol).

IMO/IMDG Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION UNDER THE IMDG CODE

ICAO/IATA Shipping Description: Anti-freeze Preparations, Proprietary; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:	1. Immediate (Acute) Health Effects:	YES
	2. Delayed (Chronic) Health Effects:	YES
	3. Fire Hazard:	NO
	4. Sudden Release of Pressure Hazard:	NO
	5. Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

The following components of this material are found on the regulatory lists indicated.

Diethylene glycol	07
Ethylene Glycol	03, 05, 06, 07

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

One or more components does not comply with the following chemical inventory requirements: ENCS (Japan).

NEW JERSEY RTK CLASSIFICATION:

Refer to components listed in Section 2.

WHMIS CLASSIFICATION:

Class D, Division 1, Subdivision B: Toxic Material - Acute Lethality

Class D, Division 2, Subdivision A: Very Toxic Material -
 Teratogenicity and Embryotoxicity
 Reproductive Toxicity

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 2 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 2* Flammability: 1 Reactivity: 0
 (0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

LABEL RECOMMENDATION:
 Label Category : ANTIFREEZE/COOLANT 3

REVISION STATEMENT: This revision updates the following sections of this Material Safety Data Sheet: 2,5,7,10,14,15,16

Revision Date: 01/13/2006

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Chevron Energy Research & Technology Company, 100 Chevron Way, Richmond, California 94802.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.



MATERIAL SAFETY DATA SHEET

Chemtrec 24-Hour Emergency Telephone
 Domestic North America (800) 424-9300
 International (703) 527-3887

*This MSDS complies with 29 CFR 1910.1200
 (Hazard Communication)*

1. Product and Supplier Identification / Product Hazard Summary

Product: [ORCA GUARD REALLY RED 1302 GELCOAT]
Product No: [05713020008, 05713020010, 05713020013, 05713020015, 05713020108, 05713020110
 05713020113, 05713020115]
Trade Name: [ORCA GUARD REALLY RED 1302 GELCOAT]
Supplier: **Fiberlay Inc.**
24 S. Idaho St
Seattle, Wa 98134
(206)782-0660

HMIS
 HEALTH: 2
 *CAUTION!
 *May be harmful if swallowed or inhaled
 *May be irritating to the skin eyes and respiratory tract
 *May cause allergic skin reaction
 *Heated material may cause thermal burns

FLAMMABILITY: 3 REACTIVITY: 2 SPECIFIC
 *Warning! *Caution! Unstable HAZARD: --
 Flammable Liquid & at high
 Vapor temperatures

2. Composition

Component	%	CAS Number	Exposure Limits
Styrene	27.2	100-42-5	ACGIH TLV (United States, 1/2009). Skin TWA: 20 ppm 8 hour(s). TWA: 85 mg/m ³ 8 hour(s). STEL: 40 ppm 15 minute(s). STEL: 170 mg/m ³ 15 minute(s). OSHA PEL Z2 (United States, 11/2006). TWA: 100 ppm 8 hour(s). CEIL: 200 ppm AMP: 600 ppm 5 minute(s). NIOSH REL (United States, 6/2009). TWA: 50 ppm 10 hour(s). TWA: 215 mg/m ³ 10 hour(s). STEL: 100 ppm 15 minute(s). STEL: 425 mg/m ³ 15 minute(s).

Aluminum Hydroxide	18 - 27	21645-51-2	ACGIH TLV (United States, 2007). Notes: Total Respirable TWA: 10 mg/m ³ Form: Aluminum metal and insoluble compounds OSHA PEL (United States). TWA: 5 mg/m ³ Form: Respirable fraction TWA: 15 mg/m ³ Form: Total particulates NIOSH REL (United States, 6/2008). TWA: 2 mg/m ³ , (as Al) 10 hour(s).
Methyl Methacrylate	2.7	80-62-6	ACGIH TLV (United States). TWA: 410 mg/m ³ TWA: 50 ppm 8 hour(s). STEL: 100 ppm 8 hour(s). NIOSH REL (United States, 6/2008). TWA: 100 ppm 10 hour(s). TWA: 410 mg/m ³ 10 hour(s). OSHA PEL (United States, 11/2006). TWA: 100 ppm 8 hour(s). TWA: 410 mg/m ³ 8 hour(s).
Silica, Amorphous	.09 – 4.5	7631-86-9	NIOSH REL (United States, 6/2009). TWA: 6 mg/m ³ 10 hour(s).
Cobalt Compounds	0.09 – 0.9	Mixture	OSHA PEL (United States). TWA: 0.1 mg/m ³ ACGIH TLV (United States). TWA: 0.02 mg/m ³
Methanol	.018	67-56-1	ACGIH TLV (United States, 1/2009). Skin TWA: 200 ppm 8 hour(s). TWA: 262 mg/m ³ 8 hour(s). STEL: 250 ppm 15 minute(s). STEL: 328 mg/m ³ 15 minute(s). NIOSH REL (United States, 6/2009). Skin TWA: 200 ppm 10 hour(s). TWA: 260 mg/m ³ 10 hour(s). STEL: 250 ppm 15 minute(s). STEL: 325 mg/m ³ 15 minute(s). OSHA PEL (United States, 11/2006). TWA: 200 ppm 8 hour(s). TWA: 260 mg/m ³ 8 hour(s).
CT 60035 Tinting Orange Pigment		This product contains no hazardous ingredients as defined under the criteria of the Federal OSHA Hazard Communications Standard 29 CFR 1910.1200.	
CT 30011 Carbazole Violet Pigment		This product contains no hazardous ingredients as defined under the criteria of the Federal OSHA Hazard Communications Standard 29 CFR 1910.1200	
CP 22001 Canary Yellow Pigment		This product contains hazardous ingredients as defined under the criteria of the Federal OSHA Hazard Communications Standard 29 CFR 1910.1200	
		7789-82-4	ACGIH TLV (United States). TWA: 10 mg/m ³
CP 23001 Lt Chrome Yellow Pigment		This product contains no hazardous ingredients as defined under the criteria of the Federal OSHA Hazard Communications Standard 29 CFR 1910.1200.	
CP 20004 Yellow Iron Oxide Pigment	0 - 2	This product contains no hazardous ingredients as defined under the criteria of the Federal OSHA Hazard Communications Standard 29 CFR 1910.1200.	

CP 40000 Oxide Green Pigment		This product contains no hazardous ingredients as defined under the criteria of the Federal OSHA Hazard Communications Standard 29 CFR 1910.1200.
CP 40001 Phthalo Green Pigment		This product contains no hazardous ingredients as defined under the criteria of the Federal OSHA Hazard Communications Standard 29 CFR 1910.1200.
CP 50001 Ultra Marine Blue Pigment		This product contains hazardous ingredients as defined under the criteria of the Federal OSHA Hazard Communications Standard 29 CFR 1910.1200.
		57455-37-5 ACGIH TLV (United States). TWA: 10 mg/m ³
CP 50500 Phthalo Blue Pigment		This product contains hazardous ingredients as defined under the criteria of the Federal OSHA Hazard Communications Standard 29 CFR 1910.1200.
		1) Copper Compound(s) Proprietary 1 - 5
CP 51001 Phthalo Blue Pigment		This product contains no hazardous ingredients as defined under the criteria of the Federal OSHA Hazard Communications Standard 29 CFR 1910.1200.
CP 60001 Violet Pigment		This product contains no hazardous ingredients as defined under the criteria of the Federal OSHA Hazard Communications Standard 29 CFR 1910.1200.
CP 60002 Magenta Pigment		This product contains no hazardous ingredients as defined under the criteria of the Federal OSHA Hazard Communications Standard 29 CFR 1910.1200.
CP 62001 Organic Red Pigment	4 - 8	This product contains no hazardous ingredients as defined under the criteria of the Federal OSHA Hazard Communications Standard 29 CFR 1910.1200.
CP 90001 Oxide Red Pigment	0 - 2	This product contains hazardous ingredients as defined under the criteria of the Federal OSHA Hazard Communications Standard 29 CFR 1910.1200.
		1) Ferric Oxide 1309-37-1 40 - 60 2) Barium Sulphate 7727-43-7 1 - 5 3) Silica, Amorphous 7631-86-9 1 - 5
CP 27001 Orange Pigment		This product contains hazardous ingredients as defined under the criteria of the Federal OSHA Hazard Communications Standard 29 CFR 1910.1200.
		1) Phosphoric Ester Salt Proprietary 1 - 5
CP 70001 BLACK		This product contains hazardous ingredients as defined under the criteria of the Federal OSHA Hazard Communications Standard 29 CFR 1910.1200.
		1) carbon black 1333-86-4 10-20
CT 10000 White Pigment	0 - 1	This product contains hazardous ingredients as defined under the criteria of the Federal OSHA Hazard Communications Standard 29 CFR 1910.1200.
		1) Titanium Dioxide 13463-67-7 40 - 60 2) Silica, Amorphous 7631-86-9 1 - 5 3) Aluminum Hydroxide 21645-51-2 1 - 5 4) Aluminum Oxide 1344-28-1 1 - 5

3. Hazards Identification

Routes of Entry:

Skin Contact: Moderate Eye Contact: Moderate Ingestion: Moderate Inhalation: Major

Emergency Overview: Central nervous system depressant. High vapor concentration may cause headache, nausea, dizziness, drowsiness and confusion. Causes skin and eye irritation. Aspiration hazard. Swallowing or vomiting of the liquid may result in aspiration into the lungs.

Potential Acute Health Effects

Eyes: Severe eye irritant which may result in redness, burning, tearing and blurred vision.

Skin: Skin irritant which may result in burning sensation. Repeated or prolonged skin contact may cause dermatitis.

Ingestion: Ingestion may result in mouth, throat and gastrointestinal irritation, nausea, vomiting and diarrhea.

Inhalation: Inhalation of spray mist or liquid vapors may cause upper respiratory irritation and possible central nervous system effects including headaches, nausea, vomiting, dizziness, drowsiness, loss of coordination, impaired judgment and general weakness.

Potential Chronic Health Effects

CARCINOGENIC EFFECTS:

Styrene: Classified A4 (not classifiable for human or animal) by ACGIH. Classified 2B (possible for human) by IARC. An increased incidence of lung tumors was observed in mice from a recent inhalation study. The relevance of this finding is uncertain since data from other long-term animal studies and from epidemiology studies of workers exposed to styrene do not provide a basis to conclude that styrene is carcinogenic to humans. Lung effects have been observed in mouse studies following repeated exposure.

Methyl Methacrylate: Classified A4 (not classifiable for human or animal) by ACGIH. Classified 3 (not classifiable for human) by IARC.

Silica, Amorphous: Classified 3 (not classifiable for human) by IARC.

Cobalt Compounds: Classified A3 (proven for animal) by ACGIH. Classified 2B (possible for human) by IARC.

Carbon Black: Classified A4 (not classifiable for human or animal) by ACGIH. Classified 2B (possible for human) by IARC.

MUTAGENIC or TERATOGENIC EFFECTS: No known effect according to our database.

Other: Prolonged exposure may cause dermatitis. Repeated or prolonged overexposure to near lethal concentrations can produce liver and kidney damage.

4. First Aid Measures

INHALATION: Move the victim to a safe area as soon as possible. Allow the victim to rest in a well-ventilated area. If breathing is difficult, give oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

SKIN CONTACT: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. If irritation persists, seek medical attention.

EYE CONTACT: Flush with a continuous flow of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Use of buffered baby shampoo will aid in removal. Seek medical attention.

INGESTION: Do not induce vomiting. Seek immediate medical attention.

GENERAL COMMENTS: Good personal hygiene is essential. Avoid eating, smoking or drinking in work areas.

5. Fire Fighting Measures

The Product Is: Flammable liquid

Flash point: 75 - 89°F (24.8 - 32°C)

Flammability Classification: Class 1C

Auto-ignition Temperature: 790°F(421°C) Methyl Methacrylate

Lower Explosive Limit: 0.09 % by volume

Upper Explosion Limit: 12.5% by volume

Sensitivity to Impact: No

Sensitivity to Static Discharge: No

Hazardous Combustion Products: May produce carbon monoxide, carbon dioxide, and irritating or toxic vapors, gases or particulate

Explosion Hazard: Can react with oxidizing materials. Explosive in the form of vapor when exposed to heat or flame. Material may polymerize when container is exposed to heat (fire) and polymerization will increase pressure in a closed container which may cause the container to rupture violently.

Fire Fighting Instructions:

SMALL FIRE: Use carbon dioxide, foam, dry chemical or water fog to extinguish.

LARGE FIRE: Evacuate surrounding areas. Use carbon dioxide, foam, dry chemical or water fog to extinguish.

Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Cool containing vessels with water spray in order to prevent pressure build-up, auto-ignition or explosion. Prevent run off to sewers or other water ways.

6. Accidental Release Measures

Small spill: Absorb with an inert material and place in an appropriate waste disposal container.

Large Spill: Stop leak if without risk. Eliminate all ignition sources. Contain with an inert material, recover as much as possible and place the remainder in an appropriate waste disposal container. Warn unauthorized personnel to move away. Prevent entry into sewers or confined areas.

7. Handling and Storage

Handling Procedures: **WARNING!** Use only in well-ventilated areas. Store away from direct sunlight. Avoid inhalation and contact with eyes, skin, and clothing. Wear appropriate personal protective equipment for your task. Ground and bond all containers when transferring the material. Empty containers may retain product and product vapor. Do not expose to heat, flame, sparks or other ignition sources such as cutting, welding, drilling, grinding or static electricity. Do not pressurize. Provide adequate safety showers and eyewashes in the area of use.

Note: If product contains metal compounds (Section III), avoid dust from dried product or grinding of articles made from this material.

Storage: Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Containers should be grounded.

8. Exposure Controls, Personal Protection

SEE COMPONENT EXPOSURE LIMITS SECTION 2

While the federal workplace exposure limit for styrene is 100 ppm, OSHA accepted the styrene industry's proposal to voluntarily meet a PEL of 50 ppm on an 8 hours TWA.

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Provide adequate safety showers and eyewashes in the area of use.

Personal Protection: Personal protective equipment may vary depending on the job being performed.

Eye/face: Wear eye protection such as safety glasses with side shields, splash goggles or face shield with safety glasses.

Skin: Avoid skin contact. Impervious gloves should be worn. Other items may include long sleeves, lab coats, or impervious jackets.

Respiratory: Determine if airborne concentrations are below the recommended exposure limits in accordance your company's PPE program and regulatory requirements. If they are not, select a NIOSH-approved respirator that provides adequate protection from the concentration levels encountered. Air-purifying respirators are generally adequate for organic vapors. Use positive pressure, supplied-air respirators if there is potential for an uncontrolled release, if exposure levels are unknown, or under circumstances where air-purifying respirators may not provide adequate protection. Reference OSHA 29 CFR 1910.134.

Personal protection in case of a large spill: Chemical resistant gloves, full protective suit, and boots.
Respiratory protection in accordance with OSHA regulation 29 CFR 1910.134. A self-contained breathing apparatus should be used to avoid inhalation of the product vapors.

9. Physical and Chemical Properties

Appearance: Red Liquid
 Odor: Aromatic
 pH: Not applicable.
 Vapor Pressure: <5 @ 20 C mm Hg
 Solubility: Slight
 Vapor Pressure: 40 mm Hg@ 77°F (25°C) Methyl Methacrylate
 Vapor Density: 3.5-3.6 (Air=1)
 Melting Point: Not applicable.
 Boiling Point: 214°F(101°C) Methyl Methacrylate
 Freezing Point: Not available.
 Specific Gravity: 1.1 to 1.4 (Water = 1)
 Partition Coefficient: No data
 Evaporation Rate: <1
 Molecular Weight: Not Available
 Odor Threshold: 1.0 ppm
 Dispersibility: Slight in Water

10. Stability and Reactivity

Chemical Stability: This product is normally stable, but can become unstable at elevated temperatures.
 Instability Temperature: >120°F (48.9°C)
 Conditions of Instability: Heat
 Incompatibility: Polymerizes in the presence of organic peroxides, oxidizing materials, or heat.
 Corrosivity: Our database contains no additional remark on the corrosivity of this product

11. Toxicological Information

Toxicity to Animals	Name	Result	Species	Dose	Exposure
	Styrene	LD50 Oral	Rat	2650 mg/kg	-
		LC50 Inhalation Vapor	Rat	5634.2 ppm	4 hours
	Methyl Methacrylate	LD50 Oral	Rat	7872 mg/kg	-
		LC50 Inhalation Gas.	Rat	7094 ppm	4 hours
	Methanol	LD50 Dermal	Rabbit	15800 mg/kg	-
		LD50 Oral	Rabbit	14200 mg/kg	-
		LD50 Oral	Mouse	7300 mg/kg	-
		LD50 Oral	Rat	5628 mg/kg	-
		LD50 Oral	Rat	5600 mg/kg	-
		LC50 Inhalation Gas.	Rat	64000 ppm	4 hours
	Cobalt Compounds	LD50 Oral	Rat	6171 mg/kg	-

Special remarks on toxicity to animals: Lung effects have been observed in mouse studies following repeated exposure.

Special remarks on chronic effects on humans: Repeated or prolonged overexposure to near lethal concentrations can produce liver and kidney damage.

Special remarks on other toxic effects on humans: Methyl Methacrylate: MMA has both acute and chronic effects. Inhalation overexposure may result in irritation of nose and throat, headache, nausea, vomiting, dizziness, irritation of upper respiratory tract and unconsciousness. Overexposure will result in moderate

irritation to the skin, eyes and mucous membranes. Prolonged skin contact may cause dermatitis. Chronic exposure can cause headache and nausea, central nervous system depression, and ultimately liver, lung or kidney damage. An allergic skin reaction may also be possible.

12. Ecological Information

Environmental Toxicity: Toxic to aquatic organisms. Should not be released to sewage system or other bodies of water at concentrations above limits established in regulations or permits..

13. Disposal Considerations

Waste Disposal: Recycle to process, if possible. Consult your local or regional authorities. Ignitable characteristic.

14. Transport Information

DOT UN1866; Resin Solution; 3; III.

TDG UN1866; Resin Solution; 3; III.

IATA/IMDG UN1866; Resin Solution; 3; III

Additional information US regulations require the reporting of spills when the amount exceeds the Reportable Quantity (RQ) for specific components of this material. See CERCLA in Section 15, Regulatory Information, for the Reportable Quantities.

15. Regulatory Information

This section does not reference all applicable regulatory compliance lists

TSCA: All ingredients are listed or compliant with TSCA.

Proposition 65 Warning: This product contains a chemical(s) known to the State of California to cause cancer, birth defects and/or reproductive harm.

SARA 313 component(s): Styrene, Methyl Methacrylate, Cobalt Compounds, Methanol.

SARA 302 component(s): None.

DSL: All ingredients are listed or compliant with the NSNR.

CERCLA(RQ):

Styrene - 1000 lbs. (453.6 kg)

Methyl Methacrylate - 1000 lbs. (453.6 kg)

Methanol - 5000 lbs. (2268 kg)

16. Other Information

California Proposition 65 involving warnings of the presence of certain listed chemicals is now in effect.

Orca Composites believes the law requires us to inform you that detectable amounts of any of the listed chemicals might be present in ORCA products. Based on a review of the list, ORCA products, like all synthetic and naturally occurring chemical substances, may conceivably contain trace contaminants of some of the listed substances. While not necessarily added to our products as ingredients, some of the listed chemicals may be present in the raw materials as received from suppliers over which we have no control.

In order to comply with the California Law, even though some of the listed substances may not represent a significant risk as defined by the regulations, we feel obligated to make the following statement:

“Warning: This product may contain trace amounts of some chemicals considered by the State of California to be carcinogens or reproductive Toxicants.”

Preparation Date: 5/28/2013

Prepared by: Orca Composites

Comments: This Material Safety Data Sheet was prepared using information provided by Orca Composites

Revisions: None

We believe the above information is correct as of the date of this MSDS. However, as this information and the conditions under which the product are used are beyond the control of Orca Composites., it is the user's obligation to determine the conditions for the safe use of the product. No warranty, expressed or implied, is hereby made.

Orca



Composites

MATERIAL SAFETY DATA SHEET

West System Inc.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:..... G/flex® 650B Epoxy Hardener
PRODUCT CODE:..... 650B
CHEMICAL FAMILY:..... Amine.
CHEMICAL NAME:..... Modified polyamine.
FORMULA:..... Not applicable.

MANUFACTURER:
West System Inc.
102 Patterson Ave.
Bay City, MI 48706, U.S.A.
Phone: 866-937-8797 or 989-684-7286
www.westsystem.com

EMERGENCY TELEPHONE NUMBERS:
Transportation
CHEMTREC:..... 800-424-9300 (U.S.)
703-527-3887 (International)
Non-transportation
Poison Hotline:..... 800-222-1222

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING Causes skin irritation. Causes eye irritation. May cause respiratory tract irritation. Can cause allergic reaction and sensitization. May be harmful if swallowed. Caramel colored viscous liquid with slight ammonia odor.

PRIMARY ROUTE(S) OF ENTRY: Skin contact, eye contact, inhalation.

POTENTIAL HEALTH EFFECTS:

ACUTE INHALATION:..... Exposure to high concentrations of vapor causes irritation to the respiratory tract.

CHRONIC INHALATION: Prolonged or repeated exposure to high concentrations of vapors may cause irritation.

ACUTE SKIN CONTACT:..... Moderate irritant to skin tissue. Can cause allergic reaction and possible sensitization.

CHRONIC SKIN CONTACT:..... May cause persistent irritation, dermatitis and sensitization

EYE CONTACT:..... Moderate to severe irritation. Causes severe irritation, pain and possible permanent injury.

INGESTION:..... Severely irritating to gastrointestinal system. May be an aspiration hazard.

SYMPTOMS OF OVEREXPOSURE:..... Development of allergic reaction or sensitization. Skin irritation and redness.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Chronic respiratory disease (e.g., bronchitis, asthma). Skin conditions and skin allergies such as to poison ivy, poison oak, etc.

3. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

<u>INGREDIENT NAME</u>	<u>CAS #</u>	<u>CONCENTRATION (%)</u>
Amine terminated copolymer	68683-29-4	30-60
Phenalkamine	868765-93-9	10-30
Cashew nutshell liquid, 2-hydroxyethyl ethers	232268-65-4	5-20
Tris-2,4,6-(dimethylaminomethyl)phenol reaction products with triethylenetetramine	1101788-77-5	1-10
Triethylenetetramine	112-24-3	1-10
Tris-2,4,6-(dimethylaminomethyl)phenol	90-72-2	1-5
Aminoethylpiperazine	140-31-8	1-5
1,3-benzenedimethaneamine	1477-55-0	1-5

4. FIRST AID MEASURES

FIRST AID FOR EYES: Immediately flush with water for at least 15 minutes. Get prompt medical attention.

FIRST AID FOR SKIN: Remove contaminated clothing. Immediately wash skin with soap and water. Do not apply greases or ointments. Get medical attention if wide spread exposure.

FIRST AID FOR INHALATION: If symptoms occur as noted in Section 3, remove to fresh air. Get medical attention if symptoms persist or worsen.

FIRST AID FOR INGESTION: Give conscious person at least 2 glasses of water. Do not induce vomiting. May be an aspiration hazard. If vomiting should occur spontaneously, keep airway clear. Get medical attention.

5. FIRE FIGHTING MEASURES

FLASH POINT: > 200°F (PMCC)

EXTINGUISHING MEDIA: Water spray, dry chemical, alcohol foam and carbon dioxide (CO₂).

FIRE AND EXPLOSION HAZARDS: Burning will generate toxic fumes, including but not limited to: ammonia, oxides of nitrogen, carbon monoxide, carbon dioxide. When mixed with sawdust, wood chips, or other cellulosic material, spontaneous combustion can occur under certain conditions. If hardener is spilled into or mixed with sawdust, heat is generated as the air oxidizes the amine. If the heat is not dissipated quickly enough, it can ignite the sawdust.

SPECIAL FIRE FIGHTING PROCEDURES: Use full-body protective gear and a self-contained breathing apparatus. If spill has ignited, use water spray to disperse vapors and protect personnel attempting to stop leak. Use water to cool fire-exposed containers. Use of water may generate toxic aqueous solutions. Do not allow water run-off from fighting fire to enter drains or other water courses.

6. ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Stop leak without causing additional risk. Wear proper personal protective equipment. Contain spill and ventilate area. Large or small spill - scoop bulk into appropriate container for recovery. Use inert, non-combustible absorbent material (e.g., sand) and shovel remainder into suitable container for disposal. Do not use sawdust, wood chips or other cellulosic materials to absorb the spill, as the possibility for spontaneous combustion exists. Wash spill residue with warm, soapy water if necessary.

7. HANDLING AND STORAGE

STORAGE TEMPERATURE (min./max.): 40°F (4°C) / 90°F (32°C)

STORAGE: Minimum feasible handling temperatures should be maintained. If stored above 100°F, nitrogen atmosphere is recommended. Keep containers tightly closed.

HANDLING PRECAUTIONS: Use with adequate ventilation. Do not breathe vapors or mists from heated material. Avoid contact with skin and eyes. Wash thoroughly after handling. When mixed with epoxy resin this product causes an exothermic reaction, which in large masses, can produce enough heat to damage or ignite surrounding materials and emit fumes and vapors that vary widely in composition and toxicity.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION GUIDELINES: A minimum of safety glasses with side shields.

SKIN PROTECTION GUIDELINES: Wear liquid-proof, chemical resistant gloves (nitrile-butyl rubber, neoprene, butyl rubber or natural rubber) and full body-covering clothing.

RESPIRATORY/VENTILATION GUIDELINES: General mechanical or local exhaust ventilation. In the absence of adequate ventilation, use a NIOSH approved air purifying respirator with an organic vapor cartridge.

Note: West System, Inc. has conducted an air sampling study using this product or similarly formulated products. The results indicate that the components sampled for (amines) were either so low that they were not detected at all or they were well below OSHA's permissible exposure levels.

ADDITIONAL PROTECTIVE MEASURES: Use where there is immediate access to safety shower and emergency eye wash. Provide proper wash/cleanup facilities for proper hygiene. Contact lens should not be worn when working with this material. Generally speaking, working cleanly and following basic precautionary measures will greatly minimize the potential for harmful exposure to this product under normal use conditions.

OCCUPATIONAL EXPOSURE LIMITS: Not established for product as whole. Refer to OSHA's Permissible Exposure Level (PEL) or the ACGIH Guidelines for information on specific ingredients.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM Liquid.

COLOR Caramel.

ODOR.....	Ammonia-like.
BOILING POINT.....	> 480°F.
MELTING POINT/FREEZE POINT.....	No data.
VISCOSITY.....	19,000 cPs
pH.....	No data.
SOLUBILITY IN WATER.....	Appreciable.
SPECIFIC GRAVITY.....	0.97
BULK DENSITY.....	8.12 pounds/gallon.
VAPOR PRESSURE.....	< 1 mmHg @ 20°C.
VAPOR DENSITY.....	Heavier than air.
% VOLATILE BY WEIGHT.....	ASTM 2369-07 was used to determine the Volatile Matter Content of mixed epoxy resin and hardener. 650 Resin and 650 Hardener, mixed together at 1.2:1 by weight, has a density of 1050 g/L (8.76 lbs/gal). The combined VOC content for 650 Resin/650 Hardener is 8.6 g/L (0.07 lbs/gal).

10. STABILITY AND REACTIVITY

STABILITY:..... Stable.

HAZARDOUS POLYMERIZATION:..... Will not occur.

INCOMPATIBILITIES:..... Strong oxidizers, acids.

DECOMPOSITION PRODUCTS:..... Very toxic fumes and gases when burned. Decomposition products may include, but not limited to: oxides of nitrogen, volatile amines, ammonia when heated.

11. TOXICOLOGICAL INFORMATION

No specific oral, inhalation or dermal toxicology data is known for this product.

Oral:..... No data.
 Inhalation:..... No data.
 Dermal:..... No data.

CARCINOGENICITY:

NTP..... No.
 IARC..... No.
 OSHA..... No.

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA, NTP or IARC.

12. ECOLOGICAL INFORMATION

Wastes from this product may present long term environmental hazards. Do not allow into sewers, on the ground or in any body of water. Not readily biodegradable.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:..... Evaluation of this product using RCRA criteria shows that it is not a hazardous waste, either by listing or characteristics, in its purchased form. It is the responsibility of the user to determine proper disposal methods.

Incinerate, recycle (fuel blending) or reclaim may be preferred methods when conducted in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION**DOT Non-Bulk**

SHIPPING NAME:..... Not Regulated.
 TECHNICAL SHIPPING NAME:..... Not Applicable.
 HAZARD CLASS:..... Not Applicable.
 U.N./N.A. NUMBER:..... Not Applicable.
 PACKING GROUP:..... Not Applicable.

ICAO/IATA

SHIPPING NAME:..... Not Regulated.
 TECHNICAL SHIPPING NAME:..... Not Applicable.
 HAZARD CLASS:..... Not Applicable.
 U.N. NUMBER:..... Not Applicable.
 PACKING GROUP:..... Not Applicable.
 MARINE POLLUTANT:..... No

IMDG

SHIPPING NAME: Not regulated.
 TECHNICAL SHIPPING NAME:..... Not applicable.
 HAZARD CLASS: Not applicable.
 U.N. NUMBER: Not applicable.
 PACKING GROUP:..... Not applicable.
 EmS:..... Not applicable.
 MARINE POLLUTANT:..... Not applicable.

15. REGULATORY INFORMATION

OSHA STATUS: Irritant, possible sensitizer.
TSCA STATUS:..... All components are listed on TSCA inventory or otherwise comply with TSCA requirements.
SARA TITLE III:
SECTION 313 TOXIC CHEMICALS None known.

Canada WHMIS Classification:..... D2B – Toxic material causing other toxic effects.
CEPA Chemical Inventory Status: All components are listed or are otherwise compliant with CEPA requirements. Phenalkamine, CAS# 868765-93-9, is NDSL listed only, as NDSL #18162-0. Tris-2,4,6-(dimethylaminomethyl)phenol reaction products with triethylenetetramine, CAS# 1101788-77-5, is NDSL listed only.

STATE REGULATORY INFORMATION:

The following chemicals are specifically listed or otherwise regulated by individual states. For details on your regulatory requirements you should contact the appropriate agency in your state.

COMPONENT NAME**/CAS NUMBER****CONCENTRATION****STATE CODE**

Tetraethylenetriamine
 112-24-3
 1,3-benzenedimethanamine
 1477-55-0

MA, NJ, PA

MA, NJ, PA

16. OTHER INFORMATION

REASON FOR ISSUE: Changes made in section: 2, 3, 14 and 15.
PREPARED BY:..... G. M. House
APPROVED BY:..... G. M. House
TITLE: Product Safety & Regulatory Compliance
APPROVAL DATE: April 3, 2013.
SUPERSEDES DATE:..... May 30, 2012
MSDS NUMBER:..... 650B-13a

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of West System Inc. The data on this sheet is related only to the specific material designated herein. West System Inc. assumes no legal responsibility for use or reliance upon these data.

MATERIAL SAFETY DATA SHEET

West System Inc.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:..... WEST SYSTEM® 105 Epoxy Resin
PRODUCT CODE:..... 105
CHEMICAL FAMILY:..... Epoxy Resin.
CHEMICAL NAME:..... Bisphenol A based epoxy resin.
FORMULA:..... Not applicable.

MANUFACTURER:
West System Inc.
102 Patterson Ave.
Bay City, MI 48706, U.S.A.
Phone: 866-937-8797 or 989-684-7286
www.westsystem.com

EMERGENCY TELEPHONE NUMBERS:
Transportation
CHEMTREC:..... 800-424-9300 (U.S.)
703-527-3887 (International)
Non-transportation
Poison Hotline: 800-222-1222

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING May cause skin irritation. May cause eye irritation. May cause allergic reaction. Clear, viscous liquid with mild odor.

PRIMARY ROUTE(S) OF ENTRY:..... Skin contact.

POTENTIAL HEALTH EFFECTS:

ACUTE INHALATION:..... If product is heated, vapors generated can cause headache, nausea, dizziness and possible respiratory irritation if inhaled in high concentrations.

CHRONIC INHALATION:..... Repeated exposure to high vapor concentrations may cause irritation of pre-existing lung allergies and increase the chance of developing allergy symptoms to this product.

ACUTE SKIN CONTACT:..... May cause allergic skin response in certain individuals. May cause moderate irritation to the skin such as redness and itching.

CHRONIC SKIN CONTACT:..... May cause sensitization in susceptible individuals. May cause moderate irritation to the skin.

EYE CONTACT:..... May cause irritation.

INGESTION:..... Low acute oral toxicity.

SYMPTOMS OF OVEREXPOSURE:..... Possible sensitization and subsequent allergic reactions usually seen as redness and rashes.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:..... Pre-existing skin and respiratory disorders may be aggravated by exposure to this product. Pre-existing lung and skin allergies may increase the chance of developing allergic symptoms to this product.

3. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

<u>INGREDIENT NAME</u>	<u>CAS #</u>	<u>CONCENTRATION (%)</u>
Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	25085-99-8	60-100
Benzyl alcohol	100-51-6	10-30
Phenol-formaldehyde polymer glycidyl ether	28064-14-4	1-10

4. FIRST AID MEASURES

FIRST AID FOR EYES..... Flush immediately with water for at least 15 minutes. Consult a physician.

FIRST AID FOR SKIN..... Remove contaminated clothing. Wipe excess from skin. Apply waterless skin cleaner and then wash with soap and water. Consult a physician if effects occur.

FIRST AID FOR INHALATION..... Remove to fresh air if effects occur.

FIRST AID FOR INGESTION..... No acute adverse health effects expected from amounts ingested under normal conditions of use. Seek medical attention if a significant amount is ingested.

5. FIRE FIGHTING MEASURES

FLASH POINT: >200°F (Tag Closed Cup)

EXTINGUISHING MEDIA: Foam, carbon dioxide (CO₂), dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES: Wear a self-contained breathing apparatus and complete full-body personal protective equipment. Closed containers may rupture (due to buildup of pressure) when exposed to extreme heat.

FIRE AND EXPLOSION HAZARDS: During a fire, smoke may contain the original materials in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include, but are not limited to: phenolics, carbon monoxide, carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Stop leak without additional risk. Dike and absorb with inert material (e.g., sand) and collect in a suitable, closed container. Warm, soapy water or non-flammable, safe solvent may be used to clean residual.

7. HANDLING AND STORAGE

STORAGE TEMPERATURE (min./max.): 40°F (4°C) / 120°F (49°C)

STORAGE: Store in cool, dry place. Store in tightly sealed containers to prevent moisture absorption and loss of volatiles. Excessive heat over long periods of time will degrade the resin.

HANDLING PRECAUTIONS: Avoid prolonged or repeated skin contact. Wash thoroughly after handling. Launder contaminated clothing before reuse. Avoid inhalation of vapors from heated product. Precautionary steps should be taken when curing product in large quantities. When mixed with epoxy curing agents this product causes an exothermic, which in large masses, can produce enough heat to damage or ignite surrounding materials and emit fumes and vapors that vary widely in composition and toxicity.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION GUIDELINES: Safety glasses with side shields or chemical splash goggles.

SKIN PROTECTION GUIDELINES: Wear liquid-proof, chemical resistant gloves (nitrile-butyl rubber, neoprene, butyl rubber or natural rubber) and full body-covering clothing.

RESPIRATORY/VENTILATION GUIDELINES: Good room ventilation is usually adequate for most operations. Wear a NIOSH/MSHA approved respirator with an organic vapor cartridge whenever exposure to vapor in concentrations above applicable limits is likely.

Note: West System, Inc. has conducted an air sampling study using this product or similarly formulated products. The results indicate that the components sampled for (epichlorohydrin, benzyl alcohol) were either so low that they were not detected at all or they were significantly below OSHA's permissible exposure levels.

ADDITIONAL PROTECTIVE MEASURES: Practice good caution and personal cleanliness to avoid skin and eye contact. Avoid skin contact when removing gloves and other protective equipment. Wash thoroughly after handling. Generally speaking, working cleanly and following basic precautionary measures will greatly minimize the potential for harmful exposure to this product under normal use conditions.

OCCUPATIONAL EXPOSURE LIMITS: Not established for product as whole. Refer to OSHA's Permissible Exposure Level (PEL) or the ACGIH Guidelines for information on specific ingredients.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM: Liquid.

COLOR: Clear.

ODOR: Mild.

BOILING POINT: > 400°F

MELTING POINT/FREEZE POINT: No data.

VISCOSITY: 1000 (cP)

pH: No data.

SOLUBILITY IN WATER: Slight.

SPECIFIC GRAVITY: 1.15

BULK DENSITY: 9.6 (pounds/gallon)

VAPOR PRESSURE: < 1 mmHg @ 20°C.

VAPOR DENSITY: Heavier than air.

% VOLATILE BY WEIGHT: ASTM D 2369-07 was used to determine the Volatile Content of mixed epoxy resin and hardener. Refer to the hardener's MSDS for information about the total volatile content of the resin/hardener system.

10. STABILITY AND REACTIVITY

STABILITY: Stable.

HAZARDOUS POLYMERIZATION:..... Will not occur by itself, but a mass of more than one pound of product plus an aliphatic amine will cause irreversible polymerization with significant heat buildup.

INCOMPATIBILITIES:..... Strong acids, bases, amines and mercaptans can cause polymerization.

DECOMPOSITION PRODUCTS:..... Carbon monoxide, carbon dioxide and phenolics may be produced during uncontrolled exothermic reactions or when otherwise heated to decomposition.

11. TOXICOLOGICAL INFORMATION

No specific oral, inhalation or dermal toxicology data is known for this product. Specific toxicology information for a bisphenol-A based epoxy resin present in this product is indicated below:

Oral:.....LD₅₀ >5000 mg/kg (rats)
Inhalation:.....No Data.
Dermal:.....LD₅₀ = 20,000 mg/kg (skin absorption in rabbits)

TERATOLOGY:.....Diglycidyl ether bisphenol-A (DGEbPA) did not cause birth defects or other adverse effects on the fetus when pregnant rabbits were exposed by skin contact, the most likely route of exposure, or when pregnant rats or rabbits were exposed orally.

REPRODUCTIVE EFFECTS:.....DGEbPA, in animal studies, has been shown not to interfere with reproduction.

MUTAGENICITY:.....DGEbPA in animal mutagenicity studies were negative. In vitro mutagenicity tests were negative in some cases and positive in others.

CARCINOGENICITY:
NTP..... Product not listed.
IARC..... Product not listed.
OSHA..... Product not listed.

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA, NTP or IARC.

Many studies have been conducted to assess the potential carcinogenicity of diglycidyl ether of bisphenol-A. Although some weak evidence of carcinogenicity has been reported in animals, when all of the data are considered, the weight of evidence does not show that DGEbPA is carcinogenic. Indeed, the most recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that DGEbPA is not classified as a carcinogen.

Epichlorohydrin, an impurity in this product (<5 ppm) has been reported to produce cancer in laboratory animals and to produce mutagenic changes in bacteria and cultured human cells. It has been established by the International Agency for Research on Cancer (IARC) as a probable human carcinogen (Group 2A) based on the following conclusions: human evidence – inadequate; animal evidence – sufficient. It has been classified as an anticipated human carcinogen by the National Toxicology Program (NTP). Note: It is unlikely that normal use of this product would result in measurable exposure concentrations to this substance.

12. ECOLOGICAL INFORMATION

In the non-cured liquid form this product may cause long-term harm if released to the environment. Prevent entry into sewers and natural waters.

Movement and Partitioning:
Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Kow between 3 and 5).

Degradation and Transformation:
Theoretical oxygen demand is calculated to be 2.35 p/p. 20-day biochemical oxygen demand is <2.5%.

Ecotoxicology:
Material is moderately toxic to aquatic organisms on an acute basis. LC50/EC50 between 1 and 10 mg/L in most sensitive species.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:..... Evaluation of this product using RCRA criteria shows that it is not a hazardous waste, either by listing or characteristics, in its purchased form. It is the responsibility of the user to determine proper disposal methods.

Incinerate, recycle (fuel blending) or reclaim may be preferred methods when conducted in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

DOT Non-Bulk
SHIPPING NAME:..... Not regulated.
TECHNICAL SHIPPING NAME:..... Not applicable.

HAZARD CLASS:..... Not applicable.
U.N./N.A. NUMBER:..... Not applicable.
PACKING GROUP:..... Not applicable.

IMDG

SHIPPING NAME:..... Environmentally hazardous substance, liquid, n.o.s.
TECHNICAL SHIPPING NAME:..... Epoxy Resin.
HAZARD CLASS:..... Class 9.
U.N. NUMBER:..... UN3082.
PACKING GROUP:..... PG III.
EmS Number: F-A, S-F
MARINE POLLUTANT Yes

ICAO/IATA

SHIPPING NAME:..... Environmentally hazardous substance, liquid, n.o.s.
TECHNICAL SHIPPING NAME:..... Epoxy Resin.
HAZARD CLASS:..... Class 9.
U.N. NUMBER:..... UN3082.
PACKING GROUP:..... PG III.
MARINE POLLUTANT:..... Yes

15. REGULATORY INFORMATION

OSHA STATUS:..... Irritant.
TSCA STATUS:..... All components are listed on TSCA inventory or otherwise comply with TSCA requirements.

Canada WHMIS Classification:..... D2B - Toxic material causing other toxic effects.
CEPA Chemical Inventory Status:..... All components are listed or are otherwise compliant with CEPA requirements.

SARA TITLE III:
SECTION 313 TOXIC CHEMICALS None (de minimus).

STATE REGULATORY INFORMATION:

The following chemicals are specifically listed or otherwise regulated by individual states. For details on your regulatory requirements you should contact the appropriate agency in your state.

Table with 3 columns: COMPONENT NAME /CAS NUMBER, CONCENTRATION, STATE CODE. Rows include Epichlorohydrin (106-89-8) and Benzyl alcohol (100-51-6).

1: These substances are known to the state of California to cause cancer or reproductive harm, or both.

16. OTHER INFORMATION

REASON FOR ISSUE:..... Changes made in Section 14 and 15.
PREPARED BY:..... G. M. House
APPROVED BY:..... G. M. House
TITLE:..... Health, Safety & Environmental Manager
APPROVAL DATE:..... April 26, 2013
SUPERSEDES DATE:..... March 9, 2012
MSDS NUMBER:..... 105-13a

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of West System Inc. The data on this sheet is related only to the specific material designated herein. West System Inc. assumes no legal responsibility for use or reliance upon these data.



Material Name: HERCULES ABS BLACK, MEDIUM BODY, FAST SET

***** Section 1 - Product and Company Identification *****

MSDS #64

Part Numbers: 60503, 60513, 60515, 60520, 60525

Manufacturer Information

HCC Holdings, Inc.
An Oatey Affiliate
4700 West 160th Street
Cleveland, OH 44135

Phone: 216-267-7100

For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1- 703-527-3887.

***** Section 2 - Hazards Identification *****

GHS Classification:

Flammable Liquids - Category 2
Eye Damage/Irritation - Category 2A
Specific Target Organ Toxicity Single Exposure - Category 3

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor.
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.

Precautionary Statements

Prevention

Keep away from heat/sparks/open flames and hot surfaces. - No smoking.
Keep container tightly closed.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/eye protection/face protection.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Avoid breathing fume/gas/mist/vapors.
Use only outdoors or in a well-ventilated area.

Material Name: HERCULES ABS BLACK, MEDIUM BODY, FAST SET

Response

If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

In case of fire: Use dry chemical, CO₂, or foam to extinguish fire.

Storage

Store in a well-ventilated place. Keep cool.

Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
78-93-3	Methyl ethyl ketone	40-60
9003-56-9	ABS resin	30-40

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes

If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.

First Aid: Skin

Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with hand cleaner or baby oil.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

First Aid: Inhalation

If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards

See Section 9 for Flammability Properties.

Highly flammable liquid and vapor. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back.

Hazardous Combustion Products

Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

Material Name: HERCULES ABS BLACK, MEDIUM BODY, FAST SET

Extinguishing Media

Use dry chemical, CO₂, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.

Unsuitable Extinguishing Media

None.

Fire Fighting Equipment/Instructions

Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

*** Section 6 - Accidental Release Measures ***
--

Recovery and Neutralization

Stop leak if it can be done without risk.

Materials and Methods for Clean-Up

Remove all sources of ignition and ventilate area. Soak up spill with an inert absorbent such as sand, earth or other noncombusting material. Put absorbent material in covered, labeled metal containers.

Emergency Measures

Isolate area. Keep unnecessary personnel away.

Personal Precautions and Protective Equipment

Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high.

Environmental Precautions

Prevent liquid from entering watercourses, sewers and natural waterways.

Prevention of Secondary Hazards

None

*** Section 7 - Handling and Storage ***

Handling Procedures

Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use. "Empty" containers retain product residue and can be hazardous. Follow all SDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

Storage Procedures

Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.

Incompatibilities

Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.

Material Name: HERCULES ABS BLACK, MEDIUM BODY, FAST SET

***** Section 8 - Exposure Controls / Personal Protection *****

Component Exposure Limits

Methyl ethyl ketone (78-93-3)

ACGIH: 200 ppm TWA
300 ppm STEL
OSHA: 200 ppm TWA; 590 mg/m³ TWA
NIOSH: 200 ppm TWA; 590 mg/m³ TWA
300 ppm STEL; 885 mg/m³ STEL

Engineering Measures

Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.

Personal Protective Equipment: Respiratory

For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

Personal Protective Equipment: Hands

Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.

Personal Protective Equipment: Eyes

Safety glasses with side shields or safety goggles.

Personal Protective Equipment: Skin and Body

No additional protective equipment needed.

***** Section 9 - Physical & Chemical Properties *****

Appearance:	Black	Odor:	Sharp, penetrating odor
Physical State:	Liquid	pH:	NA
Vapor Pressure:	145 mmHg @ 20°C	Vapor Density:	2.5
Boiling Point:	151°F (66°C)	Melting Point:	NA
Solubility (H₂O):	Negligible	Specific Gravity:	0.89 +/- 0.02 @ 20°C
Evaporation Rate:	(BUAC = 1) = 5.5 - 8.0	VOC:	60-70%
Octanol/H₂O Coeff.:	ND	Flash Point:	14-23°F (-10 to -5°C)
Flash Point Method:	CCCFP	Upper Flammability Limit (UFL):	11.8
Lower Flammability Limit (LFL):	1.8	Burning Rate:	ND
Auto Ignition:	ND		

***** Section 10 - Chemical Stability & Reactivity Information *****

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Material Name: HERCULES ABS BLACK, MEDIUM BODY, FAST SET

Conditions to Avoid

Avoid heat, sparks, flames and other sources of ignition.

Incompatible Products

Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.

Hazardous Decomposition Products

Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

*** Section 11 - Toxicological Information ***

Acute Toxicity

Component Analysis - LD50/LC50

Methyl ethyl ketone (78-93-3)

Inhalation LC50 Mouse 32 g/m³ 4 h; Oral LD50 Rat 2737 mg/kg; Dermal LD50 Rabbit 6480 mg/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

May cause irritation with redness, itching and pain. Methyl ethyl ketone may be absorbed through the skin causing effects similar to those listed under inhalation.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.

Potential Health Effects: Ingestion

Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

Potential Health Effects: Inhalation

Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

Acetone and methyl ethyl ketone are generally thought not to be mutagenic.

Carcinogenicity

A: General Product Information

This product is not reported to have any carcinogenic effects.

B: Component Carcinogenicity

ABS resin (9003-56-9)

IARC: Supplement 7 [1987]; Monograph 19 [1979] (Group 3 (not classifiable))

Reproductive Toxicity

Methyl ethyl ketone has been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Material Name: HERCULES ABS BLACK, MEDIUM BODY, FAST SET

Specified Target Organ General Toxicity: Single Exposure

May cause respiratory irritation. Inhalation of high concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ toxicity repeat exposure effects.

Aspiration Respiratory Organs Hazard

Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

***** Section 12 - Ecological Information *****

Ecotoxicity

A: General Product Information

This product is not expected to be toxic to aquatic organisms.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Methyl ethyl ketone (78-93-3)

Test & Species

Conditions

96 Hr LC50 Pimephales promelas	3130-3320 mg/L [flow-through]
48 Hr EC50 Daphnia magna	>520 mg/L
48 Hr EC50 Daphnia magna	5091 mg/L
48 Hr EC50 Daphnia magna	4025 - 6440 mg/L [Static]

Persistence/Degradability

No information available for the product.

Bioaccumulation

No information available for the product.

Mobility in Soil

No information available for the product.

***** Section 13 - Disposal Considerations *****

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

***** Section 14 - Transportation Information *****

DOT Information

For Greater than 1 liter (0.3 gal):

Shipping Name: Adhesives

UN #: 1133 Hazard Class: 3 Packing Group: II

Required Label(s): Flammable Liquid

For Less than 1 liter (0.3 gal):

Shipping Name: Consumer Commodity, ORM-D

Material Name: HERCULES ABS BLACK, MEDIUM BODY, FAST SET

IMDG Information

For Greater than 1 liter (0.3 gal):

Shipping Name: Adhesives

UN #: 1133 Hazard Class: 3 Packing Group: II

Required Label(s): Flammable Liquid

For Less than 1 liter (0.3 gal):

Shipping Name: Adhesives

UN #: 1133 Hazard Class: 3 Packing Group: II

Required Label(s): None (Limited Quantities are expected from labeling)

***** Section 15 - Regulatory Information *****

Regulatory Information

US Federal Regulations

Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Methyl ethyl ketone (78-93-3)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Methyl ethyl ketone	78-93-3	Yes	Yes	Yes	Yes	Yes	No

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Methyl ethyl ketone	78-93-3	1 %

Additional Regulatory Information

A: General Product Information

This product does not contain any chemicals subject to California Proposition 65 regulations.

Material Name: HERCULES ABS BLACK, MEDIUM BODY, FAST SET

B: Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Methyl ethyl ketone	78-93-3	Yes	DSL	EINECS
ABS resin	9003-56-9	Yes	DSL	No

***** Section 16 - Other Information *****

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

Literature References

None

Other Information

NFPA and HMIS:

NFPA Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 Special: None

HMIS Hazard Signal: Health: 2* Flammability: 3 Reactivity: 1 PPE: G

Disclaimer:

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, we cannot give any guarantees regarding information from other sources, and expressly do not make warranties, nor assume any liability for its use.

End of Sheet OAT-12

MATERIAL SAFETY DATA SHEET

Boeshield T-9[®] - Liquid UN# 1993

H M I S CODES: H-1, F-2, R-0, P-C

Section II Hazardous Ingredients/SARA III Information

<u>REPORTABLE COMPONENTS</u>	<u>CAS NUMBER</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>VAPOR PRESSURE</u>		<u>WEIGHT</u>
				<u>mmHg @ Temp</u>		<u>Percent</u>
Petroleum Distillate - (odorless Mineral Spirits)	64742-48-9	200PPM	200 PPM	2	100	61
White Mineral Oil	8042-47-5	5MG/M3	5MG/M3 : Oil Mist	.00003	100	10

No toxic chemical(s) subject to reporting requirements of section 313 of Title III and 40 CFR 372 are present

Section III Physical/Chemical Characteristics

BOILING RANGE: 350 to 611 Deg F
VAPOR DENSITY: Heavier than Air
SOLUBILITY IN WATER: Nil
APPEARANCE AND ODOR: Colorless Liquid; Typical Solvent Odor

SPECIFIC GRAVITY (H2O=1): 0.82
EVAPORATION RATE: Slower than ether

Section IV Fire and Explosion Hazard Data

FLASH POINT: 120 Deg F
METHOD USED: TCC

FLAMMABLE LIMITS IN AIR BY VOLUME - Lower: 0.7 **Upper:** 9.8

EXTINGUISHING MEDIA: Foam, Alcohol Foam, CO2, Dry Chemical, Water Fog

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water may be used to cool containers to prevent pressure build-up and explosion when exposed to extreme heat. If water is used, fog nozzles preferred. Wear goggles and self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Isolate from heat, sparks, electrical equipment and open flame. Closed containers may explode when exposed to extreme heat. Vapor accumulation can flash or explode if ignited. Overexposure to decomposition products may cause a health hazard. Symptoms may not be readily apparent. Obtain medical attention.

Section V Reactivity Data

STABILITY: Stable

CONDITIONS TO AVOID: Application to hot surfaces.

INCOMPATIBILITY (MATERIALS TO AVOID): Unknown

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: May produce fumes when heated to decomposition. Fumes may contain carbon monoxide and other toxic fumes.

HAZARDOUS POLYMERIZATION: Will not occur.

Section VI Health Hazard Data

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Respiratory irritation, headache, nausea, fatigue, drowsiness, impaired co-ordination.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

Skin: Contact may dry the skin; prolonged contact may cause moderate irritation.

Eyes: Liquid or vapor can irritate.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Not easily absorbed. Solvent action can dry and defeat the skin causing skin to crack, leading to dermatitis.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Not a likely route of exposure. If swallowed, do not induce vomiting, seek immediate medical advice and/or attention.

HEALTH HAZARDS (ACUTE AND CHRONIC):

Acute: Eye irritant, skin irritant, narcotic in high concentrations.

Chronic: Liver and kidney disease, skin irritation and dermatitis.

CARCINOGENICITY: NTP: No **IARC MONOGRAPHS:** No **OSHA REGULATED:** No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Acute and chronic liver and kidney disease, anemia.

EMERGENCY AND FIRST AID PROCEDURES: Inhalation: Remove to fresh air. Administer oxygen if needed. Apply artificial respiration if breathing has stopped. Get medical attention.

Skin: Wipe off with towel. Wash with soap and water. Get medical attention if irritation persists.

Eyes: Wash immediately with large volumes of fresh water for at least 15 minutes. Get medical attention.

Section VII Precautions for Safe Handling and Use

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Avoid breathing vapors, ventilate area. Dike area to contain spill. Clean up area with absorbent material and place in closed container for disposal.

WASTE DISPOSAL METHOD: Dispose of in accordance with local, state and federal regulations. Before attempting clean up, refer to other sections of this MSDS for hazard caution information.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store and use in cool, dry, well-ventilated areas. Keep containers closed when not in use. Keep away from excessive heat or open flame. Vapors may ignite explosively. Vapors may spread long distances. Prevent build-up of vapors. Extinguish all pilot lights and turn off heaters, non-explosion proof electrical equipment and ignition sources during use.

OTHER PRECAUTIONS: Keep closure tight and container upright to prevent leakage. Open container slowly. Ground containers when filling or emptying. Do not get in eyes. Avoid skin contact and contact with clothing. Do not weld or flame-cut an empty drum. Do not take internally. Do not transfer contents to unlabelled containers.

Section VIII Control Measures

RESPIRATORY PROTECTION: In restricted areas, use approved chemical/mechanical filters designed to remove a combination of particles and vapor. In confined areas, use approved air line type respirator or hood. Self-contained breathing apparatus is required for vapor concentrations above PEL/TLV limits.

VENTILATION: Sufficient to prevent inhalation of solvent vapors. General dilution and/or local exhaust ventilation in volume or pattern to keep PEL/TLV of most hazardous ingredients below acceptable limit and LEL below stated limit.

PROTECTIVE GLOVES: Solvent resistant required for prolonged or repeated contact.

EYE PROTECTION: Safety glasses with splash guards or full face shield.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Solvent resistant apron.

WORK/HYGIENIC PRACTICES: Eye washes and safety showers in the work place are recommended.

Section XI Disclaimer

DISCLAIMER: The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof. Because the information contained herein may be applied under conditions beyond our control, we assume no responsibility for its use.



MATERIAL SAFETY DATA SHEET - MSDS

RAPID SET® Mortar Mix

Date Issued: 6-March-2013

SECTION 1 – PRODUCT AND COMPANY INFORMATION

<p>Supplier CTS Cement Manufacturing Corp. 11065 Knott Ave., Suite A Cypress, CA 90630, United States Telephone Number: 800-929-3030 FAX Number: 714-379-8270 Email: info@ctscement.com Website: www.ctscement.com</p>	<p>Manufacturer CTS Cement Manufacturing Corp. 11065 Knott Ave., Suite A Cypress, CA 90630, United States Telephone Number: 800-929-3030 FAX Number: 714-379-8270 Email: info@ctscement.com Website: www.ctscement.com</p>	<table border="1"> <tr><td>Health</td><td>1</td></tr> <tr><td>Fire</td><td>0</td></tr> <tr><td>Reactivity</td><td>0</td></tr> <tr><td>Personal Protection</td><td>E</td></tr> </table>	Health	1	Fire	0	Reactivity	0	Personal Protection	E
Health	1									
Fire	0									
Reactivity	0									
Personal Protection	E									
<p>Supplier Emergency Contact 1-714-379-8260</p>	<p>Manufacturer Emergency Contact 1-714-379-8260</p>									
<p>Product Name: Rapid Set Mortar Mix CAS Number: N/A Chemical Family: Cementitious Mortar</p>	<p>MSDS Number: Product Code:</p>									

SECTION 2 – COMPONENT INFORMATION

Ingredient (Specific Chemical Identity, Common Name)	CAS Number	% of Total Weight
Calcium Sulfoaluminate Cement	960375-09-1	20-40
Silica Sand	14808-60-7	60-80

SECTION 3 – HAZARDOUS INFORMATION

Primary Route(s) of Entry:	Inhalation, Skin, Eye, Ingestion
Inhalation Hazards:	May cause respiratory tract, nose, throat, and lung irritation and inflammation
Skin Hazards:	May irritate skin causing drying, redness, rash, and blistering. When mixed with water, a high alkali material is produced which can cause severe skin burns. Individuals may develop allergic dermatitis.
Eye Hazards:	May severely irritate eyes. May develop inflammation of the cornea.
Ingestion Hazards:	May be caustic to mucus tissue.
Chronic Exposure:	Individuals may develop allergic dermatitis, inflammation of the cornea, and inflammation of the nose, throat, and lungs. May cause carcinogenic effects.
Carcinogenic Effects:	May contain crystalline silica, a known Human Carcinogen (Group 1), that can cause silicosis and cancer. Exposure to crystalline silica may also increase the risk of Scleroderma, tuberculosis, and kidney disorders.



SECTION 4 — FIRST AID INFORMATION

Inhalation:	Remove the individual to fresh air. If irritation persists, get medical attention.
Skin:	Flush with water immediately. If irritation persists, get medical attention immediately.
Eye:	Flush eyes with plenty of water. If irritation persists, get medical attention immediately.
Ingestion:	If conscious, drink plenty of water, Do not induce vomiting. Get immediate medical attention.

SECTION 5 — PHYSICAL & CHEMICAL PROPERTIES

Boiling Point: >2700°F	Specific Gravity: 2.7 to 3.1	Melting Point: >2700°F
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Vapor Pressure (mm Hg): None	Vapor Density (AIR = 1): None	Evaporation Rate: None
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Solubility in Water: Slight

Appearance and Odor : Beige color powder. May contain sand and rock particles. Odor N/A

SECTION 6 — FIRE & EXPLOSION PROPERTIES

Flash Point : Non-Combustible	Flammable Limits: N/A	LEL: N/A	UEL: N/A
--------------------------------------	------------------------------	-----------------	-----------------

Extinguishing Media: Water spray carbon dioxide foam dry powder	Special Fire Fighting Procedures: None
--	---

SECTION 7 — REACTIVITY INFORMATION

Stability: Stable	Conditions to Avoid: Unintended contact with water
--------------------------	---

Hazardous Polymerization: Will not occur

Hazardous Decomposition or Byproducts: Silica mixed with hydrofluoric acid may produce a corrosive gas.

Incompatible Materials: When mixed with water, may be highly alkali. Incompatible with acids, ammonium and salts. Avoid contact of silica with powerful oxidizing agents and acids.

SECTION 8 — ACCIDENTAL RELEASE MEASURES

Use a dust free method to clean up spills. Use the appropriate personal protective equipment.

SECTION 9 — HANDLING AND STORAGE

Waste Disposal Method: Use appropriate disposal facility complying with local regulations. Not classified as hazardous waste under RCRA or CERCLA. Do not create dust.

Handling and Storage Precautions: Use proper personal protective equipment. Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid unintentional contact with water.

SECTION 10 — EXPOSURE CONTROL MEASURES



Engineering Controls: Use with adequate ventilation to control airborne dust levels

Eye Protection: Safety glasses with side shields or goggles are recommended

Skin Protection: Impervious gloves, boots and clothing are recommended to protect the skin from contact

Respiratory Protection: In dusty environments, an OSHA, MSHA or NIOSH approved respirator is recommended.

Hygienic Practices: After handling, thoroughly wash hands and exposed skin with soap and water.

Exposure Limits:

Hydraulic Cement

ACGIH TLV: 10 mg/m³

OSHA PEL (8 hour TWA): 50 million particles per cubic ft

Crystalline Silica (Quartz)

ACGIH TLV: 0.05 mg/m³ (total), 0.05 mg/m³ (respirable)

OSHA PEL: 30 mg/m³ / (%SiO₂) mg/m³ (total), 10 mg/m³ / (%SiO₂) mg/m³ (respirable)

SECTION 11 — TOXICOLOGY INFORMATION

Toxicity to Animals: LD50 and LC50 rating not determined. A high pH material is produced when mixed with water.

Chronic Effects on Humans: May contain silica sand, a known carcinogen. May aggravate eye, skin, and respiratory conditions.

SECTION 12 — ECOLOGICAL INFORMATION

No Data Available

SECTION 13 — DISPOSAL CONSIDERATIONS

Not classified as hazardous waste under the Resource Conservation and Recovery Act and the Comprehensive Environmental Response, Compensation, and Recovery Act

SECTION 14 — TRANSPORTATION INFORMATION

Not determined to be hazardous under the U.S. Department of Transportation. Not Regulated by DOT.

SECTION 15 — OTHER REGULATORY INFORMATION

US OSHA 29CFR 1910.1200: May be considered hazardous and should be included in the employers' hazardous communication program.

SARA Section 313 Notification: Not subject to reporting requirements.

Proposition 65 Warning: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

SECTION 16 — OTHER INFORMATION

Key/Abbreviations

ACGIH – American Conference of Government Industrial Hygienists

CAS – Chemical Abstract Service.

CERCLA – Comprehensive Environmental Response, Compensation & Liability Act.

DOT – Department of Transportation.

LEL – Lower Exposure Limit.



MSHA – Mine Safety and Health Administration.
N/A – Not Applicable.
NIOSH – National Institute for Occupational Safety and Health.
OSHA – Occupational Safety and Health Administration.
RCRA – Resource Conservation and Recovery Act.
SARA – Superfund Amendments and Reauthorization Act.
UEL – Upper Exposure Limit.

NOTE: CTS Cement Manufacturing Corporation makes no representations as to the completeness or accuracy of the information in this document; and, no guarantee or warranty of any kind, express or implied, is made herein. We are not liable for any consequential, incidental, or special damages arising directly or indirectly from the use of this information.

Section 1: PRODUCT & COMPANY IDENTIFICATION

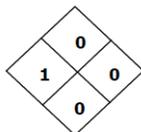
Product Name: Simple Green® All-Purpose Cleaner
 Additional Names: Simple Green® Concentrated Cleaner Degreaser Deodorizer
 Simple Green® Scrubbing Pad (Fluid in pad only)

Manufacturer's Part Number: *Please refer to page 4

Company: Sunshine Makers, Inc.
 15922 Pacific Coast Highway
 Huntington Beach, CA 92649 USA
 Telephone: 800-228-0709 • 562-795-6000 Fax: 562-592-3830
 Emergency Phone: Chem-Tel 24-Hour Emergency Service: 800-255-3924

Section 2: HAZARDS IDENTIFICATION

Emergency Overview: CAUTION. Irritant. This is a Green colored liquid with a sassafras added odor. Scrubbing pad is a green fibrous rectangle infused with Simple Green Cleaner.

**NFPA/HMIS Rating:**

Health = 1 = slight

Fire, Reactivity, and Special = 0 = minimal

Potential Health Effects

Eye Contact: Mildly irritating.

Skin Contact: No adverse effects expected under typical use conditions. Prolonged exposure may cause dryness. Chemically sensitive individuals may experience mild irritation.

Ingestion: May cause stomach or intestinal irritation if swallowed.

Inhalation: No adverse effects expected under typical use conditions. Adequate ventilation should be present for prolonged usage in small enclosed areas.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>CAS Number</u>	<u>Percent Range</u>
Water	7732-18-5	≥ 78%
2-butoxyethanol	111-76-2	≤ 5%
Ethoxylated Alcohol	68439-46-3	≤ 5%
Tetrapotassium Pyrophosphate	7320-34-5	≤ 5%
Sodium Citrate	68-04-2	≤ 5%
Fragrance	Proprietary Mixture	≤ 1%
Colorant	Proprietary Mixture	≤ 1%

Section 4: FIRST AID MEASURES

If Inhaled: If adverse effect occurs, move to fresh air.

If on skin: If adverse effect occurs, rinse skin with water.

If in eyes: Flush with plenty of water. After 5 minutes of flushing, remove contact lenses, if present. Continue flushing for at least 10 more minutes. If irritation persists seek medical attention.

If ingested: Drink plenty of water to dilute.

Section 5: FIRE FIGHTING MEASURES

This formula is stable, non-flammable, and will not burn. No special procedures necessary

Flammability: Non-flammable

Flash Point: Non-flammable

Suitable Extinguishing Media: Use Dry chemical, CO₂, water spray or “alcohol” foam.

Extinguishing Media to Avoid: High volume jet water.

Special Exposure Hazards: In event of fire created carbon oxides, oxides of phosphorus may be formed.

Special Protective Equipment: Wear positive pressure self-contained breathing apparatus; Wear full protective clothing.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: See section 8 – personal protection.

Environmental Precautions: Do not allow into open waterways and ground water systems.

Method for Clean Up: Dilute with water and rinse into sanitary sewer system or soak up with inert absorbent material.

Section 7: HANDLING AND STORAGE

Handling: Keep container tightly closed. Ensure adequate ventilation. Keep out of reach of children.

Storage: Keep in cool dry area.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limit Values:	OSHA PEL	ACGIH TLV
2-butoxyethanol	TWA 50 ppm (240 mg/m ³)	20 ppm (97 mg/m ³)
Tetrapotassium Pyrophosphate		5 mg/m ³

Exposure Controls:

Eye Contact: Use protective glasses if splashing or spray-back is likely.

Respiratory: Use in well ventilated areas.

Skin Contact: Prolonged exposure or dermal sensitive individuals should use protective gloves.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Green Liquid	Vapor Pressure:	18 mmHg @20°C; 23.5 mmHg @26°C	
Odor:	Added Sassafras odor	Density:	8.5 lb/gal;	
Specific Gravity:	1.010 ± 0.010	Water Solubility:	100%	
pH:	9.5 ± 0.5	VOC composite Partial Pressure:	TBD	
Boiling Point:	~210°F (98 °C)	VOC:	CARB Method 310	3.8%
Freezing Point:	~ 32°F (0 °C)		SCAQMD Method 313	2.8%
Nutrient Content:	Phosphorous: 0.28% Chloride: ~110 ppm	Sulfur: ~180 ppm Fluorine: ~90 ppm		

Section 10: STABILITY AND REACTIVITY

Stability: Stable
 Materials to Avoid: None known
 Hazardous Decomposition Products: Normal products of combustion - CO, CO₂; Oxides of Phosphorous may occur.

Section 11: TOXICOLOGICAL INFORMATION

Acute Toxicity: Oral LD₅₀ (rat) > 5 g/kg body weight
 Dermal LD₅₀ (rabbit) > 5 g/kg body weight
 Toxicity calculated from ingredients using OECD SERIES ON TESTING AND ASSESSMENT Number 33

Carcinogens: No ingredients are listed by OSHA, IARC, or NTP as known or suspected carcinogens.

Section 12: ECOLOGICAL INFORMATION

Hazard to wild mammals: Low, based on toxicology profile
 Hazard to avian species: Low, based on toxicology profile
 Hazard to aquatic organisms: Low, based on toxicology profile
 Chemical Fate Information: Readily Biodegradable per OECD 301D, Closed Bottle Test

Section 13: DISPOSAL CONSIDERATIONS

Appropriate Method for Disposal:

Unused Product: *Dilute with water to use concentration and dispose by sanitary sewer.
 Used Product: *This product can enter into clarifiers and oil/water separators. Used product may be hazardous depending on the cleaning application and resulting contaminants.
 Empty Containers: *Triple-rinse with water and offer for recycling if available in your area. Otherwise, dispose as non-hazardous waste.

*Dispose of used or unused product, and empty containers in accordance with the local, State, Provincial, and Federal regulations for your location. Never dispose of used degreasing rinsates into lakes, streams, and open bodies of water or storm drains.

Section 14: TRANSPORT INFORMATION

U.S. Department of Transportation (DOT) / Canadian TDG: Not Regulated

IMO / IDMG: Not classified as Dangerous
 ICAO/ IATA: Not classified as Dangerous
 ADR/RID: Not classified as Dangerous

U.N. Number	Not Required	Proper Shipping Name:	Detergent Solution
Hazard Class:	Non-Hazardous	Marine Pollutant:	No

Section 15: REGULATORY INFORMATION

All components are listed on: EINECS, TSCA, DSL and AICS Inventory.

No components listed under: Clean Air Act Section 112; Clean Water Act 307 & 311

SARA Title III 2-butoxyethanol is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 as Category N230 – Certain Glycol Ethers.

RCRA Status: Not a hazardous waste CERCLA Status: No components listed

State Right To Know Lists

2-butoxyethanol Illinois, Massachusetts, New Jersey, Pennsylvania, Rhode Island

WHMIS Classification – Category D, subcategory 2B, eye irritant

Name	Toxic Substances List – Schedule 1 – CEPA (Canadian Environmental Protection Act)	NPRI Inventory
2-butoxyethanol	Yes	No

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by Canada’s Controlled Products Regulation.

Section 16: OTHER INFORMATION

Questions about the information found on this MSDS should be directed to:

SUNSHINE MAKERS, INC. – TECHNICAL DEPARTMENT

15922 Pacific Coast Hwy. Huntington Beach, CA 92649

Phone: 800/228-0709 [8am-5pm Pacific time, Mon-Fri] Fax: 562/592-3830 Email: infoweb@simplegreen.com

CAGE CODE 1Z575

GSA/FSS - CONTRACT NO. GS-07F-0065J

Scrubbing Pad GSA/BPA - CONTRACT NO. GS-07F-BSIMP

National Stock Numbers & Industrial Part Numbers:

Simple Green	Part Number	NSN	Size
	13012	7930-01-342-5315	24 oz spray (12/case)
	13005	7930-01-306-8369	1 Gallon (6/case)
	13006	7930-01-342-5316	5 Gallon
	13016	7930-01-342-5317	15 Gallon
	13008	7930-01-342-4145	55 Gallon
	13103	N/A	2oz samples
	13225	N/A	2.5 Gallon
	13275	N/A	275 Gallon tote
	48049	N/A	1 Gallon Conc. w/ 32oz dilution
Scrubbing Pad	10224	7930-01-346-9148	Each (24/case)

Retail Numbers:

Part Number	Size
13002	16 oz Trigger (12/case)
13005	1 Gallon (6/case)
13013	24 oz Trigger (12/case)
13014	67 oz / 2 L (6/case)
13033	32 oz Trigger (12/case)
80007	Tier display holding 13005 (36/Tier)

part number is for both industrial and retail

****International Part Numbers May Differ.**

DISCLAIMER: The information provided with this MSDS is furnished in good faith and without warranty of any kind. Personnel handling this material must make independent determinations of the suitability and completeness of information from all sources to assure proper use and disposal of this material and the safety and health of employees and customers. Sunshine Makers, Inc. assumes no additional liability or responsibility resulting from the use of, or reliance on this information.



MATERIAL SAFETY DATA SHEET

Aqua Mix Grout Release

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Aqua Mix Grout Release
Product Number: F3530
Product Use: Cleaner.
Manufacturer/Supplier: Custom Building Products
13001 Seal Beach Blvd
Seal Beach, CA 90740
Phone Number: (562) 5983808
Emergency Phone: INFOTRAC 13800353535053 (US and Canada)
INTERNATIONAL + 133523233500
Date of Preparation: September 21, 2008 **Revision Date:** July 27, 2011

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION

MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION.

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Inhalation: May cause respiratory tract irritation.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation.

Signs and Symptoms: Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling. Handling can cause dry skin.

Medical Conditions Aggravated By Exposure: Asthma. Allergies.

Target Organs: Skin, eyes, gastrointestinal tract, respiratory system.

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Environmental Effects: May cause long term adverse effects in the aquatic environment. See Section 12 for more information.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Diethanolamine	11134232	1 35

Section 4: FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water. If easy to do, remove contact lenses, if worn.

Skin Contact: If irritation occurs, flush skin with plenty of water. Call a physician if irritation persists.



MATERIAL SAFETY DATA SHEET

Aqua Mix Grout Release

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE FIGHTING MEASURES

Flammability: Not flammable by WHMIS/OSHA criteria.

Means of Extinction:

Suitable Extinguishing Media: Treat for surrounding material.

Unsuitable Extinguishing Media: Not available.

Products of Combustion: May include, and are not limited to: oxides of carbon.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Not available.

Protection of Firefighters: Keep upwind of fire. Wear full fire fighting turnout gear (full Bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental Precautions: Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

Methods for Containment: Contain and/or absorb spill, then place in a suitable container.

Methods for Clean-Up: Soak into absorbent material. Spills of this material are a slipping hazard. Thoroughly wash the area with water after a spill or leak.

Other Information: Not available.

Section 7: HANDLING AND STORAGE

Handling:

Avoid contact with skin and eyes. Do not swallow. Use only in well-ventilated areas. Handle and open container with care. When using, do not eat or drink. Wash hands before eating, drinking, or smoking.

Storage:

Keep out of the reach of children. Keep container tightly closed.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Ingredient	Exposure Limits	
	OSHA-PEL	ACGIH-TLV
Diethanolamine	Not available.	1 mg/m ³ (vapour)



MATERIAL SAFETY DATA SHEET

Aqua Mix Grout Release

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal Protective Equipment:

Eye/Face Protection: Wear eye/face protection.

Hand Protection: Wear suitable gloves.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear.
Color:	Straw.
Odour:	Low odor.
Odour Threshold:	Not available.
Physical State:	Liquid.
pH:	9.4
Viscosity:	Not available.
Freezing Point:	Not available.
Boiling Point:	~ 100°C (~ 212°F)
Flash Point:	Not available.
Evaporation Rate:	< 1 (Water = 1)
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	30 mmHg
Vapor Density:	Not available.
Specific Gravity:	1.020
Solubility in Water:	Complete.
Coefficient of Water/Oil Distribution:	Not available.
Auto-ignition Temperature:	Not available.
Percent Volatile, wt. %:	Not available.
VOC content, wt. %:	< 0.01%

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions.

Conditions of Reactivity: Heat. Incompatible materials.

Incompatible Materials: Acids.

Hazardous Decomposition Products: May include, and are not limited to: oxides of carbon.

Possibility of Hazardous Reactions: No dangerous reaction known under conditions of normal use.



MATERIAL SAFETY DATA SHEET

Aqua Mix Grout Release

Section 11: TOXICOLOGY INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Analysis

Ingredient	LD ₅₀ (oral)	LC ₅₀
Diethanolamine	620 l L/kg, rat	Not available.
Eye:	May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.	
Skin:	May cause skin irritation. Handling can cause dry skin.	
Ingestion:	May be harmful if swallowed. May cause stomach distress, nausea or vomiting.	
Inhalation:	May cause respiratory tract irritation.	

EFFECTS OF CHRONIC EXPOSURE

Target Organs: Not available.

Chronic Effects: Not hazardous by WHMIS/OSHA criteria.

Carcinogenicity: Not hazardous by WHMIS/OSHA criteria.

Ingredient

Chemical Listed as Carcinogen or Potential Carcinogen *
G3A3, I33

Diethanolamine

* See Section 15 for more information.

Mutagenicity: Not hazardous by WHMIS/OSHA criteria.

Reproductive Effects: Not hazardous by WHMIS/OSHA criteria.

Developmental Effects:

Teratogenicity: Not hazardous by WHMIS/OSHA criteria.

Embryotoxicity: Not hazardous by WHMIS/OSHA criteria.

Respiratory Sensitization: Not hazardous by WHMIS/OSHA criteria.

Skin Sensitization: Not hazardous by WHMIS/OSHA criteria.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: May cause long term adverse effects in the aquatic environment.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:

This material must be disposed of in accordance with all local, state, provincial, and federal regulations.



MATERIAL SAFETY DATA SHEET

Aqua Mix Grout Release

Section 14: TRANSPORTATION INFORMATION

DOT Ground Classification

Not regulated

TDG Ground Classification

Not regulated

IATA Classification

Not regulated

IMDG Classification

Not regulated

Section 15: REGULATORY INFORMATION

Federal Regulations

Canadian: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

US: MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200).

SARA Title III

Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Diethanolamine	Not listed.	Not listed.	100	313

State Regulations

California Proposition 65:

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Global Inventories

Ingredient	Canada DSL/NDSL	USA TSCA
Diethanolamine	DSL	Yes.

All ingredients are on DSL/NDSL and TSCA inventories or are exempt from listing.

HMIS - Hazardous Materials Identification System

Health - 1 Flammability - 0 Physical Hazard - 0 PPE - B

NFPA - National Fire Protection Association:

Health - 1 Fire - 0 Reactivity - 0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):

Class D2B 3Skin/Eye Irritant

WHMIS Hazard Symbols:





MATERIAL SAFETY DATA SHEET

Aqua Mix Grout Release

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.

A1 3 Confirmed human carcinogen.

A2 3 Suspected human carcinogen.

A3 3 Animal carcinogen.

A4 3 Not classifiable as a human carcinogen.

A5 3 Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.

1 3 The agent (mixture) is carcinogenic to humans.

2A 3 The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.

2B 3 The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.

3 3 The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.

4 3 The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.

1 3 Known to be carcinogens.

2 3 Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

Expiry Date: September 21, 2014

Version #: 2.0

Prepared by: Nexreg Compliance Inc.
(519) 488-5126
www.nexreg.com

MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: AROMATIC 100/ANTI-STATIC

Product Description: Aromatic Hydrocarbon

Intended Use: Solvent

COMPANY IDENTIFICATION

Supplier: EXXONMOBIL CHEMICAL COMPANY

P.O. BOX 3272
HOUSTON, TX. 77253-3272 USA

24 Hour Health Emergency (800) 726-2015
Transportation Emergency Phone (800) 424-9300 or (703) 527-3887 CHEMTREC
Product Technical Information (281) 870-6000/Health & Medical (281) 870-6884
Supplier General Contact (281) 870-6000

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

Reportable Hazardous Substance(s) or Complex Substance(s)

Name	CAS#	Concentration*
SOLVENT NAPHTHA (PETROLEUM), LIGHT AROMATIC	64742-95-6	> 99%

Hazardous Constituent(s) Contained in Complex Substance(s)

Name	CAS#	Concentration*
CUMENE	98-82-8	< 1.1%
PSEUDOCUMENE (1,2,4-TRIMETHYLBENZENE)	95-63-6	< 32%
XYLENES	1330-20-7	< 2.2%

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

NOTE: This product contains STADIS 450 Conductivity Improver. The typical concentration is < 15 ppm.

SECTION 3 HAZARDS IDENTIFICATION

This material is considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

POTENTIAL PHYSICAL / CHEMICAL EFFECTS

Combustible. Material can release vapors that readily form flammable mixtures. Vapor accumulation could flash and/or explode if ignited. Material can accumulate static charges which may cause an ignition.

POTENTIAL HEALTH EFFECTS

Repeated exposure may cause skin dryness or cracking. If swallowed, may be aspirated and cause lung damage. May be irritating to the eyes, nose, throat, and lungs. May be irritating to the respiratory tract - effects are reversible. May cause central nervous system depression.

ENVIRONMENTAL HAZARDS

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Product Name: AROMATIC 100/ANTI-STATIC

Revision Date: 30 Apr 2010

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NFPA Hazard ID:	Health: 1	Flammability: 2	Reactivity: 0
HMIS Hazard ID:	Health: 1	Flammability: 2	Reactivity: 0

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 4 FIRST AID MEASURES

INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

Seek immediate medical attention. Do not induce vomiting.

NOTE TO PHYSICIAN

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: Combustible. Vapors are flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger.

Hazardous Combustion Products: Smoke, Fume, Incomplete combustion products, Oxides of carbon

FLAMMABILITY PROPERTIES

Product Name: AROMATIC 100/ANTI-STATIC

Revision Date: 30 Apr 2010

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Flash Point [Method]: >42C (108F) [ASTM D-56]

Flammable Limits (Approximate volume % in air): LEL: 0.9 UEL: 6.2

Autoignition Temperature: 479°C (894°F)

SECTION 6

ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for Personal Protective Equipment.

SPILL MANAGEMENT

Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapor; but may not prevent ignition in closed spaces. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do it without risk. Eliminate sources of ignition. Warn other shipping. If the Flash Point exceeds the Ambient Temperature by 10 degrees C or more, use containment booms and remove from the surface by skimming or with suitable absorbents when conditions permit. If the Flash Point does not exceed the Ambient Air Temperature by at least 10C, use booms as a barrier to protect shorelines and allow material to evaporate. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7

HANDLING AND STORAGE

HANDLING

Avoid contact with skin. Potentially toxic/irritating fumes/vapors may be evolved from heated or agitated material. Use only with adequate ventilation. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American

Product Name: AROMATIC 100/ANTI-STATIC

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Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

Loading/Unloading Temperature: [Ambient]

Transport Temperature: [Ambient]

Transport Pressure: [Ambient]

Static Accumulator: This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

STORAGE

The container choice, for example storage vessel, may effect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Storage containers should be grounded and bonded. Fixed storage containers, transfer containers and associated equipment should be grounded and bonded to prevent accumulation of static charge.

Storage Temperature: [Ambient]

Storage Pressure: [Ambient]

Suitable Containers/Packing: Railcars; Tank Trucks; Barges; Drums; Tankers

Suitable Materials and Coatings (Chemical Compatibility): Carbon Steel; Stainless Steel; Copper Bronze; Inorganic; Inorganic Zinc Coatings; Epoxy Phenolic; Polyamide Epoxy; Amine Epoxy; Viton

Unsuitable Materials and Coatings: Vinyl Coatings; Butyl Rubber; Natural Rubber; Ethylene-propylene-diene monomer (EPDM); Polyethylene; Polystyrene; PVC; Polyacrylonitrile; Polypropylene

SECTION 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Source	Form	Limit / Standard			NOTE	Source
CUMENE		TWA	245 mg/m ³	50 ppm	Skin	OSHA Z1
CUMENE		TWA	50 ppm		N/A	ACGIH
PSEUDOCUMENE (1,2,4-TRIMETHYLBENZENE)		TWA	25 ppm		N/A	ACGIH
SOLVENT NAPHTHA (PETROLEUM), LIGHT AROMATIC	Vapor.	RCP - TWA	19 ppm	100 mg/m ³	Total Hydrocarbon s	ExxonMobil
XYLENES		TWA	435 mg/m ³	100 ppm	N/A	OSHA Z1
XYLENES		STEL	150 ppm		N/A	ACGIH
XYLENES		TWA	100 ppm		N/A	ACGIH

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

Product Name: AROMATIC 100/ANTI-STATIC

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ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions.

Control measures to consider:

Adequate ventilation should be provided so that exposure limits are not exceeded. Use explosion-proof ventilation equipment.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

Half-face filter respirator

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

If prolonged or repeated contact is likely, chemical resistant gloves are recommended. If contact with forearms is likely, wear gauntlet style gloves.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

See Sections 6, 7, 12, 13.

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

GENERAL INFORMATION

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Physical State: Liquid
Form: Clear
Color: Colorless
Odor: Aromatic
Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15 C): 0.874
Density (at 15 °C): 873 kg/m³ (7.29 lbs/gal, 0.87 kg/dm³)
Flash Point [Method]: >42C (108F) [ASTM D-56]
Flammable Limits (Approximate volume % in air): LEL: 0.9 UEL: 6.2
Autoignition Temperature: 479°C (894°F)
Boiling Point / Range: 161C (322F) - 171C (340F)
Vapor Density (Air = 1): 4.2 at 101 kPa
Vapor Pressure: 0.262 kPa (1.97 mm Hg) at 20 C | 0.811 kPa (6.1 mm Hg) at 38C
Evaporation Rate (n-butyl acetate = 1): 0.27
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): N/D
Solubility in Water: Negligible
Viscosity: 0.75 cSt (0.75 mm²/sec) at 40 C | 0.9 cSt (0.9 mm²/sec) at 25C
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: -14°C (7°F)
Melting Point: N/D
Molecular Weight: 121
Hygroscopic: No
Coefficient of Thermal Expansion: 0.00085 V/VDEGC

SECTION 10	STABILITY AND REACTIVITY
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STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Avoid heat, sparks, open flames and other ignition sources.

MATERIALS TO AVOID: Nitric acid, Sulfuric acid, Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11	TOXICOLOGICAL INFORMATION
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ACUTE TOXICITY

<u>Route of Exposure</u>	<u>Conclusion / Remarks</u>
Inhalation	
Toxicity: Data available.	Minimally Toxic. Based on test data for the material.
Irritation: Data available.	Elevated temperatures or mechanical action may form vapors, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs. Based on test data for the material.
Ingestion	

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Toxicity: LD50 > 3000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Skin	
Toxicity: LD50 > 3160 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Irritation: Data available.	Mildly irritating to skin with prolonged exposure. Based on test data for structurally similar materials.
Eye	
Irritation: Data available.	May cause mild, short-lasting discomfort to eyes. Based on test data for the material.

CHRONIC/OTHER EFFECTS

For the product itself:

Vapor/aerosol concentrations above recommended exposure levels are irritating to the eyes and respiratory tract, may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects including death.

Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis.

Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

Contains:

CUMENE: Repeated inhalation exposure of cumene vapor produced damage in the kidney of male rats only. These effects are believed to be species specific and are not relevant to humans.

Additional information is available by request.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = NTP CARC

2 = NTP SUS

3 = IARC 1

4 = IARC 2A

5 = IARC 2B

6 = OSHA CARC

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

MOBILITY

Material -- Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Material -- Expected to be readily biodegradable.

Hydrolysis:

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Material -- Transformation due to hydrolysis not expected to be significant.

Photolysis:

Material -- Transformation due to photolysis not expected to be significant.

Atmospheric Oxidation:

Material -- Expected to degrade rapidly in air

OTHER ECOLOGICAL INFORMATION

VOC (EPA Method 24): 7.294 lbs/gal

SECTION 13

DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

REGULATORY DISPOSAL INFORMATION

RCRA Information: Disposal of unused product may be subject to RCRA regulations (40 CFR 261). Disposal of the used product may also be regulated due to ignitability, corrosivity, reactivity or toxicity as determined by the Toxicity Characteristic Leaching Procedure (TCLP). Potential RCRA characteristics: IGNITABILITY.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14

TRANSPORT INFORMATION

LAND (DOT)

Proper Shipping Name: PETROLEUM DISTILLATES, N.O.S.

Hazard Class & Division: COMBUSTIBLE LIQUID

ID Number: 1268

Packing Group: III

Product RQ: 4545.45 LBS - XYLENES

ERG Number: 128

Label(s): NONE

Transport Document Name: UN1268, PETROLEUM DISTILLATES, N.O.S., COMBUSTIBLE LIQUID, PG III, RQ (Xylenes)

Footnote: The flash point of this material is greater than 100 F. Regulatory classification of this material varies. DOT: Flammable liquid or combustible liquid. OSHA: Combustible liquid. IATA/IMO: Flammable liquid. This material is not regulated under 49 CFR in a container of 119 gallon capacity or less when transported solely by land, as long as the material is not a hazardous waste, a marine pollutant, or specifically listed as a hazardous substance.

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LAND (TDG)

Proper Shipping Name: PETROLEUM DISTILLATES, N.O.S.
Hazard Class & Division: 3
UN Number: 1268
Packing Group: III

SEA (IMDG)

Proper Shipping Name: PETROLEUM DISTILLATES, N.O.S.
Hazard Class & Division: 3
EMS Number: F-E, S-E
UN Number: 1268
Packing Group: III
Label(s): 3
Transport Document Name: UN1268, PETROLEUM DISTILLATES, N.O.S., 3, PG III, (42°C c.c.)

Footnote: This material is not classified as a marine pollutant according to the criteria presented in Chapter 2.9 of the IMDG code (H401 Only).

AIR (IATA)

Proper Shipping Name: PETROLEUM DISTILLATES, N.O.S.
Hazard Class & Division: 3
UN Number: 1268
Packing Group: III
Label(s) / Mark(s): 3
Transport Document Name: UN1268, PETROLEUM DISTILLATES, N.O.S., 3, PG III

SECTION 15	REGULATORY INFORMATION
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OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purpose, this material is classified as hazardous in accordance with OSHA 29CFR 1910.1200.

NATIONAL CHEMICAL INVENTORY LISTING: AICS, IECSC, DSL, EINECS, ENCS, KECI, PICCS, TSCA

EPCRA: This material contains no extremely hazardous substances.

CERCLA:

Chemical Name	CAS Number	Typical Value	Component RQ	Product RQ
CUMENE	98-82-8	< 1.1%	5000 LBS	454545.45 LBS
XYLENES	1330-20-7	< 2.2%	100 LBS	4545.45 LBS

CWA / OPA: This product is classified as an oil under Section 311 of the Clean Water Act (40 CFR 110) and the Oil Pollution Act of 1990. Discharge or spills which produce a visible sheen on either surface water, or in waterways/sewers which lead to surface water, must be reported to the National Response Center at 800-424-8802.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: Fire. Delayed Health.

SARA (313) TOXIC RELEASE INVENTORY:

Chemical Name	CAS Number	Typical Value
CUMENE	98-82-8	< 1.1%

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PSEUDOCUMENE (1,2,4-TRIMETHYLBENZENE)	95-63-6	< 32%
XYLENES	1330-20-7	< 2.2%

The following ingredients are cited on the lists below:

Chemical Name	CAS Number	List Citations
CUMENE	98-82-8	1, 4, 13, 16, 17, 18, 19
PSEUDOCUMENE (1,2,4-TRIMETHYLBENZENE)	95-63-6	1, 13, 16, 17, 18, 19
XYLENES	1330-20-7	1, 4, 5, 9, 13, 15, 16, 17, 18, 19

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

SECTION 16	OTHER INFORMATION
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N/D = Not determined, N/A = Not applicable

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Revision Changes:

Section 04: First Aid Inhalation - Header was modified.

Section 04: First Aid Ingestion - Header was modified.

Section 07: Handling and Storage - Handling was modified.

Section 07: Handling and Storage - Storage Phrases was modified.

Hazard Identification: Health Hazards was modified.

Section 07: Static Accumulator was modified.

Section 06: Accidental Release - Spill Management - Water was modified.

Section 16: Water Spill was modified.

PRECAUTIONARY LABEL TEXT:

Contains: SOLVENT NAPHTHA (PETROLEUM), LIGHT AROMATIC
CAUTION!

HEALTH HAZARDS

Repeated exposure may cause skin dryness or cracking. If swallowed, may be aspirated and cause lung damage.

PHYSICAL HAZARDS

Combustible. Material can accumulate static charges which may cause an ignition.

PRECAUTIONS

Avoid contact with skin. Potentially toxic/irritating fumes/vapors may be evolved from heated or agitated material. Use only with adequate ventilation. Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation.

FIRST AID

Product Name: AROMATIC 100/ANTI-STATIC

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Inhalation: Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

Eye: Flush thoroughly with water. If irritation occurs, get medical assistance.

Oral: Seek immediate medical attention. Do not induce vomiting.

Skin: Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

FIRE FIGHTING MEDIA

Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

SPILL/LEAK

Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. Prevent entry into waterways, sewer, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do it without risk. Eliminate sources of ignition. Warn other shipping. Report spills as required to appropriate authorities. If the Flash Point exceeds the Ambient Temperature by 10 degrees C or more, use containment booms and remove from the surface by skimming or with suitable absorbents when conditions permit. If the Flash Point does not exceed the Ambient Air Temperature by at least 10C, use booms as a barrier to protect shorelines and allow material to evaporate. Seek the advice of a specialist before using dispersants.

This warning is given to comply with California Health and Safety Code 25249.6 and does not constitute an admission or a waiver of rights. This product contains a chemical known to the State of California to cause cancer.

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MATERIAL SAFETY DATA SHEET

M & R Environmental
4623 Byrne Road
Burnaby, B.C.
604-876-0506

Ecofreez Universal Coolant
Precharged, Fully formulated Universal
(Pre-diluted, 50/50)

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product/Chemical Name:	Ecofreez Universal Coolant
Product Description:	Ethylene Glycol, Ethylene Glycol Solution, Universal Pre-diluted Coolant (50/50)
Product Use:	Automotive Cooling Systems
Chemical Family:	Inhibited Ethylene Glycol and Distilled Water Solution
CAS Registry:	Mixture
Manufacturer:	M & R Environmental 4623 Byrne Road, Burnaby, B.C. V5J 3H6
Emergency Number:	604-618-3714

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENTS</u>	<u>CAS NO</u>	<u>%</u>
*1.2 ethanediol (Ethylene Glycol)	107-21-1	35-50%
Other glycols	Not Applicable	0-3%
Distilled waster	007732-18-5	<45%
Nitric acid potassium	7757-79-1	-
Sodium nitrite	7632-00-0	-
Boric Acid (H3BO3)	10043-35-3	-
1H-Benzotriazole, 6(or 7)-methyl-, sodium salt (1:1)	64665-57-2	-
Silicic acid	6834-92-0	-
Potassium hydroxide	1310-58-3	-

(*) Confidential information under claim #5957. Exemption granted by the Hazardous Material Information Review Board on June 8, 2006.

There are no ingredients present which, within the current knowledge of the supplier and in the Concentrations applicable are classified as hazardous to health or the environment and hence require reporting in this section.

SECTION 3 – HAZARDOUS IDENTIFICATION

Health: 2
Flammability: 0
Reactivity: 0
Special: none

0 = minimal, 1 = slight, 2 = moderate, 3 = serious, 4 = serious

HMIS H #2 F #0 R #0* PPE* *Sec. 8

Route(s) of Entry
Inhalation: Yes
Skin: Yes
Ingestion: Yes
Eyes: Yes
Target Organs: Kidneys and Liver

Emergency Overview: WARNING!
HARMFUL OR FATAL IF SWALLOWED. MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. May cause target organ damage, based on animal data.

Potential Acute Health Effects: See section 11 for more detailed information on effects and symptoms.

Toxic by ingestion. May cause abdominal discomfort or pain, nausea, vomiting, dizziness, central nervous system effects and coma. Cardiac failure, pulmonary edema and severe kidney damage may develop.
May cause mild irritation.
May cause mild skin irritation.
Unlikely to be inhaled because of physical characteristics, however, heated material may produce vapours, which may cause irritation to lungs if inhaled excessively. Inhalation, particularly of mist, may cause irritation of the nose and throat with headache. High vapour concentrations may produce nausea, vomiting, headache, dizziness and irregular eye movement.

Note to Physician: The signs and symptoms in ethylene glycol poisoning are those of metabolic acidosis, central nervous system depression and kidney injury. Clinical chemistry may reveal anion-gap metabolic acidosis and uremia. Treatment with ethanol to inhibit the metabolism of glycol to oxalate. Early administration of ethanol may counter the toxic effects of hemodialysis or peritoneal dialysis has been of benefit. Pre-existing skin, eye, and respiratory disorders may be aggravated by exposure to this product. Treat symptomatically and supportively.

SECTION 4 – FIRST AID MEASURES

Emergency and First Aid Procedures

Eye contact: Immediately flush with large quantities of water for at least 15 minutes and get medical attention.

Skin contact: Remove excess with cloth or paper towels. Wash thoroughly with soap and water. If irritation persists, get medical attention.

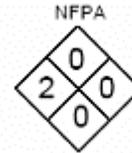
Ingestion: Immediately contact a physician, poison control center or emergency treatment center. DO NOT induce vomiting. Aspiration Hazard. Product may be inhaled into lungs if vomited.

Inhalation: Remove to fresh air. Restore and/or support breathing as required. Keep victim warm and at rest.

Note to Physicians: Treat symptomatically

Special Precautions/Procedures: None known

SECTION 5 – FIRE FIGHTING MEASURES



Unusual Fire Fighting Procedures:	None known
Flash Point:	None
Flash Point Method:	Not applicable
Burning Rate:	Not applicable
Auto ignition Temperature:	400 C
Flammable limits in air (% by volume)	Not determined
LEL:	Not determined
UEL:	Not determined
Flammability Classification:	Does not burn but can emit carbon oxides, smoke and irritating vapors as products of incomplete combustion.
Extinguishing Media:	For large fires use alcohol-type or all purpose foam. For small fires use water spray, dry chemical, foam or carbon dioxide to extinguish.
Unusual Fire or Explosion Hazards:	Not a product presenting risks of explosion.
Fire-Fighting Instructions:	According to the National Fire Protection Association Guide, use water spray dry chemical, foam or carbon dioxide. A direct stream of water or foam may cause frothing. Use water spray to disperse the vapors and to provide protection for per attempting to stop the leak.
Fire Fighting Equipment:	Because fire may produce carbon oxides, smoke and irritating vapors, wear a self

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill/Leak Procedures:	Ventilate area. Avoid breathing vapor. Wear appropriate personal protective equipment, including appropriate respiratory protection. Contain spill if possible. Wipe up or absorb on suitable material and shovel up. Prevent entry into sewers and waterways. Avoid contact with skin, eyes or clothing.
Regulatory Requirements:	Dispose of in accordance with regional regulations. . Contact BC Environmental for proper disposal

SECTION 7 - HANDLING AND STORAGE

Handling Precautions:	Minimum feasible handling temperatures should be maintained. Empty containers contain product residue and may be dangerous.
Storage Requirements:	Periods of exposure to high temperature should be minimized. Water contamination should be avoided. Keep containers away from open flames. ETHYLENE GLYCOL BASE – Ethylene Glycol has produced birth defects in rodents. No data available on humans.



SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:	For normal application, special ventilation is not necessary. If user's operations generate vapors of mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. Make-up air should always be supplied to balance air removed by exhaust ventilation. Ensure that eyewash station and safety shower are close to work-station.
Respiratory Protection:	Supplied air respiratory protection for cleaning large spills or upon entry into tanks, vessels, or other confined spaces. Use a NIOSH approved organic vapor and gas respirator with mist filter.
Eye Protection:	Wear Chemical type goggles or face shield optional.
Protective Clothing/Equipment:	Wear Neoprene, butyl rubber or equivalent protective gloves, boots, aprons and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles.
Work and Hygienic Practices:	Exposed employees should exercise reasonable personal cleanliness: this includes cleansing exposed skin areas several times daily with soap and water and laundering or dry cleaning soiled work clothing at least weekly.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance and odor:	Liquid with a mild odor (contains dyes in one of several colors)
Odor Threshold:	Not available
Boiling Point (760 mm Hg):	226 degrees F min.
Freezing/Melting Point:	-34 F max.
Specific Gravity (water = 1):	1.110 -1.145
Vapor Density (air = 1):	1.8
Percent Volatile by Volume:	NIL
Evaporation Rate (butyl acetate = 1)	Not determined
Solubility in Water (% by wt):	100%
Vapor Pressure (at 20 C):	18mm Hg
pH:	7.5 – 11.0
Viscosity SUS @ 100 F:	Less than 20cst

SECTION 10 – STABILITY AND REACTIVITY

Stability:	Stable
Polymerization:	Does not occur
Chemical Incompatibilities:	Normally unreactive, but try to avoid strong oxidizers, strong acids and strong bases at high temperatures
Conditions to avoid:	High temperatures above 413C (775F) (product can decompose)
Hazardous decomposition products:	Carbon dioxide, carbon monoxide

SECTION 11 – TOXICOLOGICAL INFORMATION

Eye Effects:	Believed to cause slight eye irritation
Skin Effects:	Can be irritating to skin upon prolonged contact
Acute Inhalation Effects:	Drowsiness, narcosis, and unconsciousness possible upon exposure to high concentrations in poorly ventilated confined spaces
Acute Oral Effects:	Can cause irritation to mouth, throat and stomach
Chronic Effects:	Liver and kidney damage in a 2 year rat feeding study using 1-2% Ethylene Glycol. Oral administration of very high doses of Ethylene Glycol produced birth defects in laboratory animals.
Carcinogenicity:	Neither product nor its ingredients are listed by IARC, NTD or OSHA
Mutagenicity:	Not mutagenic
Teratogenicity:	Not Teratogenic
Embryotoxicity:	Maternal toxicity was not significant in studies

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity:	Oral: Believed to be 4.7-8.4 g/kg (rat); moderately toxic Inhalation: Not determined Dermal: Believed to be 1-3 g/kg (rabbit); slightly toxic Other: Not determined Irritation Index/Estimation of Irritation (Species) Skin: Believed to be 0.5-1.8/8.0 (rabbit); slightly irritating Eyes: Believed to be 15-25/110 (rabbit); slightly irritating
Soil Absorption/Mobility:	Not determined

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal Method:	Dispose of waste in accordance with B.C. Provincial Environmental regulations. Consult your local or regional authority
Disposal Regulatory Requirements:	Disposal of waste disposal lies with the owner of the waste. Contact M & R Environmental regarding proper disposal or recycling
Container Cleaning and Disposal:	containers should be cleaned or residual product before disposal and disposed of in accordance with all applicable laws and regulations.

SECTION 14 – TRANSPORT INFORMATION

Dot Proper Shipping Name:	Not Regulated
Shipping Symbols:	Not Applicable
Hazard Class:	Not Applicable
UN Number:	Not regulated unless shipping container holds at least 10,539 pounds
Packing Group:	Not Applicable
Label	Not Applicable
Special Provisions (172.102)	Not Applicable
Bulk Shipments	
DOT Proper Shipping Name:	Environmentally hazardous substance liquid, n.o.s. (Ethylene glycol)
UN Number:	UN 3082
Label Requirement:	Class 9, UN 3082

SECTION 15 – REGULATORY INFORMATION

Other Regulations:

This product is acceptable for use under the provisions of WHMIS-CPR. All components of this formulation are listed on the CEPA-DSL (Domestic Substances List). This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

WHMIS:

D2A – Chronic Toxic Effects
D2B – Irritating to eyes and skin

SECTION 16 – OTHER INFORMATION

Prepared by: M & R Environmental – RJE on 09/02/10

Additional Hazard Rating Systems: None

Disclaimer: THE INFORMATION GIVEN HEREIN IS GIVEN IN GOOD FAITH AND FROM SOURCES WE BELIEVE RELIABLE. BUT NO WARRANT, EXPRESS OR IMPLIED REGARDING ITS CORRECTNESS IS MADE.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we don't assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

This MSDS was prepared and is to be used only for this product.

Consult Company listed in Section 1 for further information.

MATERIAL SAFETY DATA SHEET

SPOTCHECK® PENETRANT SKL-SP1

1. *Company:* MAGNAFLUX
Address: 3624 West Lake Avenue, Glenview, Illinois 60026
Telephone No.: 847-657-5300 (Off-Hour Emergency Number - CHEMTREC - 1-800-424-9300).
Product Use: Visible inspection penetrant.
Packages: 1 gallon and 5 gallon pails, 20 gallon drums, 55 gallon drums, Totes, aerosols, pens
NFPA Rating: Health 1, Flammability 1, (Aerosol Flammability 4), Reactivity 0
PIN (Canada): None
Revision date: July 14, 2008

2. HAZARDOUS INGREDIENTS

<u>Ingredient</u>	<u>Wt./Wt.%</u>	<u>CAS #</u>	<u>TLV</u>	<u>PEL</u>	<u>LD₅₀</u>	<u>LC₅₀</u>
White mineral oil (petroleum)	60-80	8042-47-5 or 64742-47-8	5 mg/m ³	5 mg/m ³	not avail.	not avail.
Phthalic Esters	5-25	71888-89-6	5mg/m ³	not avail.	not avail.	not avail.
Liquefied petroleum gasses (propellant, aerosol only)*	30	68476-86-8	not avail.	1000 ppm	not avail.	not avail.

*Aerosol Package Only

3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

Bland, oily liquid which may irritate the skin and eyes. Bulk material is difficult to ignite, but will burn vigorously if engulfed in fire. Aerosol is extremely flammable.

POTENTIAL HEALTH EFFECTS, AND SIGNS AND SYMPTOMS OF EXPOSURE:

- Skin contact:* Can irritate by removing natural skin oils on long or repeated exposures.
Eyes: May irritate.
Inhalation: Not significant at room temperatures. When heated or sprayed, vapors may cause dizziness and nausea.
Ingestion: Not significant in small (mouthful) amounts.
Medical conditions known to be aggravated by exposure to product: None

4. FIRST AID

- Skin Contact:* Wash off with soap and water. Use soothing lotion.
Eyes: Rinse carefully under upper and lower eyelids using plenty of water.
Inhalation: Remove to fresh air if dizzy or nauseated.
Ingestion: Do not induce vomiting. Accidental ingestion of a small mouthful is not expected to cause significant harm.
NOTE: In all severe cases, contact physician immediately. Local telephone operators can furnish number of regional poison control center.

5. FIRE HAZARD

- Conditions of flammability:* Aerosol: Spraying near an ignition source will ignite spray mist.
Bulk: None unless heated over 200°F (93°C) near ignition source.
Flash point (Bulk): Min. 200°F (93°C) (Pensky-Martens closed cup)
Flammable limits in air: 1% to 6%
Extinguishing media: Carbon dioxide, foam
Special fire fighting procedures: Keep containers cool with water spray. Do not spray water directly on burning SKL-SP1. It may float and spread the fire.
Hazardous combustion products: Smoke, soot, oxides of carbon and nitrogen.
Unusual fire hazards: Aerosol cans may burst at temperatures over 130°F (54°C) and spray contents into a fire.

6. ACCIDENTAL RELEASE MEASURES

Mop up or sweep up with absorbent. (For disposal, see Section 13.)

7. HANDLING AND STORAGE

Store away from heat source. Avoid eye contact. Avoid repeated or prolonged skin contact. Avoid breathing spray mist. Do not spray around arcs or flames.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Controls:* None, unless sprayed. Use where ventilation will carry spray mist away from occupied areas.
Personal protection: Wear safety glasses to protect eyes. Wear nitrile rubber gloves if hand exposure is unavoidable. Respirator with filter if sprayed in enclosed unventilated space.

MAGNAFLUX

A Division of Illinois Tool Works Inc.
3624 WEST LAKE AVENUE ■ GLENVIEW, ILLINOIS 60026
TEL 847.657.5300 ■ FAX 847.657.5388
www.magnaflux.com

9. **PHYSICAL PROPERTIES**

Initial boiling point (bulk) Min. 455°F (230°C) (ASTM D-86)
Vapor pressure: Aerosol: 60 psi @ 75°F (24°C) Bulk: <0.10 mm @ 70°F (21°C)
Percent volatile: None (30% in aerosol) *Vapor density:* Heavier than air
Density/sp. gravity: 0.89 *Evaporation rate:* Negligible
Water solubility: 0 *Appearance:* Dark red oily liquid
pH: Neutral *Odor:* Mild oily odor

10. **STABILITY AND REACTIVITY**

Stability: Stable
Incompatibility: None
Hazardous decomposition products: Soot, oxides of carbon and nitrogen when burning
Reactivity: None

11. **TOXICOLOGICAL INFORMATION**

Carcinogenicity: Contains no known or suspected carcinogens listed with OSHA, IARC, NTP, or ACGIH.
Threshold limited value: 5 mg/m³ for oily mist.
WHMIS information (Canada): No human information is available for teratogenicity, reproductive toxicity, and mutagenicity. No reports of toxicological synerism were located. The ingredients have not been found to show skin sensitization.

12. **ECOLOGICAL INFORMATION**

No data is available on SKL-SP1. It floats on water and can be skimmed off. Its low vapor pressure may exempt it from VOC restrictions. The hydrocarbon propellant is not an ozone depleter.

13. **DISPOSAL**

As a non-hazardous oil waste, incinerate or send to waste handler who can blend it into secondary fuels. Empty aerosol cans before disposal.

14. **TRANSPORTATION**

U.S. DOT: 49 CFR 172.101 Hazardous Materials Table

	<u>1 gal, 5 gal</u>	<u>20 gal, 55 gal. & Totes</u>
<u>Aerosol</u>		
<i>Proper shipping name:</i>	None, not restricted	None, not restricted
<i>Consumer commodity</i>		
<i>Hazard class or division:</i>	None	None
ORM-D		
<i>Identification No.:</i>	None	None
None		
<i>Packing Group:</i>	None	None
None		

IATA: List of Dangerous Goods

	<u>1 gal, 5 gal</u>	<u>Bulk</u>
<u>Aerosol</u>		
<i>Proper shipping name:</i>	None, not restricted	None, not restricted
Aerosols, flammable		
<i>Hazard class or division:</i>	None	None
2.1		
<i>Identification No.:</i>	None	None
UN1950		
<i>Packing Group:</i>	None	None
-		

IMDG: General Index

	<u>1 gal, 5 gal</u>	<u>Bulk</u>
<u>Aerosol</u>		
<i>Proper shipping name:</i>	None, not restricted	None, not restricted
AEROSOLS		
<i>Hazard class or division:</i>	None	None
2.1		
<i>Identification No.:</i>	None	None
UN1950		
<i>Packing Group:</i>	None	None
-		

15. **REGULATORY INFORMATION**

TSCA: All ingredients are listed in TSCA inventory

CERCLA: Not reportable.

SARA TITLE III, Section 313: No reportable ingredients.

WHMIS Class (Canada): Bulk: D-2A Aerosol: A, B-5, D-2A

Note: This MSDS has been prepared to meet WHMIS (Canada) requirements with the exception of using 16 headings.

16. **OTHER INFORMATION**

Revision Statement: Section: 2

Supersedes: MSDS dated May 1, 2006

Prepared by: Tamie Simmons, Research Manager

MATERIAL SAFETY DATA SHEET - 8 Point

SECTION 1 – PRODUCT INFORMATION

Mascoat
Houston, TX 77041

Emergency phone: (713) 465-0304
Fax: (713) 465-0302
Date Reviewed: September 2010

Product Name: Mascoat Marine-DTM
Product ID: MM-DTM
Common Chemical Name: Acrylic Insulation Coating
Synonyms: None
Molecular Formula: Mixture

Thermal Insulating Material

HEALTH	1
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FLAMMABILITY	0
---------------------	----------

PHYSICAL HAZARD	0
------------------------	----------

Personnel Protection	G
-----------------------------	----------

Eye protection
Gloves
Dust mask

SECTION 2 – HAZARDOUS INGREDIENTS

<u>Cas Number</u>	<u>Ingredients</u>	<u>% Range</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
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This product does not contain any hazardous ingredients in reportable quantities.

SECTION 3 – PHYSICAL PROPERTIES

Color :	White	Form/Appearance:	Thick emulsion
Odor:	Slight ammonia		mixture
Boiling Point:	Approx. 212°F (100°C)	Melting Point:	N/A
Freeze Point	32°F (0°C)	Evaporation Rate (Butyl Ace =1):	<1
Specific Gravity:	0.61	Solubility in H₂O:	Dilutable
Pounds/Gallon:	5.0-5.1 lbs/gal. (0.6 kg/l)	Volume Solids:	80-82%
Non Volatile Solids:	53.3%	VOC Content:	0.06 lbs/gal (7.1 g/l)

SECTION 4 – FIRE FIGHTING MEASURES

Flash Point: Noncombustible

Auto ignition: N/A

Extinguished Media: (for dried film) carbon dioxide, water, dry chemical, or alcohol foam.

Special Fire Fighting Procedures: Full protective equipment including self-contained breathing apparatus should be used. If water is used, fog nozzles may be preferable. Water may be used to cool closed containers to prevent pressure buildup.

Unusual Fire and Explosion: Liquid product will not burn but may spatter if temperature exceeds boiling point. Extreme heat may cause closed containers to burst. Dried film of product is capable of burning, giving off oxides of carbon/nitrogen.

SECTION 5 – REACTIVITY DATA

Stability Data: Stable

Incompatibility: Solvents will coagulate the product.

Conditions or Hazards to Avoid: Extreme temperatures above 500°F (260°C)

Hazardous Decomposition: Hazardous polymerization will not occur.

Corrosive Properties: Not corrosive

Oxidizer Properties: Not an oxidizer

Chloride Properties: None

SECTION 6 – HEALTH HAZARD AND FIRST AID DATA

Routes of entry: skin-possible ingestion-possible inhalation-possible

Health Hazards Acute - In a confined area vapors in high concentration can bother some personnel. Extended periods of exposure without PPE may result in health concerns.

Carcinogenicity: N/A

SECTION 6 – HEALTH HAZARD AND FIRST AID DATA (cont.)

First aid procedure:	<p>Eye exposure - Flush eyes with water immediately. Get immediate medical attention.</p> <p>Skin contact - Wash area with soap and water. If redness persists, seek medical attention.</p> <p>Ingestion – If swallowed, dilute with water. DO NOT INDUCE VOMITING. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get immediate medical attention.</p> <p>Inhalation – Move to fresh air. Aide in breathing if needed and get immediate medical attention.</p> <p>Notes to Physicians – None known</p> <p>Medical Conditions Aggravated by Exposure – None known</p> <p>Special Precautions – None</p>
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SECTION 7 – ACCIDENTAL RELEASE MEASURES

Steps if material is released:	Spills should be contained and placed in suitable containers for disposal by a licensed facility.
Waste Disposal Methods:	Waste from this material is not hazardous as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Incinerate in approved facility. Do not incinerate closed containers. Dispose of in accordance with Federal, State, and Local regulations .
Precaution in handling and storage:	Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using. Protect against dust which may be generated by sanding or abrading the dried film.
Other Precautions:	Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. <i>Keep out of reach of children.</i>
General:	Protect from freezing.
Other:	Keep out of direct sunlight in storage area.

SECTION 8 – PERSONNEL PROTECTION

Clothing:	Gloves, coveralls, apron, and boots necessary to prevent contact.
Respiratory Protection:	Ventilation and dust mask recommended during application. If sprayed in confined area, respiratory equipment is recommended due to slight ammonia odor.
Ventilation:	Local exhaust - <i>preferable</i> Mechanical (general) - <i>acceptable</i>
Protective Gloves:	Preferred
Eye Protection:	Spectacles with unperforated side-shields.
Other Protective Equipment:	None needed

OTHER

Special Handling:	DO NOT LET PRODUCT FREEZE.								
Hazardous ratings:	Mascoat currently uses the National Paint and Coatings Association rating system. The use of an asterisk (*) in the HMIS rating indicates the potential for chronic health effects.								
HMIS:	<table> <thead> <tr> <th>Health</th> <th>Fire</th> <th>Reactivity</th> <th>Special</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table>	Health	Fire	Reactivity	Special	1	0	0	0
Health	Fire	Reactivity	Special						
1	0	0	0						
Hazardous rating OSHA:	The product is considered NON HAZARDOUS by the OSHA Hazard Communication Standard.								
Trademark:	Mascoat® is a registered trademark of Mascorp, Ltd. - Houston, TX.								
Important:	While descriptions, designs, data and other information contained herein are presented in good faith and believed to be accurate, it is provided for guidance only. Because many factors may influence the processing or application/use, Mascoat recommends that tests are made for the suitability of the product in the intended purpose. The intended use of this document is for health and handling procedures and not intended for an ingredients list for reformulation.								
Shipping:	This product is acceptable for shipment as non-hazardous via motor, air or ocean freight without any specialized handling. (Class 55)								



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ Marine Color/Gloss Restorer, PN09089
MANUFACTURER: 3M
DIVISION: Marine & Specialty Vehicle
ADDRESS: 3M Center, St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 02/09/12
Supersedes Date: 10/24/11

Document Group: 20-5916-0

Product Use:

Specific Use: Color/Gloss Restorer
Intended Use: Marine

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
WATER	7732-18-5	15 - 40
STODDARD SOLVENT	8052-41-3	15 - 40
ALUMINUM OXIDE	1344-28-1	10 - 30
POLYETHYLENE GLYCOL SORBITAN MONOOLEATE	9005-65-6	3 - 7
WHITE MINERAL OIL (PETROLEUM)	8042-47-5	1 - 5
ALKYLOLAMMONIUM SALT (NJTSRN: 800963-5050)	Trade Secret	0.5 - 1.5
1,2,4-TRIMETHYLBENZENE	95-63-6	< 1.5
CUMENE	98-82-8	< 0.07
NAPHTHALENE	91-20-3	< 0.07

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste
Odor, Color, Grade: Cream color; kerosene odor
General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Combustible liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Contains a chemical or chemicals which can cause cancer. May cause target organ effects.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Mild Eye Irritation: Signs/symptoms may include redness, pain, and tearing.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Inhalation:

Intentional concentration and inhalation may be harmful or fatal.

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Prolonged or repeated exposure may cause:

Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

Prolonged or repeated exposure may cause:

Hematopoietic Effects: Signs/symptoms may include generalized weakness, fatigue and alterations in numbers of circulating blood cells.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Class Description</u>	<u>Regulation</u>
NAPHTHALENE	91-20-3	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
NAPHTHALENE	91-20-3	Anticipated human carcinogen	National Toxicology Program Carcinogens

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature

No Data Available

Flash Point

135 °F [*Test Method:* Tagliabue Closed Cup]

Flammable Limits(LEL)

No Data Available

Flammable Limits(UEL)

No Data Available

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Combustible liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Dust clouds of this material in combination with an ignition source may be explosive. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard.

6.2. Environmental precautions

For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Clean-up methods

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill.

Contain spill. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Seal the container.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Avoid static discharge. Avoid eye contact with vapors, mists, or spray. Avoid breathing of dust created by cutting, sanding, grinding or machining. For industrial or professional use only. Avoid contact with oxidizing agents. Avoid skin contact. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment. Do not ingest. Keep container closed when not in use.

7.2 STORAGE

Store away from acids. Store away from heat. Store away from areas where product may come into contact with food or pharmaceuticals. Store away from oxidizing agents. Keep container tightly closed. Keep container in well-ventilated area.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use in an enclosed process area is recommended. Provide appropriate local exhaust for cutting, grinding, sanding or machining. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment. Provide appropriate local exhaust ventilation on open containers.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Safety Glasses with side shields
Indirect Vented Goggles

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Fluoroelastomer
Nitrile Rubber

8.2.3 Respiratory Protection

Avoid breathing of dust created by cutting, sanding, grinding or machining.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with

OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P100 particulate prefilters
 . Select and use respiratory protection to prevent an inhalation exposure based on the results of an exposure assessment. Consult with your respirator manufacturer for selection of appropriate types of respirators.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
ALUMINUM OXIDE	CMRG	TWA	1 fiber/cc	
ALUMINUM OXIDE	OSHA	TWA, respirable fraction	5 mg/m3	
ALUMINUM OXIDE	OSHA	TWA, as total dust	15 mg/m3	
CUMENE	ACGIH	TWA	50 ppm	
CUMENE	OSHA	TWA	245 mg/m3	Skin Notation*
MINERAL OILS, HIGHLY-REFINED OILS	ACGIH	TWA, inhalable fraction	5 mg/m3	
NAPHTHALENE	ACGIH	TWA	10 ppm	Skin Notation*
NAPHTHALENE	ACGIH	STEL	15 ppm	Skin Notation*
NAPHTHALENE	OSHA	TWA	50 mg/m3	
Paraffin oil	OSHA	TWA, as mist	5 mg/m3	
PETROLEUM DISTILLATES	OSHA	TWA	2000 mg/m3	
STODDARD SOLVENT	ACGIH	TWA	100 ppm	
STODDARD SOLVENT	OSHA	TWA	2900 mg/m3	
WHITE MINERAL OIL (PETROLEUM)	CMRG	TWA	5 mg/m3	
WHITE MINERAL OIL (PETROLEUM)	CMRG	STEL	10 mg/m3	

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- CMRG: Chemical Manufacturer Recommended Guideline
- OSHA: Occupational Safety and Health Administration
- AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Paste
Odor, Color, Grade:	Cream color; kerosene odor
General Physical Form:	Liquid
Autoignition temperature	<i>No Data Available</i>
Flash Point	135 °F [<i>Test Method:</i> Tagliabue Closed Cup]
Flammable Limits(LEL)	<i>No Data Available</i>
Flammable Limits(UEL)	<i>No Data Available</i>
Boiling Point	>= 195 °F
Density	1.16 g/ml
Vapor Density	>=1 [<i>Ref Std:</i> AIR=1]
Vapor Pressure	<i>No Data Available</i>
Specific Gravity	1.1 [<i>Ref Std:</i> WATER=1]
pH	7.5 - 8.5
Melting point	<i>No Data Available</i>

Solubility in Water	Appreciable
Evaporation rate	No Data Available
Hazardous Air Pollutants	0.6 % weight [Test Method: Calculated]
Volatile Organic Compounds	356 g/l [Test Method: calculated SCAQMD rule 443.1]
Volatile Organic Compounds	2.98 lb/gal [Test Method: calculated SCAQMD rule 443.1]
Volatile Organic Compounds	30.7 % weight [Test Method: calculated per CARB title 2]
Kow - Oct/Water partition coef	No Data Available
Percent volatile	63.7 % weight
VOC Less H2O & Exempt Solvents	577 g/l [Test Method: calculated SCAQMD rule 443.1]
Viscosity	40000 - 60000 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

Heat

10.2 Materials to avoid

Strong oxidizing agents

Strong acids

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable), D018 (Benzene)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

LB-T100-0370-5, 60-4300-5080-1

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
ALUMINUM OXIDE	1344-28-1	10 - 30
ALUMINUM OXIDE (ALUMINUM OXIDE (FIBROUS FORMS ONLY))	1344-28-1	10 - 30
1,2,4-TRIMETHYLBENZENE	95-63-6	< 1.5

STATE REGULATIONS

Contact 3M for more information.

CALIFORNIA PROPOSITION 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
CUMENE	98-82-8	**Carcinogen
NAPHTHALENE	91-20-3	**Carcinogen

** WARNING: contains a chemical which can cause cancer.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

WHMIS: Hazardous

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 2 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Section 3: Immediate physical hazard(s) was modified.

Section 2: Ingredient table was modified.

Copyright was modified.

Section 15: TSCA section 12[b] text was deleted.

Section 15: TSCA section 12[b] information was deleted.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ Machine Polish, P.N. 05996, 05986, 39809

MANUFACTURER: 3M

DIVISION: Automotive Aftermarket

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 01/18/10

Supersedes Date: 02/13/08

Document Group: 24-5408-0

Product Use:

Intended Use: Automotive

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
WATER	7732-18-5	40 - 70
DISTILLATES (PETROLEUM), ACID TREATED, LIGHT	64742-14-9	7 - 13
ALUMINUM OXIDE	1344-28-1	5 - 10
DECAMETHYLCYCLOPENTASILOXANE	541-02-6	3 - 7
HYDROTREATED LIGHT PETROLEUM DISTILLATES	64742-47-8	3 - 7
DODECAMETHYLCYCLOHEXASILOXANE	540-97-6	1 - 5
ALUMINUM SILICATE CLAY (CERAMIC MATERIALS AND WARES)	66402-68-4	1 - 5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Emulsion

Odor, Color, Grade: Slight solvent odor, grey liquid

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Combustible liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

May cause target organ effects.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Prolonged or repeated exposure may cause:

Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	<i>No Data Available</i>
Flash Point	170 °F [<i>Test Method:</i> Closed Cup]
Flammable Limits - LEL	<i>No Data Available</i>
Flammable Limits - UEL	<i>No Data Available</i>

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Combustible liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures:

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode.

For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Avoid breathing of vapors, mists or spray. Keep out of the reach of children. Avoid contact with oxidizing agents. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Use in a well-ventilated area.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.

The following eye protection(s) are recommended: Safety Glasses with side shields, Indirect Vented Goggles.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Nitrile Rubber.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P100 particulate prefilters. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Do not ingest.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
ALUMINUM OXIDE	ACGIH	TWA, particulate matter, < 1% crystalline silica	10 mg/m ³	Table A4
ALUMINUM OXIDE	CMRG	TWA	1 fiber/cc	
ALUMINUM OXIDE	OSHA	TWA, respirable	5 mg/m ³	Table Z-1
ALUMINUM OXIDE	OSHA	TWA, Vacated, as dust	10 mg/m ³	
ALUMINUM OXIDE	OSHA	TWA, as total dust	15 mg/m ³	Table Z-1
DECAMETHYLCYCLOPENTASILOXANE	CMRG	TWA	10 ppm	
HYDROTREATED LIGHT PETROLEUM DISTILLATES	CMRG	TWA	300 ppm	
OIL MIST, MINERAL	ACGIH	TWA, as mist	5 mg/m ³	
OIL MIST, MINERAL	ACGIH	STEL, as mist	10 mg/m ³	

OIL MIST, MINERAL OSHA TWA, as mist 5 mg/m3 Table Z-1
 VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists
 CMRG: Chemical Manufacturer Recommended Guideline
 OSHA: Occupational Safety and Health Administration
 AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Emulsion
Odor, Color, Grade:	Slight solvent odor, grey liquid
General Physical Form:	Liquid
Autoignition temperature	<i>No Data Available</i>
Flash Point	170 °F [<i>Test Method:</i> Closed Cup]
Flammable Limits - LEL	<i>No Data Available</i>
Flammable Limits - UEL	<i>No Data Available</i>
Boiling point	375 °F
Density	8.12 lb/gal
Vapor Density	<i>No Data Available</i>
 Vapor Pressure	 <i>No Data Available</i>
 Specific Gravity	 0.96 [<i>Ref Std:</i> WATER=1]
pH	7.5 - 8.5
Melting point	<i>Not Applicable</i>
 Solubility in Water	 Negligible
Evaporation rate	<i>No Data Available</i>
Hazardous Air Pollutants	0.00072 lb HAPS/gal
Volatile Organic Compounds	14.66 % [<i>Test Method:</i> calculated SCAQMD rule 443.1] [<i>Details:</i> excluding exempt compounds]
 Volatile Organic Compounds	 140.95 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1] [<i>Details:</i> excluding exempt compounds]
 Kow - Oct/Water partition coef	 <i>No Data Available</i>
VOC Less H2O & Exempt Solvents	396.31 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Viscosity	8000 - 14000 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

None known

10.2 Materials to avoid

None known

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Formaldehyde	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Oxides of Nitrogen	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in an industrial or commercial facility. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

LB-K100-0431-6, 60-4550-3566-1, 60-4550-3567-9, 60-4550-3568-7

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 1 Flammability: 2 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification

Health: 1 Flammability: 1 Reactivity: 0 Protection: X - See PPE section.

Hazardous Material Identification System (HMIS(r)) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency

situations. HMIS(r) ratings are to be used with a fully implemented HMIS(r) program. HMIS(r) is a registered mark of the National Paint and Coatings Association (NPCA).

Revision Changes:

Section 1: Product name was modified.

Copyright was modified.

Page Heading: Product name was modified.

Section 9: Property description for optional properties was modified.

Section 1: Initial issue message was modified.

Section 2: Ingredient table was modified.

Section 10.1 Conditions to avoid was added.

Section 10.2 Materials to avoid was added.

Section 6: Release measures information was added.

Section 6: Release measures information was added.

Section 6: Release measures information was added.

Section 10: Materials to avoid physical property was added.

Section 10: Conditions to avoid physical property was added.

Section 6: Release measures information was deleted.

Section 10: Materials and conditions to avoid physical property was deleted.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Marine Adhesive Sealant Fast Cure 5200, White; PN 06520 , 05220, 06534, 06535
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division
ADDRESS: 3M Center, St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 08/22/12
Supercedes Date: 06/07/12

Document Group: 16-5850-9

Product Use:

Specific Use: Adhesive Sealant
Intended Use: Sealant

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
Urethane Polymer	51447-37-1	40 - 70
Titanium Dioxide	13463-67-7	10 - 30
Fumed Silica	112945-52-5	1 - 5
p,p'-Methylenebis(Phenyl Isocyanate)	101-68-8	< 2.4
Zinc Oxide	1314-13-2	< 2.3
Carbitol Acetate	112-15-2	< 2.0
Alkyl Isocyanate Silane	85702-90-5	< 2
Fumed Silica	7631-86-9	0.5 - 1.5
Heptane	142-82-5	< 0.3

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste

Odor, Color, Grade: White thixotropic paste, slight odor

General Physical Form: Solid

Immediate health, physical, and environmental hazards: May cause allergic skin reaction. May cause allergic respiratory reaction. May cause target organ effects.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Inhalation:

May be harmful if inhaled.

Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Prolonged or repeated exposure, above recommended guidelines, may cause:

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Class Description</u>	<u>Regulation</u>
Titanium Dioxide	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Titanium oxide (TiO ₂)	13463677	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical

attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	<i>No Data Available</i>
Flash Point	No flash point
Flammable Limits(LEL)	<i>Not Applicable</i>
Flammable Limits(UEL)	<i>Not Applicable</i>

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: No unusual fire or explosion hazards are anticipated.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Avoid contact with water.

6.2. Environmental precautions

Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Dispose of collected material as soon as possible.

Clean-up methods

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Collect as much of the spilled material as possible. Clean up residue.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Avoid eye contact. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid skin contact. Avoid breathing of vapors. Keep out of the reach of children. Do not ingest.

7.2 STORAGE

Store in a cool place. Store away from heat. Store out of direct sunlight. Keep container tightly closed. Store away from areas where product may come into contact with food or pharmaceuticals.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Use in an enclosed process area is recommended. Do not use in a confined area or areas with little or no air movement.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.

The following eye protection(s) are recommended: Safety Glasses with side shields

8.2.2 Skin Protection

Not applicable. Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Nitrile Rubber

8.2.3 Respiratory Protection

Avoid breathing of vapors.

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors

For questions about suitability for a specific application, consult with your respirator manufacturer.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
Aluminum, insoluble compounds	ACGIH	TWA, respirable fraction	1 mg/m ³	
FREE ISOCYANATES	Manufacturer determined	TWA	0.005 ppm	
FREE ISOCYANATES	Manufacturer determined	STEL	0.02 ppm	
p,p'-Methylenebis(Phenyl Isocyanate)	ACGIH	TWA	0.005 ppm	
p,p'-Methylenebis(Phenyl Isocyanate)	OSHA	CEIL	0.2 mg/m ³	
Fumed Silica	CMRG	TWA, as respirable	3 mg/m ³	

		dust	
SILICA, AMORPHOUS	OSHA	TWA concentration	0.8 mg/m ³
SILICA, AMORPHOUS	OSHA	TWA	20 millions of particles/cu. ft.
Titanium Dioxide	ACGIH	TWA	10 mg/m ³
Titanium Dioxide	CMRG	TWA, as respirable	5 mg/m ³
		dust	
Titanium Dioxide	OSHA	TWA, as total dust	15 mg/m ³
Titanium oxide (TiO ₂)	ACGIH	TWA	10 mg/m ³
Titanium oxide (TiO ₂)	OSHA	TWA, as total dust	15 mg/m ³
Zinc Oxide	ACGIH	TWA, respirable	2 mg/m ³
		fraction	
Zinc Oxide	ACGIH	STEL, respirable	10 mg/m ³
		fraction	
Zinc Oxide	OSHA	TWA, as fume	5 mg/m ³
Zinc Oxide	OSHA	TWA, respirable	5 mg/m ³
		fraction	
Zinc Oxide	OSHA	TWA, as total dust	15 mg/m ³

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists
 CMRG: Chemical Manufacturer Recommended Guideline
 OSHA: Occupational Safety and Health Administration
 AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Paste
Odor, Color, Grade:	White thixotropic paste, slight odor
General Physical Form:	Solid
Autoignition temperature	<i>No Data Available</i>
Flash Point	No flash point
Flammable Limits(LEL)	<i>Not Applicable</i>
Flammable Limits(UEL)	<i>Not Applicable</i>
Boiling Point	<i>Not Applicable</i>
Density	1.3 g/ml
Vapor Density	<i>No Data Available</i>
Vapor Pressure	<i>No Data Available</i>
Specific Gravity	1.3 [<i>Ref Std: WATER=1</i>]
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Solubility in Water	Nil
Evaporation rate	<i>No Data Available</i>
Hazardous Air Pollutants	2.6 % weight [<i>Test Method: Calculated</i>]
Volatile Organic Compounds	38 g/l [<i>Test Method: tested per EPA method 24</i>] [<i>Details: EU VOC content</i>]
Kow - Oct/Water partition coef	<i>No Data Available</i>
Percent volatile	2.83 % weight
VOC Less H₂O & Exempt Solvents	38 g/l [<i>Test Method: tested per EPA method 24</i>]
Viscosity	100000 - 500000 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

None known

10.2 Materials to avoid

Amines

Alcohols

Water

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Isocyanates	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Cyanide	During Combustion
Oxides of Nitrogen	During Combustion
Toxic Vapor, Gas, Particulate	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of completely cured (or polymerized) wastes in a sanitary landfill. Incinerate uncured product in a permitted hazardous waste incinerator in the presence of a combustible material. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

60-9800-4557-3, 60-9800-4558-1, 60-9800-4562-3, 62-5239-0330-0, 62-5239-5236-4

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
p,p'-Methylenebis(Phenyl Isocyanate)	101-68-8	< 2.4
p,p'-Methylenebis(Phenyl Isocyanate) (DIISOCYANATES (CERTAIN CHEMICALS ONLY))	101-68-8	< 2.4
Zinc Oxide (ZINC COMPOUNDS)	1314-13-2	< 2.3
Carbitol Acetate (GLYCOL ETHERS)	112-15-2	< 2.0

STATE REGULATIONS

Contact 3M for more information.

CALIFORNIA PROPOSITION 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
Titanium oxide (TiO ₂)	None	**Carcinogen
Titanium Dioxide	13463-67-7	**Carcinogen

** WARNING: contains a chemical which can cause cancer.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 1 Reactivity: 1 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Section 3: Potential effects from skin contact information was modified.

Section 3: Potential effects from inhalation information was modified.

Section 7: Storage information was modified.

Section 8: Engineering controls information was modified.

Section 8: Skin protection phrase was modified.

Section 8: Respiratory protection - recommended respirators was modified.

Section 8: Respiratory protection - recommended respirators guide was modified.

Section 14: ID Number(s) Template 1 was modified.

Section 15: California proposition 65 ingredient information was modified.

Section 8: Respiratory protection - recommended respirators punctuation was deleted.

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Super 77(TM) Multipurpose Adhesive (Aerosol)
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division
ADDRESS: 3M Center, St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 04/19/12
Supersedes Date: 03/30/12

Document Group: 16-3472-4

Product Use:

Intended Use: general purpose aerosol adhesive
Specific Use: General Purpose Aerosol adhesive

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
Non-volatile components - N.J.T.S. Registry No. 04499600-6433P	Trade Secret	20 - 30
Acetone	67-64-1	20 - 30
Propane	74-98-6	15 - 25
Cyclohexane	110-82-7	10 - 20
Petroleum distillates	64742-49-0	10 - 20
Hexane	110-54-3	< 1

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Aerosol

Odor, Color, Grade: Clear, sweet, fruity odor

General Physical Form: Gas aerosol

Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains flammable material under pressure. May cause target organ effects. Contains a

chemical or chemicals which can cause birth defects or other reproductive harm.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, and itching.

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Single exposure, above recommended guidelines, may cause:

Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

Intentional concentration and inhalation may be harmful or fatal.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure may cause:

Peripheral Neuropathy: Signs/symptoms may include tingling or numbness of the extremities, incoordination, weakness of the hands and feet, tremors and muscle atrophy.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Wash affected area with soap and water. If signs/symptoms develop, get medical attention.

Inhalation: Remove person to fresh air. Get immediate medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

4.2 NOTE TO PHYSICIANS

Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	No Data Available
Flash Point	-42.00 °F [Test Method: Tagliabue Closed Cup]
Flammable Limits(LEL)	No Data Available
Flammable Limits(UEL)	No Data Available
OSHA Flammability Classification:	Class IA Flammable Liquid

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains flammable material under pressure.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation and personal protective equipment. Evacuate unprotected and untrained personnel from the hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area. **WARNING !** A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. If it can be done safely, place the leaking containers in an exhaust hood or well-ventilated area. **WARNING !** To avoid problems with pressure buildup, slowly leaking pressurized aerosol cans should not be placed in sealed containers. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS.

6.2. Environmental precautions

Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Clean-up methods

Contain spill, using absorbent if necessary. Collect spilled material with non-sparking tools. Clean up residue. Place depressurized cans and clean up wastes in a metal container approved for transportation. Seal the container. Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with an appropriate organic solvent. Seal the container.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Do not pierce or burn container, even after use. No smoking while handling this material. Do not spray near flames or sources of ignition. Avoid breathing of vapors, mists or spray. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Vapors may ignite explosively. May cause flash fire. Prevent build-up of vapors - open all windows and doors. Maintain vapor concentrations below recommended exposure limits. Use only with cross-ventilation. Without adequate ventilation, vapors may settle in low-lying areas. Keep away from heat, sparks, and open flame. Do not smoke or ignite matches, lighters, etc. Avoid contact with oxidizing agents.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Use in an enclosed process area is recommended. Use with functioning spray booth or local exhaust. Use in a well-ventilated area. If exhaust ventilation is not available, use appropriate respiratory protection. Do not use in a confined area or areas with little or no air movement. Do not remain in area where available oxygen may be reduced. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment. Do not use in a confined area or areas with little or no air movement. If exhaust ventilation is not adequate, use appropriate respiratory protection. Provide ventilation adequate to control vapor concentrations below recommended exposure limits and/or control spray or mist.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Safety Glasses with side shields

.

8.2.2 Skin Protection

Not applicable. Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Polymer laminate

.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or full facepiece air-purifying respirator suitable for organic vapors

. Select and use respiratory protection to prevent an inhalation exposure based on the results of an exposure assessment. Consult with your respirator manufacturer for selection of appropriate types of respirators.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
Acetone	ACGIH	TWA	500 ppm	
Acetone	ACGIH	STEL	750 ppm	
Acetone	OSHA	TWA	2400 mg/m3	
Hexane	ACGIH	TWA	50 ppm	Skin Notation*
Hexane	OSHA	TWA	1800 mg/m3	
Petroleum distillates	CMRG	TWA	50 ppm	
Propane	OSHA	TWA	1800 mg/m3	

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Aerosol
Odor, Color, Grade:	Clear, sweet, fruity odor
General Physical Form:	Gas aerosol
Autoignition temperature	<i>No Data Available</i>
Flash Point	-42.00 °F [<i>Test Method:</i> Tagliabue Closed Cup]
Flammable Limits(LEL)	<i>No Data Available</i>
Flammable Limits(UEL)	<i>No Data Available</i>
Boiling Point	<i>Not Applicable</i>
Density	0.726 g/ml
Vapor Density	2.97 [<i>Ref Std:</i> AIR=1]
Specific Gravity	0.726 [<i>Ref Std:</i> WATER=1]
pH	<i>No Data Available</i>
Melting point	<i>No Data Available</i>
Solubility in Water	Nil
Evaporation rate	1.90 [<i>Ref Std:</i> ETHER=1]
Hazardous Air Pollutants	<=0.4 % weight [<i>Test Method:</i> Calculated]
Volatile Organic Compounds	<=537 g/l [<i>Details:</i> EU VOC content]
Kow - Oct/Water partition coef	<i>No Data Available</i>
Percent volatile	<=75 % weight [<i>Details:</i> all volatiles]
VOC Less H2O & Exempt Solvents	<=51 % weight [<i>Test Method:</i> calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	<=3.82 lb/gal [<i>Test Method:</i> calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	<=458 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Viscosity	<i>Not Applicable</i>
Solids Content	>=22.4 %

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

Heat

10.2 Materials to avoid

Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

Substance

Aldehydes
Carbon monoxide
Carbon dioxide

Condition

During Combustion
During Combustion
During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Vent cylinder or pressurized container in an operating exhaust hood or remote area. A qualified person should adjust the release rate so gas concentration in ducts is less than 20% of the lower explosive limit (LEL). The LEL is the lowest concentration that can propagate (spread) a flame. Incinerate uncured product in a permitted hazardous waste incinerator.

Incinerate in a permitted hazardous waste incinerator. For quantities <10 lbs. (5 kg):

As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

The facility should be equipped to handle gaseous waste.

Facility must be capable of handling aerosol cans. Dispose of empty product containers in a sanitary landfill.

RECYCLE EMPTY AEROSOL CONTAINERS WHERE AVAILABLE.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

62-4977-4730-3, 62-4977-4925-9, 62-4977-4929-1, 62-4977-4930-9, 62-4977-4935-8

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 4 Reactivity: 0 Special Hazards: None
Aerosol Storage Code: 3

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification

Health: 2 Flammability: 4 Reactivity: 0 Protection: X - See PPE section.

Hazardous Material Identification System (HMIS®) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint and Coatings Association (NPCA).

Reason for Reissue: Removed stock numbers.

Revision Changes:

Section 8: Respiratory protection - recommended respirators information was modified.

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M

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Document Library
TS Data Sheet 46004
46005
46006

Rev:2

Status: Active

Effective: 01/11/2002

3M™ Marine Premium Filler



3M Part No.(s)	3M Part Descriptor(s)
46004	Pint
46005	Quart
46006	Gallon

Description

3M™ Marine Premium Filler is a unique vinyl ester formulation designed for marine filling and fairing applications above or below the waterline. 3M™ Marine Premium Filler is a unique and easy to sand formula designed with 3M™ Scotchlite™ Glass Bubbles.

Features

- Excellent moisture resistance
- Fast curing
- Easy to sand
- Easy spreading
- Premixed
- Blue creme hardener

Typical Physical Properties

Base	Vinyl Ester
Color	Light Yellow
Flash Point - °F	88 F
Solids Content (Appx.)	100% By Weight (App.)
Consistency	Thick Liquid
Reactive Diluent	Styrene
Net Weight	0.6 lb. Per Gallon

Performance Properties

A. Cure Rate

With 2 % 3M™ Creme Hardener and at 70°F/50% RH.

working time 10 minutes
sandable in 30 minutes

B. Shear Strength:

Recorded in pounds per square inch.

wood	fiberglass	
509	669*	PSI

Shear strength retained after 2 week salt water soak = 99 %
* substrate failure

C. Tensile
Tensile 1396 PSI

Application Information

Directions for Use

Important usage recommendations:

- Surface and product temperatures must remain above 60°F from application to full cure.
- All epoxy resins must be removed prior to application of 3M Marine Fiberglass Fillers. Epoxy will inhibit cure and adhesion.
- Laminates must be dry.

Failure to follow these recommendations will yield unsatisfactory results.

Surface Preparation:

Clean surface free of dust, grease, wax, oil and moisture using a cloth and good cleaning solvent such as 3M™ General Purpose Adhesive Cleaner, P.N. 08984, or acetone.

When using solvents, use in a well ventilated area. Extinguish all sources of ignition in the work area and observe proper precautionary measures for handling such materials. Refer to product label and MSDS for further precautions.

Local and Federal air quality regulations may regulate or prohibit the use of surface preparation and cleanup materials based on VOC content. Consult your Local and Federal air quality regulation.

Remove damaged fiberglass or wood from the repair area. Scuff repair area with a 80 grit abrasive. Wipe clean.

Mixing:

Apply the desired amount of filler on a clean non-porous mixing surface. Do not use cardboard, as styrene or hardener may soak in and effect performance.

Add 2% 3M™ Marine Creme Hardener (1 ½ inch strip* of cream hardener to a golf ball sized amount of filler). Mix filler and hardener to a uniform color making sure to break any air bubbles that may have been introduced. Mix only what you will use in 10 minutes.

Premium Filler	Creme Hardener
¼ pint	5 inch strip*

½ pint	10 inch strip*
pint	20 inch strip*
quart	40 inch strip*

2 % creme hardener*

Apply
one strip of
hardener
across
the diameter of
the filler.
Amounts
of filler larger
than a baseball
will
require
additional
hardener.

* Diameter of bead strip should be equal to the opening in the tube.

Application:

Do not proceed with the repair if the air, 3M™ Marine Premium Filler, or the area to be repaired is below 60°F.

For scratches, cracks, and gouges deeper than ¼", begin with 3M™ Marine High Strength Repair Filler and follow label directions.

Wet surface by applying a thin coat of mixed 3M™ Marine Premium Filler to the clean repair surface. Spreading in one direction and then smoothing in the opposite direction will reduce the possibility of leaving voids. Apply additional filler in layers (3/8" maximum thickness per layer), building slightly higher than the surrounding area. 3M™ Marine Premium Filler can be sanded after 30 minutes.

APPLICATION TIP: In many cases separate fill coats will reduce the amount of sanding and labor time.

- fill level with surrounding surface and allow to cure.
- fill any low areas or pin holes with a "skin coat".

Finishing:

Sand 3M™ Marine Premium Filler close to contour using a coarse grade

40 grit abrasive, follow with a medium grade 80 grit. Most primers, coating, and sprayable fillers will fill 80 grit scratches. When not using a primer, final sanding with a fine grade 180 grit may be necessary.

For topside repairs, apply primer, paint, or gelcoat following manufactures recommended procedures.

Cleanup:

For cleaning 3M™ Marine Premium Filler before it is cured, use a dry cloth to remove the majority, followed by a cloth damp with 3M™ General Purpose Adhesive Cleaner, P.N. 08984 or acetone.

*Cured Filler can be removed by sanding.

Applications

For filling and fairing of fiberglass, metal, and wood. Can be applied up to 3/8" thick per application. Can be used for boat repairs above or below the waterline.

- Filling scratches, cracks, and gouges above and below the waterline
- Building and shaping
- Fairing hulls, decks, keels, rudders, etc.
- Cosmetic filling of repair area

Storage and Handling

Recommended Storage Temperature Range : 60F or 15C to 80F or 26C

Expected Shelf Life at Recommended Storage Temperature : 12 months

Precautionary Information

Refer to Product Label and Material Safety Data Sheet for Health and Safety Information before using this product.

Country

US

This document is public. It may be distributed.

Important Notice to Purchaser

Technical Data: All physical properties, statements and recommendations are either based on tests we believe to be reliable or our experience, but they are not guaranteed. 3M recommends each user determine the suitability of the products for the intended use.

* If 'Directions for Use' reference P.N.'s 08984, 08986, or 08987, please read. Federal and local air quality regulations may regulate or prohibit the use of surface preparation and cleanup solvents based on VOC content. Consult your local and Federal air quality regulations for information. When using solvents, use in a well ventilated area. Extinguish all sources of ignition in the work area and observe precautionary measures for handling these materials. Refer to product label and MSDS for P.N. 8984, 8986, or 8987 for detailed precautionary information.

Warranty and Limited Remedy: 3M warrants this product will be free from defects in materials and manufacture. **3M MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE** . If the product is proved to be defective your exclusive remedy and 3M's and seller's sole obligation will be, at 3M's option, to replace the product or refund the purchase price.

Limitation of Liability: 3M and seller will not be liable for any loss or damage arising from this product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract,

negligence or strict liability.

For Additional Health and Safety Information

**3M Marine
3M Center, Building 223-6S-06
Saint Paul, MN 55144-1000
1-877-366-2746 (1-877-3M MARINE)**

MEGUIAR'S M49 - SUPER DUTY FIBERGLASS CLEANER

Chemwatch Independent Material Safety Data Sheet
Issue Date: 10-Jun-2010
C9317EC

CHEMWATCH 4912-9
Version No:2.0
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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

MEGUIAR'S M49 - SUPER DUTY FIBERGLASS CLEANER

SYNONYMS

"Product Code: M49"

PRODUCT USE

Fiberglass cleaner.

SUPPLIER

Company: MotorActive
Address:
35 Slough Business Park, Holker St, reet
Silverwater
NSW, 2128
Australia
Telephone: +61 2 9737 9422
Telephone: 1800 350 622
Fax: +61 2 9737 9414
Email: info@motoractive.com.au

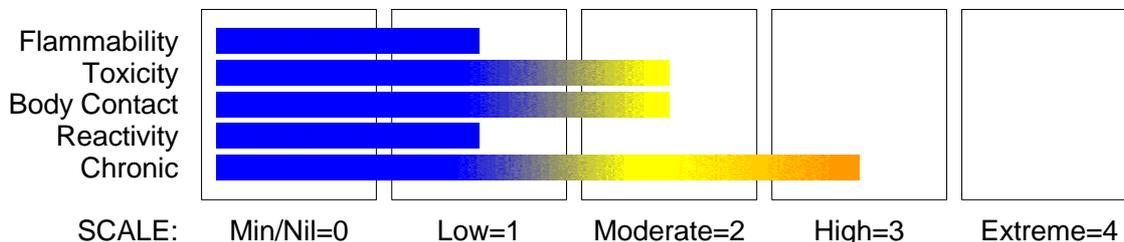
Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to NOHSC Criteria, and ADG Code.

COMBUSTIBLE LIQUID, regulated under AS1940 for Bulk Storage purposes only.

CHEMWATCH HAZARD RATINGS



POISONS SCHEDULE

None

RISK

Risk Codes

R45(2)

R65

R66

R67

Risk Phrases

- May cause CANCER.
- HARMFUL- May cause lung damage if swallowed.
- Repeated exposure may cause skin dryness and cracking.
- Vapours may cause drowsiness and dizziness.

SAFETY

Safety Codes

S01

S36

S38

S401

S35

S13

Safety Phrases

- Keep locked up.
- Wear suitable protective clothing.
- In case of insufficient ventilation wear suitable respiratory equipment.
- To clean the floor and all objects contaminated by this material use water and detergent.
- This material and its container must be disposed of in a safe way.
- Keep away from food drink and animal feeding stuffs.

continued...

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Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
distillates, petroleum, light, acid- treated	64742-14-9	10-20
aluminium oxide	1344-28-1	10-20
distillates, petroleum, middle, hydrotreated	64742-46-7	1-5
sorbitan sesquioleate	8007-43-0	1-5
conditioners proprietary		1-5

Section 4 - FIRST AID MEASURES

SWALLOWED

- - If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Avoid giving milk or oils.
- Avoid giving alcohol.
- If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

EYE

- If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

- If skin or hair contact occurs:
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- - If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.

NOTES TO PHYSICIAN

- Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:
- Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO₂ 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Manifestation of aluminium toxicity include hypercalcaemia, anaemia, Vitamin D refractory osteodystrophy and a progressive encephalopathy (mixed dysarthria-apraxia of speech, asterixis, tremulousness, myoclonus, dementia, focal seizures). Bone pain, pathological fractures and proximal myopathy can occur.
- Symptoms usually develop insidiously over months to years (in chronic renal failure patients) unless dietary aluminium loads are excessive.
- Serum aluminium levels above 60 ug/ml indicate increased absorption. Potential toxicity occurs above 100 ug/ml and clinical symptoms are present when levels exceed 200 ug/ml.
- Deferoxamine has been used to treat dialysis encephalopathy and osteomalacia. CaNa₂EDTA is less effective in chelating aluminium.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- - Water spray or fog.
- Alcohol stable foam.
- Dry chemical powder.
- Carbon dioxide.

FIRE FIGHTING

- - Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Use water delivered as a fine spray to control fire and cool adjacent area.

continued...

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Section 5 - FIRE FIGHTING MEASURES

FIRE/EXPLOSION HAZARD

- - Combustible.
- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).

Combustion products include: carbon dioxide (CO₂), other pyrolysis products typical of burning organic material.

When aluminium oxide dust is dispersed in air, firefighters should wear protection against inhalation of dust particles, which can also contain hazardous substances from the fire absorbed on the alumina particles.

May emit poisonous fumes.

FIRE INCOMPATIBILITY

- - Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

HAZCHEM

None

PERSONAL PROTECTION

Glasses:
Chemical goggles.

Gloves:
PVC chemical resistant type.

Respirator:
Type A- P Filter of sufficient capacity

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- - Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.

MAJOR SPILLS

- - Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by all means available, spillage from entering drains or water courses.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- - Containers, even those that have been emptied, may contain explosive vapours.
- Do NOT cut, drill, grind, weld or perform similar operations on or near containers.
- Electrostatic discharge may be generated during pumping - this may result in fire.
- Ensure electrical continuity by bonding and grounding (earthing) all equipment.
- Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/sec until fill pipe submerged to twice its diameter, then ≤ 7 m/sec).
- Avoid splash filling.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.

SUITABLE CONTAINER

- - Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

- For aluminas (aluminium oxide):
- Incompatible with hot chlorinated rubber.
- In the presence of chlorine trifluoride may react violently and ignite.
- May initiate explosive polymerisation of olefin oxides including ethylene oxide.
- Produces exothermic reaction above 200 C with halocarbons and an exothermic reaction at ambient temperatures with halocarbons in the presence of other metals.
- Avoid reaction with oxidising agents.

STORAGE REQUIREMENTS

- - Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA mg/m ³	Notes
Australia Exposure Standards	distillates, petroleum, light, acid- treated (Oil mist, refined mineral)	5	
Australia Exposure Standards	aluminium oxide (Aluminium oxide (a))	10	(see Chapter 14)

The following materials had no OELs on our records

- sorbitan sesquileate:

CAS:8007- 43- 0 CAS:39320- 83- 7 CAS:59585- 62- 5

PERSONAL PROTECTION

RESPIRATOR

Type A-P Filter of sufficient capacity

EYE

- - Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET

- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:
 - frequency and duration of contact,
 - chemical resistance of glove material,
 - glove thickness and
 - dexterity.
- Wear chemical protective gloves, eg. PVC.
- Wear safety footwear or safety gumboots, eg. Rubber.

OTHER

- - Employees working with confirmed human carcinogens should be provided with, and be required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area.
- Employees engaged in handling operations involving carcinogens should be provided with, and required to wear and use half-face filter-type respirators with filters for dusts, mists and fumes, or air purifying canisters or cartridges. A respirator affording higher levels of protection may be substituted.
- Emergency deluge showers and eyewash fountains, supplied with potable water, should be located near, within sight of, and on the same level with locations where direct exposure is likely.
- Prior to each exit from an area containing confirmed human carcinogens, employees should be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers must be identified with suitable labels. For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood.
- Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood.
- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.

ENGINEERING CONTROLS

- - Employees exposed to confirmed human carcinogens should be authorized to do so by the employer, and work in a regulated area.
- Work should be undertaken in an isolated system such as a "glove-box" . Employees should wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system.
- Within regulated areas, the carcinogen should be stored in sealed containers, or enclosed in a closed system, including piping systems, with any sample ports or openings closed while the carcinogens are contained within.
- Open-vessel systems are prohibited.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Golden yellow viscous lotion with a mild sweet odour; not miscible with water.

PHYSICAL PROPERTIES

Liquid.

Does not mix with water.

continued...

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Sinks in water.

State	Liquid	Molecular Weight	Not Applicable
Melting Range (°C)	Not Available	Viscosity	Not Available
Boiling Range (°C)	>199	Solubility in water (g/L)	Immiscible
Flash Point (°C)	>93	pH (1% solution)	Not Applicable
Decomposition Temp (°C)	Not Available	pH (as supplied)	Not Applicable
Autoignition Temp (°C)	Not Available	Vapour Pressure (kPa)	<0.133 @ 21C
Upper Explosive Limit (%)	Not Available	Specific Gravity (water=1)	1.10
Lower Explosive Limit (%)	Not Available	Relative Vapour Density (air=1)	>1
Volatile Component (%vol)	11 (VOC)	Evaporation Rate	<1

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

• - Presence of incompatible materials.

- Product is considered stable.

- Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

• HARMFUL- May cause lung damage if swallowed.

• Vapours may cause dizziness or suffocation.

• Vapours may cause drowsiness and dizziness.

CHRONIC HEALTH EFFECTS

• May cause CANCER.

• Repeated exposure may cause skin dryness and cracking.

TOXICITY AND IRRITATION

DISTILLATES, PETROLEUM, MIDDLE, HYDROTREATED:

Sorbitan Sesquiolate:

DISTILLATES, PETROLEUM, LIGHT, ACID-TREATED:

• unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

• unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

• No significant acute toxicological data identified in literature search.

For "kerosenes"

Acute toxicity: Oral LD50s for three kerosenes (Jet A, CAS No. 8008-20-6 and CAS No.

DISTILLATES, PETROLEUM, LIGHT, ACID-TREATED:

• For "kerosenes"

Acute toxicity: Oral LD50s for three kerosenes (Jet A, CAS No. 8008-20-6 and CAS No.

No data of toxicological significance identified in literature search.

ALUMINIUM OXIDE:

• No significant acute toxicological data identified in literature search.

DISTILLATES, PETROLEUM, MIDDLE, HYDROTREATED:

TOXICITY

Inhalation (rat) LC50: 3400 ppm/4H None reported [EXXON]

Oral (rat) LD50: >8000 mg/kg [CCINFO- Shell]

Dermal (rat) LD50: >4000 mg/kg

typical for isoparaffinic hydrocarbons:

isoparaffinic hydrocarbon:

IRRITATION

Sorbitan Sesquiolate:

TOXICITY

IRRITATION

Skin (rabbit): 0.45 mg Mild

Eye (rabbit): 3 mg Mild

• The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis.

For Group D aliphatic esters:(sorbitan fatty esters)

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Section 11 - TOXICOLOGICAL INFORMATION

According to a classification scheme described by the American Chemistry Council' Aliphatic Esters Panel, Group D substances are esters of monoacids, mainly common fatty acids, and sorbitan (which is derived from sorbitol - a natural carbohydrate sweetener). The fatty acids include lauric, stearic, oleic acids and coca fatty acids (mainly lauric and myristic acids).

CARCINOGEN

Petroleum solvents

International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs

Group

3

Section 12 - ECOLOGICAL INFORMATION

No data

Section 13 - DISPOSAL CONSIDERATIONS

- Containers may still present a chemical hazard/ danger when empty.
 - Return to supplier for reuse/ recycling if possible.
- Otherwise:
- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
 - Where possible retain label warnings and MSDS and observe all notices pertaining to the product.
- Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.
- A Hierarchy of Controls seems to be common - the user should investigate:
- Reduction.
 - DO NOT allow wash water from cleaning or process equipment to enter drains.
 - It may be necessary to collect all wash water for treatment before disposal.
 - In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
 - Where in doubt contact the responsible authority.
 - Recycle wherever possible or consult manufacturer for recycling options.
 - Consult State Land Waste Authority for disposal.
 - Bury or incinerate residue at an approved site.
 - Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

Labels Required: COMBUSTIBLE LIQUID, regulated under AS1940 for Bulk Storage purposes only.

HAZCHEM:

None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: ADG7, UN, IATA, IMDG

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE

None

REGULATIONS

Regulations for ingredients

distillates, petroleum, light, acid-treated (CAS: 64742-14-9) is found on the following regulatory lists;

"Australia Hazardous Substances", "Australia Inventory of Chemical Substances (AICS)", "OECD Representative List of High Production Volume (HPV) Chemicals"

aluminium oxide (CAS: 1344-28-1) is found on the following regulatory lists;

"Australia Exposure Standards", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD Representative List of High Production Volume (HPV) Chemicals"

distillates, petroleum, middle, hydrotreated (CAS: 64742-46-7) is found on the following regulatory lists;

"Australia Hazardous Substances", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD Representative List of High Production Volume (HPV) Chemicals"

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Section 15 - REGULATORY INFORMATION

sorbitan sesquioleate (CAS: 8007-43-0,39320-83-7,59585-62-5) is found on the following regulatory lists;

"Australia Inventory of Chemical Substances (AICS)", "OECD Representative List of High Production Volume (HPV) Chemicals"

No data for Meguiar's M49 - Super Duty Fiberglass Cleaner (CW: 4912-9)

Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
sorbitan sesquioleate	8007- 43- 0, 39320- 83- 7, 59585- 62- 5

• Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references.

• The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

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Issue Date: 10-Jun-2010

Print Date: 11-Jun-2010

This is the end of the MSDS.

Product Name: ALEXSEAL-Metallic Base Coat
Product No.: 40326XXXXX000

Revision Date 06/15/2012
Print Date 06/15/2012

Version 1

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : ALEXSEAL-Metallic Base Coat

Use of the Substance/Mixture : Industrial serial painting

Company : Mankiewicz Coatings L.L.C
415 Jessen Lane
Charleston, South Carolina 29492
USA

Telephone : +1 (843) 6547755
Emergency Telephone : CHEMTREC +1 (800) 4249300 or +1 (703) 5273887

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Warning
Form: liquid, Color: according product name, Odor: characteristic

OSHA Hazards : FLAMMABLE LIQUID
CARCINOGEN
TOXIC BY INHALATION.
HARMFUL BY INGESTION.
HARMFUL BY SKIN ABSORPTION.
MODERATE SKIN IRRITANT
SEVERE EYE IRRITANT
MODERATE RESPIRATORY IRRITANT

Potential Health Effects

Inhalation : Harmful if inhaled.
May cause respiratory tract irritation.
Causes headache, drowsiness or other effects to the central nervous system.

Skin : May be harmful if absorbed through skin.
May cause skin irritation.
Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering.

Eyes : Causes eye irritation.

Ingestion : May be harmful if swallowed.

Chronic Exposure : Suspect cancer hazard - contains material which may cause cancer.

Symptoms of Overexposure : No information available.

Product Name: ALEXSEAL-Metallic Base Coat
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Carcinogenicity:

IARC	Group 2B: Possibly carcinogenic to humans Carbon black 1333-86-4 ethylbenzene 100-41-4
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	Confirmed animal carcinogen with unknown relevance to humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure. ethylbenzene 100-41-4

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture of synthetic resins, organic solvents and pigments

Hazardous ingredients

Component	CAS-No.	Weight %
n-butyl acetate	123-86-4	30.00 - 60.00
xylene	1330-20-7	5.00 - 10.00
Carbon black	1333-86-4	1.00 - 5.00
ethylbenzene	100-41-4	1.00 - 5.00
ALUMINIUM POWDER (STABILIZED)	7429-90-5	1.00 - 5.00
butan-1-ol	71-36-3	1.00 - 5.00

SECTION 4. FIRST AID MEASURES

First aid procedures

- General advice : In all cases of doubt, or when sickness symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.
- Inhalation : Remove to fresh air, keep patient warm and at rest.
Irregular breathing/no breathing: artificial respiration.
If unconscious place in recovery position and seek medical advice.

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- Skin contact** : Take off all contaminated clothing immediately.
Wash skin thoroughly with soap and water or use recognised skin cleanser.
Do NOT use solvents or thinners !
- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart and seek medical advice.
- Ingestion** : Do NOT induce vomiting.
If accidentally swallowed obtain immediate medical attention.
Never give anything by mouth to an unconscious person.
Keep at rest.

Notes to physician

- Symptoms** : No information available.
- Treatment** : No information available.

SECTION 5. FIRE-FIGHTING MEASURES

Flammable properties

- Flash point** : 88.7 °F (31.5 °C)
Method: ISO 2719
- Ignition temperature** : > 752 °F (> 400 °C)
- Lower explosion limit** : 1 %(V)
- Upper explosion limit** : 10 %(V)

Fire fighting

- Suitable extinguishing media** : Alcohol resistant foam, CO2, powders, water spray
- Unsuitable extinguishing media** : High volume water jet
- Further information** : Cool endangered containers with water in case of fire.
DO NOT ALLOW RUN-OFF FROM FIRE FIGHTING TO ENTER DRAINS OR WATER COURSES!!

Protective equipment and precautions for firefighters

- Specific hazards during fire fighting** : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.
- Special protective equipment for fire-fighters** : As in any fire, wear self-contained breathing apparatus pressure - demand, MSHA / NIOSH (approved or equivalent) and full protective gear.

Product Name: ALEXSEAL-Metallic Base Coat
Product No.: 40326XXXXX000

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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Exclude sources of ignition and ventilate the area.
Do not inhale vapors.
Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not let product enter drains.
If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations.
- Methods for containment /
Methods for cleaning up : Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see chapter 13).
Clean preferably with a detergent; avoid use of solvents.

SECTION 7. HANDLING AND STORAGE

Handling

- Handling : Prevent the creation of flammable or explosive concentrations of vapor in air and avoid vapor concentrations higher than the occupational exposure limits.
Comply with the health and safety at work laws.
Smoking, eating and drinking should be prohibited in the application area.
Observe specific national regulations for handling and use of paints.
- Advice on protection against fire and explosion : The product should only be used in areas from which all naked lights and other sources of ignition have been excluded.
Preparation may charge electrostatically: always use earthing leads when transferring from one container to another.
Operators should wear anti-static footwear and clothing. No sparking tools should be used.
Vapors are heavier than air and may spread along floors.
Vapors may form explosive mixtures with air.

Storage

- Requirements for storage areas and containers : Electrical equipment should be protected to the appropriate standard. Floors should be of the conducting type.
Keep container tightly closed. Never use pressure to empty: container is not a pressure vessel. No smoking. Prevent unauthorized access.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- Further information on storage conditions : Always keep in containers of same material as the original one. See also instructions on the label. Avoid heating and direct sunlight.
Keep container dry in a cool, well-ventilated place.

Product Name: ALEXSEAL-Metallic Base Coat
Product No.: 40326XXXXX000

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Print Date 06/15/2012

Version 1

Advice on common storage : Keep away from oxidizing agents and strongly acid or alkaline materials.

Storage temperature : 41 - 95 °F (5 - 35 °C)

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Ingredients with workplace control parameters

Ingredients Source	Value	Control parameters
n-butyl acetate CAS-No.123-86-4		
ACGIH	TWA	150 ppm
ACGIH	STEL	200 ppm
OSHA P1	TWA	150 ppm 710 mg/m3
OSHA P0	TWA	150 ppm 710 mg/m3
OSHA P0	STEL	200 ppm 950 mg/m3
xylene CAS-No.1330-20-7		
ACGIH	TWA	100 ppm
ACGIH	STEL	150 ppm
OSHA P1	TWA	100 ppm 435 mg/m3
OSHA P0	TWA	100 ppm 435 mg/m3
OSHA P0	STEL	150 ppm 655 mg/m3
Carbon black CAS-No.1333-86-4		
ACGIH	TWA	3.5 mg/m3
OSHA P1	TWA	3.5 mg/m3
OSHA P0	TWA	3.5 mg/m3
NIOSH REL	TWA	3.5 mg/m3
ethylbenzene CAS-No.100-41-4		
ACGIH	TWA	100 ppm
ACGIH	STEL	125 ppm
OSHA P1	TWA	100 ppm 435 mg/m3
OSHA P0	TWA	100 ppm 435 mg/m3
OSHA P0	STEL	125 ppm 545 mg/m3
ALUMINIUM POWDER (STABILIZED) CAS-No.7429-90-5		
OSHA P1	TWA	15 mg/m3
OSHA P1	TWA	5 mg/m3
OSHA P0	TWA	15 mg/m3
OSHA P0	TWA	5 mg/m3
NIOSH REL	TWA	5 mg/m3
NIOSH REL	TWA	10 mg/m3



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butan-1-ol CAS-No.71-36-3		
ACGIH	TWA	20 ppm
OSHA P1	TWA	100 ppm 300 mg/m3
OSHA P0	C	50 ppm 150 mg/m3

Immediately Dangerous to Life or Health Concentrations (IDLH)

Substance name	CAS-No.	Control parameters	Update
n-butyl acetate	123-86-4	Immediately Dangerous to Life or Health Concentration Value 1700 parts per million	1995-03-01
xylene	1330-20-7	Immediately Dangerous to Life or Health Concentration Value 900 parts per million	1995-03-01
Carbon black	1333-86-4	Immediately Dangerous to Life or Health Concentration Value 1750 milligram per cubic meter	1995-03-01
ethylbenzene	100-41-4	Immediately Dangerous to Life or Health Concentration Value 800 parts per million	1995-03-01
butan-1-ol	71-36-3	Immediately Dangerous to Life or Health Concentration Value 1400 parts per million	1995-03-01

Engineering measures

Engineering measures : Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain aerosol- and solvent vapors concentration below the OEL, suitable respiratory protection must be worn.

Personal protective equipment

Protective measures : Do not eat or drink during work - no smoking.
Avoid product contact with skin, eyes and clothing.
Avoid the inhalation of dust from sanding, particulates and spray mist arising from the application of this preparation.
When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapor in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process until such time as the particulates and solvent vapor concentration has fallen below the exposure limits.

Eye protection : Use safety glasses or face shield (ANSI Z87.1 or approved equivalent).



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- Hand protection** : Glove permeation data does not exist for this material.
The following glove(s) should be used for splash protection only:
Appropriate material: nitrile
- Skin and body protection** : Personal should wear protective clothing as necessary to prevent skin contact. All parts of the body should be washed after contact.
- Respiratory protection** : If workers are exposed to concentrations above the exposure limit they must use appropriate, certified respirators.
Use MSHA/NIOSH approved respirator if concentration exceeds recommended exposure levels.
Dry grinding, torch cutting and/or welding however can produce hazardous dust and/or vapor.
If possible, machine employing a wet medium.
Where practicable, install exhaust hoods to improve capture of vapors and fumes and avoid exposition; otherwise wear respiratory protection equipment.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

- Form** : liquid
Color : according product name
Odor : characteristic

Safety data

- Flash point** : 88.7 °F (31.5 °C)
Method: ISO 2719
- Ignition temperature** : > 752 °F (> 400 °C)
- Lower explosion limit** : 1 %(V)
- Upper explosion limit** : 10 %(V)
- Boiling point/boiling range** : ca. 248 °F (120 °C)
- Vapor pressure** : ca. 100 hPa (75 mmHg)
at 122 °F (50 °C)
- Density** : ca. 7.93 lb/gal (0.95 g/cm3)
at 68 °F (20 °C)
- Water solubility** : Note: insoluble
- Flow time** : 22 s
4 mm



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Additional ecological information : There are no data available on the preparation itself.
The product should not be allowed to enter drains or water courses.

SECTION 13. DISPOSAL CONSIDERATIONS

Further information : Dispose of in accordance with local regulations.

SECTION 14. TRANSPORT INFORMATION

DOT

UN number : 1263
Description of the goods : PAINT
Class : 3
Packing group : III
Labels : 3
Environmentally hazardous : no

IATA

UN number : 1263
Description of the goods : PAINT
Class : 3
Packing group : III
Labels : 3
Packing instruction (cargo aircraft) : 366
Packing instruction (passenger aircraft) : 355
Packing instruction (LQ) : Y344
Environmentally hazardous : no

IMDG

UN number : 1263
Description of the goods : PAINT
Class : 3
Packing group : III
Labels : 3
EmS Number 1 : F-E
EmS Number 2 : S-E

Marine pollutant : no
Environmentally hazardous : no

Other information : If transported within the user's premises: To be transported always in closed, upright and safe containers. Make sure that persons handling these containers are aware of the rules of conduct in case of incident or spillage.



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SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Flammable Liquid, Carcinogen, Toxic by inhalation., Harmful by ingestion., Harmful by skin absorption., Moderate skin irritant, Severe eye irritant, Moderate respiratory irritant

TSCA Status : y (positive listing)
All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Chronic Health Hazard

**Clean Air Act
Ozone-Depletion
Potential** : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Clean Water Act
This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT - TO - KNOW

**SARA 302 Reportable
Quantity** : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Ingredients : Xylene 1330-20-7
ethylbenzene 100-41-4
aluminium powder 7429-90-5
butan-1-ol 71-36-3

US CAA HAP The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):
xylene 1330-20-7 7.6196 %
ethylbenzene 100-41-4 2.2257 %

CAA112(r) This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

CAA111 The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):
xylene 1330-20-7 7.6196 %
ethylbenzene 100-41-4 2.2257 %

US State Regulations

**Massachusetts Right To
Know Ingredients** : butyl acetate 123-86-4



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	Xylene	1330-20-7
	Carbon black	1333-86-4
	ethylbenzene	100-41-4
	aluminium powder	7429-90-5
	butan-1-ol	71-36-3
Pennsylvania Right To Know Ingredients	: butyl acetate	123-86-4
	Xylene	1330-20-7
	Carbon black	1333-86-4
	ethylbenzene	100-41-4
	aluminium powder	7429-90-5
	butan-1-ol	71-36-3
New Jersey Right To Know Ingredients	: butyl acetate	123-86-4
	Xylene	1330-20-7
	Carbon black	1333-86-4
	ethylbenzene	100-41-4
	aluminium powder	7429-90-5
	butan-1-ol	71-36-3
California Prop. 65 Ingredients	: WARNING! This product contains a chemical known in the State of California to cause cancer.	
	Carbon black	1333-86-4
	ethylbenzene	100-41-4
	WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.	
US Federal Regulations	N-METHYL-2-PYRROLIDONE	872-50-4
Volatile organic compounds (VOC) content	: VOC content excluding water: 5.18 lb/gal (0.62 g/cm3)	

SECTION 16. OTHER INFORMATION

Further information

HMIS Classification : Health Hazard: 3

Mankiewicz Gebr. & Co. (GmbH & Co. KG)
Georg-Wilhelm-Straße 189
21107 Hamburg (Wilhelmsburg)
Tel: +49 (0) 40 / 75 10 30
Fax: +49 (0) 40 / 75 10 33 75
www.mankiewicz.de

Bank Name	Ort	Kto.-Nr.	BLZ	BIC	IBAN
Deutsche Bank	Hamburg	600227300	200 700 00	DEUTDE33HAN	DE58 2007 0000 0800 2273 00
HypoVereinsbank	Hamburg	59273300	200 300 00	HYVEDE33HAN	DE34 2003 0000 0059 2733 00
Postbank	Hamburg	373205	200 100 20	PNKDEFF200	DE85 2001 0020 0000 3732 05

Sitz/Registriergericht Hamburg: HRA 42442
Büro/Vertrieb: Grauburg, Bismarckstraße 11
Stz/Registriergericht Hamburg: HRB 17189
Geschäftsführender Gesellschafter:
Michael O. Grau



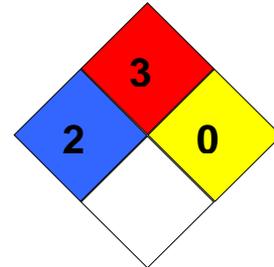
Product Name: ALEXSEAL-Metallic Base Coat
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Flammability: 3
Physical hazards: 0

NFPA Classification : Health Hazard: 2
Fire Hazard: 3
Reactivity Hazard: 0



Department issuing safety data sheet

UMCO Umwelt Consult GmbH
Georg-Wilhelm-Str. 183, D-21107 Hamburg
Telefon: +49 (0)40 / 79 02 36 300 Fax: +49 (0)40 / 79 02 36 357 e-mail: umco@umco.de

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



Revision Number: 003.1

Issue date: 12/10/2009

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE® 7649™ PRIMER
Product type: Accelerator
Company address: Henkel Corporation
 One Henkel Way
 Rocky Hill, Connecticut 06067

IDH number: 209715
Item number: 21348
Region: United States

Contact information:
 Telephone: 860.571.5100
 Emergency telephone: 860.571.5100
 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state:	Liquid	HMIS:	
Color:	Green	HEALTH:	*2
Odor:	Acetone	FLAMMABILITY:	3
		PHYSICAL HAZARD:	0
		Personal Protection:	See MSDS Section 8

DANGER: CAUSES EYE AND SKIN IRRITATION.
 MAY CAUSE RESPIRATORY TRACT IRRITATION.
 FLAMMABLE LIQUID AND VAPOR.

Relevant routes of exposure: Inhalation, Skin, Eye contact, Ingestion

Potential Health Effects

Inhalation: Vapors and mists will irritate nose and throat and possibly eyes. May cause respiratory tract irritation. Excessive inhalation of this material causes headache, dizziness, nausea and incoordination. Harmful by inhalation.

Skin contact: May cause skin irritation. Solvent action can dry and defat the skin, causing the skin to crack, leading to dermatitis.

Eye contact: Vapors may irritate eyes. Contact with eyes will cause irritation.

Ingestion: Harmful if swallowed.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Acetone	67-64-1	60 - 100
Isobutane	75-28-5	10 - 30
2-Ethylhexanoic acid	149-57-5	0.1 - 1

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If symptoms persist, seek medical advice.

Skin contact: Wash with soap and water. If symptoms develop and persist, get medical attention.

Eye contact: Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Get medical attention.

Ingestion: If conscious, drink plenty of water. Do not induce vomiting. Keep individual calm. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash point: -20 °C (-4°F) Estimated

Autoignition temperature: Not available

Flammable/Explosive limits - lower: Not available

Flammable/Explosive limits - upper: Not available

Extinguishing media: Foam, dry chemical or carbon dioxide.

Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Unusual fire or explosion hazards: Vapors may accumulate in low or confined areas, travel considerable distance to source of ignition, and flash back.

Hazardous combustion products: Oxides of carbon. Oxides of nitrogen. Irritating organic vapours.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.

Clean-up methods: Remove all sources of ignition. Ensure adequate ventilation. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Store in a partly filled, closed container until disposal.

7. HANDLING AND STORAGE

Handling: Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. During use and until all vapors are gone: Keep area ventilated - do not smoke; extinguish all flames, pilot lights, and heaters; turn off stoves, electrical tools and appliances, and any other sources of ignition.

Storage: For safe storage, store at or below 49 °C (120.2 °F)
Store away from heat, sparks, flames, or other sources of ignition.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Acetone	500 ppm TWA 750 ppm STEL	1,000 ppm (2,400 mg/m ³) TWA	None	None
Isobutane	1,000 ppm TWA	None	None	None
2-Ethylhexanoic acid	5 mg/m ³ TWA Inhalable fraction and vapor.	None	None	None

Engineering controls:	Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.
Respiratory protection:	Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
Eye/face protection:	Safety goggles or safety glasses with side shields.
Skin protection:	Neoprene, Butyl-rubber, or nitrile-rubber gloves. Chemical resistant, impermeable gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Green
Odor:	Acetone
Odor threshold:	Not available
pH:	Not available
Vapor pressure:	172 mm hg (68 °F (20°C))
Boiling point/range:	133 °F (56.1 °C)
Melting point/ range:	Not available
Specific gravity:	0.7936
Vapor density:	2.0
Flash point:	-20 °C (-4°F) Estimated
Flammable/Explosive limits - lower:	Not available
Flammable/Explosive limits - upper:	Not available
Autoignition temperature:	Not available
Evaporation rate:	1.9 (Ether = 1)
Solubility in water:	Soluble
Partition coefficient (n-octanol/water):	Not available
VOC content:	1.48 %; 11.7 g/l EPA Method 24

10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Oxides of carbon. Oxides of nitrogen. Irritating organic vapours.
Incompatible materials:	Strong oxidizing agents. Acids.
Conditions to avoid:	See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10).

11. TOXICOLOGICAL INFORMATION

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Acetone	No	No	No
Isobutane	No	No	No
2-Ethylhexanoic acid	No	No	No

Hazardous components	Health Effects/Target Organs
Acetone	Blood, Central nervous system, Irritant, Reproductive
Isobutane	Cardiac, Central nervous system, Lung
2-Ethylhexanoic acid	Developmental, Eyes, Irritant, Liver, Reproductive

12. ECOLOGICAL INFORMATION

Ecological information:	Not available
--------------------------------	---------------

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: D001: Ignitable.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Aerosols
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None
Exceptions: Consumer Commodity, (Not more than 1 L), ORM-D

International Air Transportation (ICAO/IATA)

Proper shipping name: Aerosols, flammable
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None
Exceptions: (Not more than 30 kg), ID8000, May Qualify as Consumer Commodity

Water Transportation (IMO/IMDG)

Proper shipping name: AEROSOLS
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None
Exceptions: Limited quantity (Not more than 1 L).

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification: None above reporting de minimus
CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Delayed Health, Fire, Immediate Health
CERCLA/SARA 313: None above reporting de minimus
California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
WHMIS hazard class: A, B.5, D.2.A, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Kyra Kozak Woods, Manager, Regulatory Affairs

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.



MATERIAL SAFETY DATA SHEET

SECTION 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: LOCTITE 771 NICKEL ANTI-SEIZE LUBRICANT

Proper Shipping Name: None allocated

Product code(s): 472902, 267237, 641488

Part Number(s): 28182A (28g), 33630 (28g), 39163 (500g)

Use: High temperature anti-seize compound

Supplier: HENKEL AUSTRALIA PTY. LIMITED ABN 82 001 302 996
ADHESIVE TECHNOLOGIES
135-141 Canterbury Road, Kilsyth, Victoria, 3137. Tel: (03) 9724 6444
24 HOUR EMERGENCY CONTACT NUMBER Tel: (03) 9724 6556

SECTION 2. HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE:

Hazardous according to the criteria of Safe Work Australia. This material has been classified as Toxic (T) and Irritant (Xi).

Risk phrase(s):

R36 Irritating to eyes.
R40 Limited evidence of a carcinogenic effect.
R43 May cause sensitisation by skin contact.
R48/23 Toxic: danger of serious damage to health by prolonged exposure through inhalation.

Safety phrase(s):

S24/25 Avoid contact with skin and eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 After contact with skin, wash immediately with plenty of soap suds.
S37/39 Wear suitable gloves and eye/face protection.
S46 If swallowed, seek medical advice immediately and show this container or label.

DANGEROUS GOODS INFORMATION:

Not classified as Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code).

SUSMP POISON SCHEDULE: None allocated

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS:

CHEMICAL ENTITY	CAS NO.	PROPORTION
Petroleum hydrocarbons		> 60% w/w
Nickel	[7440-02-0]	10-20% w/w
Graphite		10-20%w/w
Petroleum sulphonate		<10%w/w
Aluminum		<5%w/w



MATERIAL SAFETY DATA SHEET

SECTION 4. FIRST AID MEASURES

- Ingestion:** If swallowed, **do not induce** vomiting. Seek medical attention or contact a Poisons Information Centre (Phone 13 11 26).
- Skin:** Remove contaminated clothing and wash affected areas with plenty of soap and water. If irritation occurs, seek medical attention.
- Eyes:** Hold eyes open and flush with water for at least 15 minutes. Seek medical attention or contact a Poisons Information Centre (Phone 13 11 26).
- Inhalation:** If inhaled, remove from contaminated area. For all but the most minor symptoms, arrange for patient to be seen by a doctor.
- Advice to doctor:** Treat symptomatically.
- First Aid facilities:** Eye wash and normal washroom facilities

SECTION 5. FIRE FIGHTING MEASURES

- Suitable extinguishing media:** Carbon dioxide, foam, dry chemical.
- Hazards from combustion products:** Combustible paste. In a fire, it will emit oxides of carbon, oxide of sulphur and irritating fumes.
- Precautions for fire fighters and special protective equipment:** If there is a risk of exposure to products of combustion, then fire-fighters should wear full protective clothing and self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Wear impervious gloves, chemical goggles and waterproof boots. Contain and collect spillage with inert absorbent materials (e.g. sand, earth, vermiculite). Transfer to sealable containers suitable for storing spilled material. Use a non-flammable solvent or detergent and excess water to clean up areas in contact with spilled material. Do not contaminate watercourse. Dispose of residues in chemical waste disposal area in accordance with relevant State and Federal requirements.

SECTION 7. HANDLING AND STORAGE

Safe Handling: Observe recommendations made under SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION. Wear neoprene gloves and safety glasses.

Storage: Store indoors at ambient temperatures. Keep containers sealed when not in use. Protect from physical damage.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National exposure standards: TWA : 1 mg/m³ as Nickel
5 mg/m³ as aluminium (fumes)

Engineering controls: If processing vapours/dusts are produced, use a local mechanical exhaust system.

Personal protective equipment: Use good industrial hygiene. Avoid contact with skin and eyes. Wear overalls, safety footwear, neoprene gloves and chemical splash goggles. Use in a well ventilated area. If inhalation risk exists, wear a respirator complying with the requirements of AS 1715 and AS 1716.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

DATE OF ISSUE: 22.03.11 **REVISION OF:** 26.05.08 **IDH NO:** -
Page 2 of 4 **PRODUCT NAME:** LOCTITE 771 NICKEL ANTI-SEIZE LUBRICANT



MATERIAL SAFETY DATA SHEET

Physical data:

Appearance: Dark grey paste
Specific gravity: 1.20
Solubility: Insoluble in water

SECTION 10. STABILITY AND REACTIVITY

Chemical stability: Stable under normal conditions of temperature and pressure.

Conditions to avoid: Avoid sources of ignition.

Incompatible materials: Keep away from phosphorus, alcohols, sulphur, selenium and oxidising agents.

Hazardous decomposition products: When heated to decomposition, it will emit oxides of carbon, oxides of sulphur and irritating fumes.

Other reactions: Nickel will react slowly with hydrochloric acid, sulphuric acid and nitric acid. Under certain conditions it may release hydrogen gas, a flammable gas.

SECTION 11. TOXICOLOGICAL INFORMATION

HEALTH EFFECTS:

Acute:

Ingestion: If swallowed, this product will cause irritation to the mouth, throat and digestive tract.

Skin: Contact with the skin may cause irritation. This product may cause skin sensitisation in susceptible individuals.

Eyes: Contact with the eyes can cause irritation.

Inhalation: Inhalation of vapour from the heated product may cause irritation to the nose and throat.

Chronic:

Repeated skin contact may lead to dermatitis. This product contains nickel, for which, there is limited evidence of a carcinogenic effect (category 3). Prolonged inhalation of nickel and graphite dusts may cause pulmonary disease.

Exposure to free respirable nickel or graphite dust is not anticipated during normal use of this product. However, grinding or machining of coated parts may release dust/fumes. Under such circumstances, wear an approved dust/mist respirator.

Toxicity information: None available.

SECTION 12. ECOLOGICAL INFORMATION

Do not contaminate waterways and soil.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal of this material should be undertaken by a registered chemical disposal company. Empty containers should be cleaned by a registered contractor and then recycled or disposed of at an approved land waste site.

SECTION 14. TRANSPORT INFORMATION

Not classified as Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code).

DATE OF ISSUE: 22.03.11
Page 3 of 4

REVISION OF: 26.05.08
PRODUCT NAME: LOCTITE 771 NICKEL ANTI-SEIZE LUBRICANT

IDH NO: -



MATERIAL SAFETY DATA SHEET

SECTION 15. REGULATORY INFORMATION

SUSMP POISON SCHEDULE: None allocated

SECTION 16. OTHER INFORMATION

Abbreviations/acronyms:

SUSMP - Standard for the Uniform Scheduling of Medicines and Poisons

DISCLAIMER:

The percentage weight (% w/w) of ingredients is not to be taken as a specification guaranteed by Henkel Australia Pty. Limited, but only as an approximate guide to the content of hazardous ingredients in the material. The information contained herein does not constitute a guarantee by Henkel Australia Pty. Limited concerning the properties of the material.

The information contained in this Material Safety Data Sheet is offered in good faith and has been developed from what is believed to be accurate and reliable sources. The information is offered without warranty, representation, inducement or licence and Henkel Australia Pty. Limited assumes no legal responsibility for reliance upon same. Henkel Australia Pty. Limited disclaims any liability for loss, injury or damage incurred in connection with the use of the material or its associated Material Safety Data Sheet.

This information is not to be construed as a representation that the material is suitable for any particular purpose or use except those conditions and warranties implied by either Commonwealth or State statutes. Customers are encouraged to make their own enquiries as to the material's characteristics and, where appropriate, to conduct their own tests in the specific context of the material's intended use.

MATERIAL SAFETY DATA SHEET

Distributor: Lilly Miller Brands
1340 Treat Blvd., Suite 650
Walnut Creek, CA 94597

Date: July 13, 2006
Supersedes: July 3, 2003
Telephone: 866-866-0301

I. PRODUCT INFORMATION

Product: (Hose 'n Go) Lilly Miller Moss Out!
Roofs & Walks,
EPA Reg. No. 67702-8-33116
Chemical Name: salts of fatty acids
Chemical Family: salts of carboxylic acids

II. HAZARDOUS INGREDIENTS

<u>Components</u>	<u>%</u>	<u>Hazard Information</u>
ammonium salts of fatty acids	22.11%	eye irritant

III. PHYSICAL AND CHEMICAL CHARACTERISTICS (FIRE AND EXPLOSION DATA)

Solubility in Water: miscible in all proportions
Appearance and Odor: clear, colorless, odour of soap,
ammonia
Flash Point (°C): n/a
Specific Gravity, 25°C: 1.00
pH: 8.4±0.10
Extinguishing Media for Fires: water, CO₂, foams
Special Fire Fighting Procedures: normal extinguishing procedures

N/A - not applicable, NAV - not available, ca. - approximately

IV. PHYSICAL HAZARDS

Stability: product is stable
Conditions to Avoid: exposure to excessive heat
Materials to Avoid: none known
Hazardous Decomposition Products: CO₂, CO, NO_x, NH₃
Hazardous Polymerization Conditions: none known

V. HEALTH HAZARD DATA

LC ₅₀ (fish): NAV	LD ₅₀ (oral) NAV		
Carcinogen or Potential Carcinogen	NTP:no	IARC:no	OSHA: no
Routes of Entry:	inhalation, skin		
Skin:	May cause irritation; prolonged or frequent contact may cause allergic reaction		
Eyes:	Can be expected to cause moderate irritation		
Ingestion:	May cause irritation		
Inhalation	Can be expected to cause irritation if fine droplets are inhaled		
Medical Conditions Aggravated:	Chronic skin, eye or respiratory disease.		

VI. EMERGENCY FIRST AID PROCEDURES

Skin:	Wash with soap and water.
Eyes:	Flush eyes for at least 15 minutes, consult a physician.
Ingestion:	Drink a quantity of water.
Inhalation:	Remove to fresh air. If irritation persists consult a physician.

VII. SPECIAL PROTECTION INFORMATION

Ventilation:	Adequate ventilation for aerosol should be provided.
Respiratory Protection:	none required
Eye Protection:	none required
Protective Gloves:	none required

VIII. SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Storage Recommendations:	Store at ambient temperatures, tightly capped.
Spill or Leak Procedures:	Absorb large spills with absorbent materials. Will be very slippery.
Disposal Recommendations:	Dispose of in accordance with local regulations.

Information presented herein has been compiled from sources considered to be accurate and reliable, but is not guaranteed to be so. Please read entire product label prior to using this product. Buyer assumes all responsibility for safety and use not in accordance with directions.

MATERIAL SAFETY DATA SHEET

LIFE-CALK (WHITE)

FILE NO.: 0001
MSDS DATE: 02/19/2009

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Life Calk (White)
SYNONYMS: Polysulfide Sealant, Polysulfide Caulk
PRODUCT CODES: 1305, 1030, 1033, 1372

MANUFACTURER: Life Industries Corporation
DIVISION: Manufacturing
ADDRESS: 4060 Bridge View Drive
N. Charleston, SC 29405

EMERGENCY PHONE (USA): 1-800-424-9300
EMERGENCY PHONE (Outside USA): 1-703-527-3887
OTHER CALLS: 1-800-262-8200
FAX PHONE: (843)-566-1275

PRODUCT USE: Deck Sealant, Bedding Compound, General Sealant

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT(S):

1.) Barium Hydroxide

<u>CAS NO.</u>	<u>% WT</u>	<u>% VOL</u>	<u>SARA 313 REPORTABLE</u>
17194-00-2	6-10	NA	NA

**The values reported below are for barium concentration; the hydroxide present in anhydrous form does not contribute to the value.

	<u>ppm</u>	<u>mg/m3</u>
OSHA PEL-TWA:	NA	0.5
OSHA PEL STEL :	NA	NA
OSHA PEL CEILING:	NA	NA
ACGIH TLV-TWA:	NA	0.5
ACGIH TLV STEL:	NA	NA
ACGIH TLV CEILING:	NA	NA

2.) Calcium Peroxide

<u>CAS NO.</u>	<u>% WT</u>	<u>% VOL</u>	<u>SARA 313 REPORTABLE</u>
1305-79-9	6-10	NA	NA

**Exposure limits are not available.

3.) Toluene

<u>CAS NO.</u>	<u>% WT</u>	<u>% VOL</u>	<u>SARA 313 REPORTABLE</u>
108-88-3	< 2%	NA	Yes

	<u>ppm</u>	<u>mg/m3</u>
OSHA PEL-TWA:	NA	100
OSHA PEL STEL :	NA	NA
OSHA PEL CEILING:	NA	150
ACGIH TLV-TWA:	50	NA
ACGIH TLV STEL:	NA	NA
ACGIH TLV CEILING:	NA	NA

MATERIAL SAFETY DATA SHEET
LIFE-CALK (WHITE)

FILE NO.: 0001
MSDS DATE: 02/19/2009

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: DANGER! Emits toxic fumes when exposed to open flames/excessively high temperatures.

ROUTES OF ENTRY: INGESTION, SKIN CONTACT, EYE CONTACT

POTENTIAL HEALTH EFFECTS

EYES: May cause irritation.

SKIN: May cause irritation.

INGESTION: Not known. See section 4 for course of action.

INHALATION: Inhalation is not an expected hazard unless misted or heated to high temperatures.

ACUTE HEALTH HAZARDS: N/A

CHRONIC HEALTH HAZARDS: No information found.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NA

SECTION 4: FIRST AID MEASURES

EYES: Immediately flush eyes with gentle but large stream of water for at least 15 minutes. Call a physician immediately.

SKIN: Immediately flush skin with plenty of water for at least 15 minutes. If irritation persist contact a physician.

INGESTION: If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately

INHALATION (Burning Material): Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Treat symptomatically and supportively.

SECTION 5: FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: Foam, CO₂, dry chemical. DO NOT ATTEMPT TO EXTINGUISH WITH WATER.

SPECIAL FIRE FIGHTING PROCEDURES: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Not considered to be an explosion hazard.

HAZARDOUS DECOMPOSITION PRODUCTS: Sulfur Oxides, Carbon Oxides, Carbon Sulfide, Hydrogen Sulfide

SECTION 5 NOTES:

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Confine spill and place in a closed container. Wipe up excess with dry rags and place in a closed container.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Avoid contact with skin and eyes by using personal protective equipment; product is moisture sensitive (store in a dark, DRY place). BE SURE TO HAVE PROPER VENTILLATION TO MINIMIZE EXPOSURE TO VAPORS.

MATERIAL SAFETY DATA SHEET
LIFE-CALK (WHITE)

FILE NO.: 0001
MSDS DATE: 02/19/2009

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use adequate ventilation to keep airborne concentrations low.

RESPIRATORY PROTECTION: Not generally required.

EYE PROTECTION: Goggles

SKIN PROTECTION: PVC or rubber gloves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Thick White Paste

ODOR: Characteristic polysulfide odor, sulfur gives a distinct odor that most would consider "foul."

PHYSICAL STATE: Thick White Paste

pH AS SUPPLIED: NA

pH (Other):

BOILING POINT:

F: NA

C: NA

MELTING POINT:

F: NA

C: NA

FREEZING POINT:

F: NA

C: NA

VAPOR PRESSURE (mmHg): NA

VAPOR DENSITY (AIR = 1): NA

SPECIFIC GRAVITY (H₂O = 1): NA

EVAPORATION RATE: NA

BASIS (=1):

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (con't)

SOLUBILITY IN WATER: Insoluble

PERCENT VOLATILE: 2 %

BY VOL @

F: NA

C: NA

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under ordinary conditions of use and storage.

CONDITIONS TO AVOID (STABILITY): NA

INCOMPATIBILITY (MATERIAL TO AVOID): Strong oxidizing agents.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Sulfur Oxides (Contact with water could produce sulfuric acid; this is only a concern for large amounts of material engulfed in flames).

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID (POLYMERIZATION): N/A

MATERIAL SAFETY DATA SHEET

LIFE-CALK (WHITE)

FILE NO.: 0001
MSDS DATE: 02/19/2009

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

No toxicological information is available for this product.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION:

No ecological information available.

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: NA
HAZARD CLASS: NA
ID NUMBER: NA
PACKING GROUP: NA
LABEL STATEMENT: NA

SECTION 14 NOTES: This product does not require DOT labeling considering that the major component of the material is non-regulated by the laws governing domestic and international transportation; the chemicals listed within this MSDS are in a physical state or in such low concentrations that they do not apply to this section.

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): NA

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): NA

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): NA

311/312 HAZARD CATEGORIES: NA

313 REPORTABLE INGREDIENTS: NA

STATE REGULATIONS: NA

INTERNATIONAL REGULATIONS: NA

SECTION 15 NOTES:

OTHER INFORMATION: SECTION 16: OTHER INFORMATION

European Risk Phrases:

R 25, R 36/38

European Safety Phrases:

MATERIAL SAFETY DATA SHEET

LIFE-CALK (WHITE)

FILE NO.: 0001
MSDS DATE: 02/19/2009

S2, S3, S24/25, S37/39, S41, S51

DISCLAIMER: The information and recommendations contained herein are based upon data believed to be correct. Life Industries Corporation assumes no liability for misinterpretation of the data contained within this form as any type of warranty or guarantee of the product.

MATERIAL SAFETY DATA SHEET

SECTION I - IDENTIFICATION

TRADE NAME: POLYCOR
DESCRIPTION: HP30 ARCTIC WHITE
PRODUCT CODE IDENTITY: 992WK266
NPCA HMIS RATING: H 2* F 3 R 2
REVISION: 05
LAST REVISED : 09/20/2004
DATE OF ISSUE: 11/08/2004
COMPANY NAME: COOK COMPOSITES AND POLYMERS CO.
ADDRESS: 820 E. 14th AVENUE
NORTH KANSAS CITY, MO 64116
PREPARED BY:
HAZARD COMMUNICATION DEPT.
INFORMATION TELEPHONE:
COMPOSITES: 1-800-821-3590
POLYMERS: 1-800-488-5541
CUSTOMER:

ATTENTION:

24 HOUR RESPONSE NUMBER (CHEMTREC): 1-800-424-9300 (NORTH AMERICA)
703-527-3887 (INTERNATIONAL)

CCP certifies that its products comply with all the provisions of the Toxic Substances Control Act (TSCA), unless otherwise stated by ingredient in Section II.

*** The percent by weight composition data given in Sections II and X are NOT SPECIFICATIONS, but are based on 'target' formula values for each ingredient in the product. The data are presented as ranges for low hazard ingredients and single point values for ingredients of regulatory concern. Actual batch concentrations will vary within limits consistent with separately established product specifications. ***

SECTION II INGREDIENTS

1
CAS# 000136-52-7
COBALT 2-ETHYLHEXANOATE, 17% COBALT
PCT BY WT: .1260
EXPOSURE LIMIT:
ACGIH TLV/TWA: .05 MG/CU.M. AS COBALT METAL, DUST & FUME
OSHA PEL/TWA: .05 MG/CU.M. AS COBALT METAL, DUST & FUME

2
CAS# 000100-42-5
STYRENE MONOMER
PCT BY WT: 29.9030 VAPOR PRESSURE: 4.500 MMHG @ 68F
EXPOSURE LIMIT:
ACGIH TLV/TWA: 20 PPM (85 MG/CU.M.)
ACGIH TLV/STEL: 40 PPM (170 MG/CU.M.)
OSHA PEL/TWA: 100 PPM (8 HR TWA)
OSHA PEL/CEILING: ACCEPTABLE MAX. PEAK: 600 PPM (5 MIN IN ANY 3 HRS)
OSHA PEL/STEL: ACCEPTABLE CONCENTRATION: 200 PPM (15 MIN TWA)
LD50, Oral: 4.37 G/KG (RAT)
LD50, Dermal: >5 G/KG (RABBIT)
OTHER: LCLo: 5000 PPM/8H (RAT)
OTHER (cont.): NIOSH TWA: 50 PPM (215 MG/M3)
OTHER LIMITS:
IARC - Group 2B See Section V

3
CAS# 013463-67-7
TITANIUM DIOXIDE
PCT BY WT: 12.1990
EXPOSURE LIMIT:
ACGIH TLV/TWA: 10 MG/CU.M. (TOTAL DUST)
OSHA PEL/TWA: 15 MG/CU.M. (TOTAL DUST)

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LD50, Oral: >7500 MG/KG (RAT)
LD50, Dermal: NOT AVAILABLE
LC50, Inhalation: NOT AVAILABLE

4
CAS# 014807-96-6
TALC (HYDROUS MAGNESIUM SILICATE)
PCT BY WT: 10 - 20
EXPOSURE LIMIT:

ACGIH TLV/TWA: 2 MG/CU.M., RESPIRABLE DUST
OSHA PEL/TWA: 2 MG/CU.M., RESPIRABLE DUST
LD50, Oral: NOT AVAILABLE
LD50, Dermal: NOT AVAILABLE
LC50, Inhalation: NOT AVAILABLE

5
UNSATURATED POLYESTER RESIN
ON TSCA INVENTORY/ON CANADIAN DSL CAS# PROPRIETARY
PCT BY WT: 20 - 30
EXPOSURE LIMIT:

ACGIH TLV/TWA: NONE ESTABLISHED
OSHA PEL/TWA: NONE ESTABLISHED

This product contains one or more reported carcinogens or suspected
carcinogens which are noted by NTP, IARC, or OSHA-Z in the appropriate
subsection above under OTHER LIMITS.

This substance is classified as a hazardous air pollutant.

SECTION III PHYSICAL DATA

Boiling Range: High- -N/A F Low- 293.0 F
Vapor Pressure: See Section II
Theoretical Weight per Gallon, Calculated: 11.0950 LB/GL
Theoretical Specific Gravity, Calculated: 1.333
Theoretical VOC, Calculated: 3.375 LB/GL
--If applicable, see Section X for further VOC information--
Physical State: LIQUID
Appearance: WHITE
Odor: MODERATE AROMATIC
Odor Threshold: -N/A
pH: -N/A
Freezing Point: -N/A
Water Solubility: INSOLUBLE
Coefficient of Water/Oil Distribution: -N/A
Mechanical Impact Explosion: NO KNOWN HAZARD
Static Electricity Explosion: AVOID STATIC CHARGE
% HAP BY WEIGHT 30.035
% MONOMER BY WEIGHT 29.895

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SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CHARACTERISTICS:

Lowest Closed Cup Flashpoint: 88.0 degrees F
For Flash Points 73 to 100 deg. F.
OSHA Flammability Classification: Class IC
DOT Flammability Classification: Flammable Liquid
Lower Flammable Limit in Air: Lower- 1.1 % by volume
DOT Shipping Name:
Flash Points 73 to 100 deg. F. = RESIN SOLUTION, 3, UN1866, PG III

EXTINGUISHING MEDIA:

Foam, carbon dioxide, dry chemical, water fog.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

If polymerization takes place in a container, there is possibility of violent rupture of the container. Vapors are uninhibited and may form polymers in vents or flame arrestors of storage tanks resulting in stoppage of vents. Vapors may cause flash fire. Keep containers tightly closed and isolate from heat, electrical equipment, sparks and flame. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

SPECIAL FIRE FIGHTING PROCEDURES:

Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible auto-ignition or explosion when exposed to extreme heat.

ADDITIONAL TRANSPORTATION INFORMATION:

Freight Classification:
NMFC: 46030 RESIN COMPOUNDS, LIQUID LTL CLASS 55

SECTION V HEALTH HAZARD DATA

EFFECTS OF EXCESSIVE OVEREXPOSURE. PRIMARY ROUTES OF ENTRY ARE:

EYE CONTACT:

Irritation. Symptoms are tearing, redness and discomfort.

SKIN CONTACT:

Irritation. Can cause defatting of skin which may lead to dermatitis.

INHALATION:

Irritation to nose and throat. Extended or repeated exposure to concentrations above the recommended exposure limits may cause brain or nervous system depression, with symptoms such as dizziness, headache or nausea and if continued indefinitely, loss of consciousness, liver and kidney damage.

Reports have associated repeated and prolonged occupational over-exposure to solvents with permanent brain and nervous system damage.

INGESTION:

May cause mouth, throat, esophagus and stomach irritation, nausea, vomiting and diarrhea.

MEDICAL CONDITIONS THAT MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

Preexisting eye, skin, liver, kidney and respiratory disorders.

EMERGENCY AND FIRST AID PROCEDURES:

In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water. If affected by inhalation of vapors or spray mist, remove to fresh air. If swallowed, get medical attention immediately.

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CALIFORNIA PROPOSITION 65 INFORMATION:

WARNING - This product contains a chemical(s) known to the State of California to cause cancer.

OTHER HEALTH HAZARDS:

STYRENE MONOMER

The International Agency for Research on Cancer (IARC) has reclassified styrene as Group 2B "possibly carcinogenic to humans". This new classification is not based on new health data relating to either humans or animals, but on a change in the IARC classification system. The Styrene Information and Research Center does not agree with the reclassification and has published the following statement. "Recently published studies tracing 50,000 workers exposed to high occupational levels of styrene over a period of 45 years showed no association between styrene and cancer, no increase in cancer among styrene workers (as opposed to the average among all workers), and no increase in mortality related to styrene." An increased incidence of lung tumors was observed in mice from a recent inhalation study. The relevance of this finding is uncertain. Data from other long-term animal studies and from epidemiology studies of workers exposed to styrene do not provide a basis to conclude that styrene is carcinogenic. Lung effects have been observed in the mouse following repeated exposure to styrene.

DIMETHYLANILINE

Although Dimethylaniline is not listed as a carcinogen by OSHA, NTP, IARC or ACGIH, it contains trace amounts of aniline which is listed by the State of California as a substance known to cause cancer. A report of a two year study of Dimethylaniline was published by NTP (TR 360, March 1989). The study demonstrated some evidence of carcinogenic activity of Dimethylaniline in male rats, equivocal evidence in female mice.

TALC

Talc, Hydrous Magnesium Silicate, contains crystalline silica at levels greater than 0.1% but less than 1.0%. "IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Supplement 7, 1987", concludes there is limited evidence for the carcinogenicity of crystalline silica to humans, Class 2A. This classification was based on exposure to free silica dust and is not expected to be relevant to trace amounts of crystalline silica dispersed in paints and plastics.

ETHYLBENZENE

This product contains ethylbenzene. The International Agency for Research on Cancer (IARC) has evaluated ethylbenzene and classified it as Group 2B, possibly carcinogenic to humans. This classification is based on sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in humans.

CARBON BLACK

The IARC evaluation in Monograph 65 concluded that "there is sufficient evidence in experimental animals for the carcinogenicity of Carbon Black". Based on this evaluation, along with their evaluation of inadequate evidence of carcinogenicity in humans, IARC's overall evaluation is that "carbon black is possibly carcinogenic to humans (Group 2B)". Many inhalation toxicologists believe that the tumor response observed in the referenced rat studies is species specific and does not correlate to human exposure. Carbon black has not been listed as a carcinogen by the National Toxicology Program (NTP) or the Occupational Safety and Health Administration (OSHA). The National Institute of Occupational Safety and Health (NIOSH) criteria document on carbon black recommends that only carbon blacks with PAH levels greater than 0.1% be considered suspect carcinogens.

DIETHYLENE GLYCOL

Excessive exposure to diethylene glycol may cause severe kidney, liver, gastrointestinal and central nervous system effects.

METHANOL

If taken internally, Methyl Alcohol may cause methanol poisoning.

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Symptoms include severe headache, vomiting, unconsciousness and blurring or loss of vision. Methyl Alcohol exposure can cause damage to liver, heart and kidneys.

SECTION VI REACTIVITY DATA

STABILITY: Stable HAZARDOUS POLYMERIZATION: May occur.

CONDITIONS TO AVOID:

Elevated temperatures. Improper addition of promoter and/or catalyst.

Avoid direct contact of MEKP catalyst with accelerator. If an accelerator such as cobalt drier is to be added, mix this accelerator with base material before adding catalyst.

INCOMPATIBILITY (MATERIALS TO AVOID):

Oxidizers, peroxides, strong acids, aluminum chloride and vinyl polymers or any source of free radicals.

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition or combustion can produce fumes containing organic acids, carbon dioxide and carbon monoxide.

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Remove all sources of ignition (flames, hot surfaces, and electrical, static, or frictional sparks). Avoid breathing vapors. Ventilate area. Contain and remove with inert absorbent and non-sparking tools.

WASTE DISPOSAL METHOD:

Dispose of in accordance with local, state and federal regulations. Do not incinerate closed containers. Incinerate in approved facility.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

Do not breathe or ingest vapors, spray mist or dust while applying, sanding, grinding, or sawing cured product. Wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during application and other use of this product until vapors, mists and dusts are exhausted, unless air monitoring demonstrates vapor, mist and dust levels are below applicable limits. Follow respirator manufacturer's directions for respirator use. Observe OSHA Standard 29CFR 1910.134.

VENTILATION:

Provide general clean air dilution or local exhaust ventilation in volume and pattern to keep the air contaminant concentration below the lower explosion limit and below current applicable exposure limits in the mixing, application and curing areas; and to remove decomposition product during welding and flame cutting on surfaces coated with this product. In confined areas, use only with forced ventilation adequate to keep vapor concentration below 20% of lower explosion limits. Refer to OSHA Standards 29CFR 1910.94, 1910.107, 1910.108.

NOTE: Heavy solvent vapors should be removed from lower levels of the work area and all ignition sources (nonexplosion-proof motors, etc.) should be eliminated.

PROTECTIVE GLOVES:

Use solvent impermeable gloves to avoid contact with product.

EYE PROTECTION:

Do not get in eyes. Use safety eyewear with splash guards or side shields, chemical goggles, face shields.

OTHER PROTECTIVE EQUIPMENT:

Avoid contact with skin. Use protective clothing. Prevent contact with

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contaminated clothing. Wash contaminated clothing, including shoes,
before reuse.

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Do not store above 100 deg. F. Store large quantities in buildings
designed to comply with OSHA 1910.106. Keep away from heat, sparks and
flame. Keep containers closed when not in use and upright to prevent
leakage.

OTHER PRECAUTIONS:

Containers should be grounded when pouring. Do not take internally.
Wash hands after using and before smoking or eating. Emptied containers
may retain hazardous residue and explosive vapors. Keep away from heat,
sparks and flames. Do not cut, puncture or weld on or near emptied con-
tainers. Follow all hazard precautions given in this data sheet until
container is thoroughly cleaned or destroyed. If this product is
blended with other components such as thinners, converter, colorants and
catalysts prior to use, read all warning labels. Any mixture of com-
ponents will have hazards of all components. Follow all precautions.
If spraying this material, keep spray booths clean. Avoid buildup of
spray dust or overspray in booths or ducts.

KEEP OUT OF REACH OF CHILDREN FOR INDUSTRIAL USE ONLY

ADDITIONAL ENVIRONMENTAL INFORMATION:

The VOC quantity listed in Section III is a total theoretical loss value.
Under typical conditions only half this amount might be lost to the atmo-
sphere. Loss will vary due to temperature, humidity, film thickness, air
movement, spray equipment/techniques, catalyzation, gel and cure rates,
etc. If precise values are needed, it is suggested that onsite testing
be conducted.

SECTION X Sara Title III Information

SARA 313 INFORMATION:

This product contains the following substances subject to the
reporting requirements of Section 313 of Title III of the Superfund
Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

COBALT 2-ETHYLHEXANOATE, 17% COBALT
CAS# 000136-52-7 PCT BY WT: .1260

STYRENE MONOMER

CAS# 000100-42-5 PCT BY WT: 29.9030

DISCLAIMER AND LIMITATION OF LIABILITY

The products sold hereunder shall meet Seller's applicable specifications
at the time of shipment. Seller's specifications may be subject to change
at any time without notice to Buyer. Buyer must give Seller notice in
writing of any alleged defect covered by this warranty (together with all
identifying details, including the Product Code(s), description and date
of purchase) within thirty (30) days of the date of shipment of the product
or prior to the expiration of the shipment's quality life, whichever occurs
first. THE WARRANTY DESCRIBED HEREIN SHALL BE IN LIEU OF ANY OTHER
WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED
WARRANTY OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE. THERE
ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION OF THE FACE HEREOF.
The Buyer's sole and exclusive remedy against Seller shall be for the
replacement of the product or refund of the purchase price in the event

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that a defective condition of the product should be found to exist by Seller. NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY, OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO THE BUYER.

The sole purpose of this exclusive remedy shall be to provide Buyer with replacement of the product or refund of the purchase price of the product if any defect in material or workmanship is found to exist. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Seller is willing and able to replace the defective products or refund the purchase price.

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Klean-Strip Lacquer Thinner

HEALTH	2
FLAMMABILITY	2
PHYSICAL HAZ.	1
PPE	G



Printed: 03/30/2006
Revision: 03/15/2006

Date Created: 12/13/2005

1. Product and Company Identification

Product Code: QML170
Product Name: Klean-Strip Lacquer Thinner
Reference #: 1605.34
Manufacturer Information
Company Name: W. M. Barr
 2105 Channel Avenue
 Memphis, TN 38113
Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892
Web site address: www.wmbarr.com
Preparer Name: W.M. Barr and Company, Inc. (901)775-0100

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Percentage	OSHA TWA	ACGIH TWA	Other Limits
1. Methanol	67-56-1	20.0 -25.0 %	200 ppm	200 ppm	
2. Toluene	108-88-3	5.0 -10.0 %	200 ppm	50 ppm	
3. Acetone	67-64-1	5.0 -20.0 %	1000 ppm	500 ppm	
4. Acetic acid, Ethyl ester	141-78-6	5.0 -15.0 %	400 ppm	400 ppm	
5. Hexane, Light aliphatic naptha	64742-89-8	30.0 -50.0 %			
6. Methyl ethyl ketone	78-93-3	5.0 -10.0 %	200 ppm	200 ppm	
7. Ethanol, 2-Butoxy-	111-76-2	1.0 -5.0 %	50 ppm	20 ppm	
Hazardous Components (Chemical Name)	CAS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Methanol	67-56-1			250 ppm	
2. Toluene	108-88-3	500 ppm/(10min)	300 ppm		
3. Acetone	67-64-1			750 ppm	
4. Acetic acid, Ethyl ester	141-78-6				
5. Hexane, Light aliphatic naptha	64742-89-8				
6. Methyl ethyl ketone	78-93-3			300 ppm	
7. Ethanol, 2-Butoxy-	111-76-2				

3. Hazards Identification

Emergency Overview

Danger! Extremely flammable. Keep away from heat, sparks, flame and all other sources of ignition. Vapors may cause flash fire or ignite explosively. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition during use and until all vapors are gone. Beware of static electricity that may be generated by synthetic clothing and other sources.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic)

Inhalation Acute Exposure Effects:

Vapor harmful. May cause dizziness; headache; watering of eyes; irritation of respiratory tract; weakness; drowsiness; nausea; numbness in fingers, arms and legs; depression of central nervous system; loss of appetite; fatigue; hallucinations; light headedness; visual disturbances; giddiness and intoxication; sleepiness; cough and dyspnea; cold, clammy extremities; diarrhea; vomiting; dilation of pupils; spotted vision. Severe overexposure may cause convulsions; unconsciousness; coma; and death. Intentional misuse of this product by deliberately concentrating and inhaling can be harmful or fatal.

Skin Contact Acute Exposure Effects:

May be absorbed through the skin. May cause irritation; numbness in the fingers and arms; drying of skin; and dermatitis. May cause increased severity of symptoms listed under inhalation.

Eye Contact Acute Exposure Effects:

This material is an eye irritant. May cause irritation; burns; conjunctivitis of eyes; and corneal ulcerations of the eye. Vapors may irritate eyes.

Ingestion Acute Exposure Effects:

Poison. Cannot be made non-poisonous. May be fatal or cause blindness. May cause dizziness; headache; nausea; vomiting; burning sensation in mouth, throat, and stomach; loss of coordination; depression of the central nervous system; narcosis; stupor; gastrointestinal irritation; liver, kidney, and heart damage; diarrhea; loss of appetite; coma and death. May produce symptoms listed under inhalation.

Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged or repeated contact may cause dermatitis. Prolonged skin contact may result in absorption of a harmful amount of this material. May cause conjunctivitis; gastric disturbances; insomnia; dizziness; headache; weakness; fatigue; nausea; heart palpitations; skin irritation; numbness in hands and feet; permanent central nervous system changes; some loss of memory; pancreatic damage; giddiness; visual impairment or blindness; kidney or liver damage; and death. May cause symptoms listed under inhalation.

Signs and Symptoms Of Exposure

Medical Conditions Generally Aggravated By Exposure

Diseases of the skin, eyes, liver, kidneys, central nervous system and respiratory system.

4. First Aid Measures

Emergency and First Aid Procedures

Inhalation:

If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial medical assistance can be rendered.

Skin Contact:

Wash with soap and large quantities of water and seek medical attention if irritation from contact persists.

Eye Contact:

Flush with large quantities of water for at least 15 minutes and seek immediate medical attention.

Ingestion:

Call your local poison control center, hospital emergency room or physician immediately for instructions to induce vomiting.

Note to Physician

Poison. This product contains methanol. Methanol is metabolized to formaldehyde and formic acid. These metabolites may cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used as an antidote. Methanol is effectively removed by hemodialysis. Call your local poison control center for further information.

5. Fire Fighting Measures

Flammability Classification:

Class IB

Flash Pt:

4.00 F Method Used: TOC

Explosive Limits:

LEL: 1.00 UEL:

Fire Fighting Instructions

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards

Extinguishing Media

Use carbon dioxide, dry powder, or foam.

Unsuitable Extinguishing Media

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Clean up:

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area.

Small spills:

Take up with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

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Large spills:

Dike far ahead of spill for later disposal.

Waste Disposal:

Dispose in accordance with applicable local, state and federal regulations.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.

Eye Protection

Safety glasses, goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

Other Protective Clothing

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after use. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

Engineering Controls (Ventilation etc.)

Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering - Stop - ventilation is inadequate. Leave area immediately.

9. Physical and Chemical Properties

Physical States: [] Gas [X] Liquid [] Solid
Flash Pt: 4.00 F Method: TOC
Explosive Limits: LEL: 1.00 UEL:
Specific Gravity (Water = 1): 0.7642 - 0.7829
Percent Volatile: 100.0 % by weight.
VOC / Volume: 697.0000 G/L
Appearance and Odor
Water White / Free and Clear

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability

Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents, strong caustics, hydrogen peroxide, and nitrates.

Hazardous Decomposition Or Byproducts

Decomposition may produce carbon monoxide; carbon dioxide; formaldehyde; and unidentified organic compounds in black smoke.

Hazardous Polymerization: Will occur [] Will not occur [X]

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Conditions To Avoid - Hazardous Polymerization

11. Toxicological Information

Toxicological Information

Carcinogenicity/Other Information

Carcinogenicity:

NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

Ecological Information

13. Disposal Considerations

Waste Disposal Method

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name

Additional Transport Information

For DOT information, contact W.M. Barr Technical Services.

15. Regulatory Information

No data available.

16. Other Information

Company Policy or Disclaimer

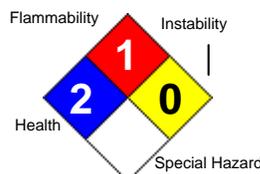
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Klean Strip Adhesive Remover / Klean Strip Premium Stripper



HEALTH	2
FLAMMABILITY	1
PHYSICAL	0
PPE	X



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Revision: 05/17/2011
Supersedes Revision: 10/13/2009

1. Product and Company Identification

Product Code:	4015.26		
Product Name:	Klean Strip Adhesive Remover / Klean Strip Premium Stripper		
Manufacturer Information			
Company Name:	W. M. Barr 2105 Channel Avenue Memphis, TN 38113		
Phone Number:	(901)775-0100		
Emergency Contact:	3E 24 Hour Emergency Contact	(800)451-8346	
Information:	W.M. Barr Customer Service	(800)398-3892	
Web site address:	www.wmbarr.com		
Preparer Name:	W.M. Barr EHS Dept	(901)775-0100	
Intended Use:	Removal of adhesives, mastics, & contact cement from wood, concrete, metal and masonry.		
Synonyms			
GKAS94325, QKAS94326, QKAS94326L, GKS3, QKS3, QKS3L, QKS34, PA11185			

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA TWA	ACGIH TWA	Other Limits
1. Dichloromethane {Methylene chloride; R-30; Freon 30}	75-09-2	60.0 -100.0 %	25 ppm	50 ppm	No data.
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	10.0 -30.0 %	200 ppm	200 ppm	No data.
3. Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	8052-41-3	1.0 -5.0 %	500 ppm	100 ppm	No data.
Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Dichloromethane {Methylene chloride; R-30; Freon 30}	PA8050000	125 ppm (15 min)	No data.	No data.	No data.
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	PC1400000	No data.	No data.	250 ppm	No data.
3. Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	WJ8925000	No data.	No data.	No data.	No data.

3. Hazards Identification

Emergency Overview

Danger! Poison. May be fatal or cause blindness if swallowed. Eye and skin irritant. Vapor Harmful.

Use only with adequate ventilation to prevent buildup of vapors. If the work area is not well ventilated, do not use this product.

Keep out of reach of children.

Potential Health Effects (Acute and Chronic)

INHALATION ACUTE EXPOSURE EFFECTS:

Vapor harmful. May cause upper respiratory tract irritation and central nervous system depression with symptoms such as confusion, lightheadedness, nausea, vomiting, headache, drowsiness, and fatigue. Mist or

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vapor can irritate the throat and lungs. Causes formation of carbon monoxide in blood which may affect the cardiovascular system and central nervous system. Continued exposure may cause unconsciousness and even death. Intentional misuse of this product by deliberately concentrating and inhaling the vapors can be harmful or fatal. Concurrent exposure to carbon monoxide, smoking, and physical activity may increase the level of carboxyhemoglobin levels in the blood resulting in additive effects. This product is a simple asphyxiant.

SKIN CONTACT ACUTE EXPOSURE EFFECTS:

This product is a skin irritant. Product may be absorbed through the skin. Harmful if absorbed through the skin. Effects may range from mild irritation to severe pain, and possibly burns, depending on the intensity of contact. Prolonged or repeated contact may dry the skin and cause irritation. Symptoms include redness, itching, burning, drying and cracking of the skin, and skin burns.

EYE CONTACT ACUTE EXPOSURE EFFECTS:

This material is an eye irritant. Vapors may irritate the eyes. Contact may cause tearing, redness, a stinging or burning feeling, swelling, and blurred vision.

INGESTION ACUTE EXPOSURE EFFECTS:

Poison. May be fatal or cause blindness if swallowed. May cause nausea or vomiting. Aspiration hazard. This material may be aspirated into the lungs during vomiting. If vomiting results in aspiration, chemical pneumonia could occur. It can be readily absorbed by the stomach and intestinal tract. Absorption through the gastrointestinal tract may produce central nervous system depression and systemic effects. Swallowing this material may irritate the mucous membranes of the mouth, throat, and esophagus. May cause cyanosis (blue coloring of the skin and nails from lack of oxygen).

CHRONIC EXPOSURE EFFECTS:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged skin contact may cause irritation, redness, swelling and possible tissue destruction. Prolonged or repeated contact may cause dermatitis. Prolonged skin contact may result in absorption of a harmful amount of this material. May cause liver damage. May cause cancer based on animal data (see Section 11. Toxicological Information).

Target Organs:

Blood, central nervous system, liver, skin, cardiovascular system, eyes, respiratory system, lungs.

Signs and Symptoms Of Exposure

See Potential Health Effects.

Medical Conditions Generally Aggravated By Exposure

Heart of cardiovascular disorders, kidney disorders, liver disorders, central nervous system disorders, respiratory system (including asthma and other breathing disorders), skin disorders and allergies.

Alcohol may enhance the toxic effects of methylene chloride exposure. May cross the placenta. May be excreted in breast milk.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

4. First Aid Measures

Emergency and First Aid Procedures

INHALATION:

If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

SKIN CONTACT:

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Wash with soap and large quantities of water and seek medical attention if irritation from contact persists.

EYE CONTACT:

Immediately flush with water, remove any contact lens, continue flushing with water for at least 15 minutes, then get medical attention immediately.

INGESTION:

Do not induce vomiting, unless directed to by medical personnel. Call your poison control center, hospital, emergency room, or physician immediately for instructions. Do not give anything by mouth to an unconscious person.

Note to Physician

This product contains methylene chloride and methanol.

This product contains methanol which can cause intoxication and central nervous system depression. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used to prevent methanol metabolism. Ethanol administration is indicated in symptomatic patients or at blood methanol concentrations above 20 ug/dl. Methanol is effectively removed by hemodialysis.

Methylene Chloride is an aspiration hazard. Risk of aspiration must be weighed against possible toxicity of the material when determining whether to induce emesis or to perform gastric lavage. This material sensitizes the heart to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmia in individuals exposed to this material. This material is metabolized to carbon monoxide. Consequently, elevations in carboxyhemoglobin as high as 50% have been reported, and levels may continue to rise for several hours after exposure has ceased. Data in experimental animals suggest there is a narrow margin between concentrations causing anesthesia and death. Adrenalin should never be given to a person overexposed to methylene chloride.

5. Fire Fighting Measures

Flammability Classification:	NFPA Class IIIB	
Flash Pt:	NP	
Explosive Limits:	LEL: No data.	UEL: No data.
Autoignition Pt:	No data available.	

Fire Fighting Instructions

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards

No flash to boil.

Contact of liquid or vapor with flame or hot surfaces will produce toxic gases and a corrosive residue that will cause deterioration of metal.

Vapors are heavier than air and will tend to collect in low areas.

Hazardous Combustion Products

Thermal decomposition or combustion may produce hydrogen chloride, chlorine, phosgene, and oxides of carbon.

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Extinguishing Media

Use carbon dioxide, dry powder, water spray, or foam.

Unsuitable Extinguishing Media

None known.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Isolate the immediate area. Prevent unauthorized entry. Eliminate all sources of ignition in area and downwind of the spill area. Stay upwind, out of low areas, and ventilate closed spaces before entering. All equipment used when handling this product must be grounded or non-sparking. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to compatible containers.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. A source of clean water should be kept in the immediate work area for flushing of the eyes and skin.

Keep away from heat, sparks, flame, and any other source of ignition.

Do not smoke when anywhere near this material.

Ground and bond containers when transferring material.

Do not use in confined spaces, basements, bathrooms, etc, where vapors can build up and explode if ignited by an ignition source.

Vapors are heavier than air and will collect in low areas.

Precautions To Be Taken in Storing

Store in a cool place in original container and protect from sunlight. Exposure to high temperatures or prolonged exposure to sun may cause can to leak or swell. Once opened, remover should be used within six months or properly disposed of to avoid can deterioration. Do not store near flames or at elevated temperatures.

Keep container tightly closed when not in use.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For use in areas with inadequate ventilation or fresh air, wear a properly maintained and properly fitted NIOSH approved self-contained breathing apparatus or powered air supply respirator or loose fitting hood.

For OSHA controlled work places and other regular users - Use only with adequate ventilation under engineered air control systems designed to prevent exceeding the appropriate TLV.

A dust mask does not provide protection against vapors.

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Eye Protection

Chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Chemical goggles or face shields are recommended when splashing or spraying of chemical is possible. A faceshield provides more protection to help reduce chemical contact to the face and eyes.

Protective Gloves

Wear gloves with as much resistance to the chemical ingredients as possible. Laminate film gloves offer the best protection. Other glove materials, such as nitrile rubber, neoprene, and PVC will be degraded by methylene chloride, but may provide protection for some amount of time, based on the type of glove and the conditions of use. Consult your glove supplier for additional information. Gloves contaminated with product should be discarded and not reused.

Other Protective Clothing

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure.

Engineering Controls (Ventilation etc.)

Use only with adequate ventilation to prevent buildup of vapors. If work area is not well ventilated, do not use this product. Do not use in areas where vapors can accumulate and concentrate, such as basements, bathrooms or small enclosed areas.

Whenever possible, use outdoors in an open air area. If using indoors open all windows and doors and maintain a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea or eye-watering -- STOP -- ventilation is inadequate. Leave area immediately and move to fresh air.

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Work/Hygienic/Maintenance Practices

A source of clean water should be available in the work area for flushing of the eyes and skin.

Wash hands thoroughly after use.

Do not eat, drink, or smoke in the work area.

Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use.

Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

9. Physical and Chemical Properties

Physical States:	[] Gas [X] Liquid [] Solid
Melting Point:	No data.
Boiling Point:	No data.
Autoignition Pt:	No data.
Flash Pt:	NP
Specific Gravity (Water = 1):	1.138
Density:	9.462
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	> 1
Evaporation Rate (vs Butyl Acetate=1):	< 1

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Solubility in Water: Slight
Percent Volatile: 97 % by weight.
VOC / Volume: 23 % WT
pH: 10.0 - 10.5

Appearance and Odor
Clear to white color.

10. Stability and Reactivity

Stability: Unstable [] Stable []

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents; bases; strong caustics; strong acids; oxygen; nitrogen peroxide; reactive metals such as aluminum and magnesium; sodium; potassium; and nitric acid.

Hazardous Decomposition Or Byproducts

Decomposition may produce carbon monoxide and carbon dioxide, hydrogen chloride, chlorine gas, and small quantities of phosgene.

Hazardous Polymerization: Will occur [] Will not occur []

Conditions To Avoid - Hazardous Polymerization

No data available.

11. Toxicological Information

This product has not been tested as a whole. Information below will be for individual ingredients.

Methylene Chloride:

ACUTE TOXICITY:

LC50 Rat inhalation 52 mg/L 4 hrs

LD50 Rat oral 985-1600 mg/kg

SKIN CORROSION / IRRITATION:

810 mg/24 hr skin rabbit - severe

100 mg/24 hr skin rabbit - moderate

SERIOUS EYE DAMAGE / IRRITATION:

162 mg eyes rabbit - moderate

10 mg eyes rabbit - mild

500 mg/24 hr eyes rabbit - mild

RESPIRATORY OR SKIN SENSITIZATION: Not a respiratory or skin sensitizer.

ASPIRATION HAZARD: Methylene chloride does present an aspiration hazard.

MUTAGENIC DATA: Positive results have been observed in the Ames test. In mammalian systems, responses have generally been negative.

IMMUNOTOXICITY: A study found there was no evidence of harm to the immune system of laboratory animals or reduced ability to combat disease.

NEUROTOXICITY: Tests in rats indicate no significant neurotoxic effects after exposure to concentrations up to 2,000 ppm for 90 days. No neurotoxic effects have been observed in humans at typical occupational exposure levels.

DEVELOPMENTAL/REPRODUCTIVE: No significant developmental effects were observed in female rats and mice exposed to 1,250 ppm during gestation. A similar result was observed in rats exposed to 4,500 ppm before and during gestation. A two-generation inhalation study showed no adverse reproductive effects in rats exposed to as much as 1,500 ppm for 14 weeks.

CARCINOGEN STATUS: Methylene chloride is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that are not considered relevant

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to worker exposure. Available epidemiological studies do not confirm an increased risk of cancer in humans. Available evidence suggests that this material is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.

Methanol:

ACUTE TOXICITY:

LD50 Rat oral 5628 mg/kg

LC50 Rat inhalation 64000 ppm/4 hr

LC50 Rat inhalation 87.5 mg/L/6 hr

LD50 Mouse oral 7300 mg/kg

SKIN CORROSION / IRRITATION: LD50 Rabbit dermal 15,800 mg/kg bw

SERIOUS EYE DAMAGE / IRRITATION: Methanol is a mild to moderate eye irritant.

RESPIRATORY OR SKIN SENSITIZATION: Not a respiratory or skin sensitizer.

ASPIRATION HAZARD: Methanol presents an aspiration hazard.

MUTAGENIC DATA: No data.

IMMUNOTOXICITY: No data.

NEUROTOXICITY: Overexposure to methanol has been suggested as causing central nervous system damage in laboratory animals.

DEVELOPMENTAL/REPRODUCTIVE: The inhalation of methanol by pregnant rodents throughout the period of embryogenesis induces a wide range of concentration-dependent teratogenic and embryo-lethal effects.

Methanol has caused birth defects in laboratory animals, but only when inhaled at extremely high vapor concentrations. The relevance of this finding to humans is uncertain.

CARCINOGEN STATUS: There is no evidence from animal studies to suggest methanol is a carcinogen.

Stoddard Solvent:

ACUTE TOXICITY:

LD50 Rat oral >34,600 mg/kg

LC50 Rat Inhalation >21,400 mg/m³ / 4 hrs

LD50 Rabbit skin 15,400 mg/kg

SKIN CORROSION / IRRITATION: Primary dermal studies (4 hr exposure) in rabbits utilizing mineral spirits containing less than 2% aromatics resulted in slight to moderate skin irritation.

SERIOUS EYE DAMAGE / IRRITATION: In a 15 minute inhalation period, eye irritation, characterized as a slight dryness, was reported in one of six volunteers (ages 22-61 years) at 150 ppm (860 mg/cu m). At 470 ppm (2700 mg/cu m), ocular irritation was reported by all six volunteers.

RESPIRATORY OR SKIN SENSITIZATION: Skin sensitization was not evident in animal studies.

ASPIRATION HAZARD: This material presents an aspiration hazard.

MUTAGENIC DATA: No data.

IMMUNOTOXICITY: No data.

NEUROTOXICITY: Repeated exposure to elevated concentrations of hydrocarbon solvents can produce a variety of transient CNS effects (e.g., dizziness, headache, narcosis, etc.)

DEVELOPMENTAL/REPRODUCTIVE: There were no treatment-related effects on pregnancy rate, mortality or gross post mortem observations in animal studies utilizing mineral spirits containing less than 2% aromatics. In vivo and in vitro studies on mineral spirits containing up to 22% aromatics indicate that these products are not genotoxic.

CARCINOGEN STATUS: There is inadequate evidence for the carcinogenicity of petroleum solvents in humans. Animal studies have indicated that there may be some evidence of carcinogenic activity in male rats but no evidence in female rats. A low carcinogenic potential is suggested by a lack of genotoxic potential

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identified in in vivo and in vitro genetic toxicity tests.

OTHER ADVERSE EFFECTS: Chronic effects of ingestion and subsequent aspiration of mineral spirits into the lungs may cause pneumatocele (lung cavity) formation and chronic lung dysfunction.

Chronic Toxicological Effects

Reports have associated repeated and prolonged occupational overexposure to solvents with irreversible brain and nervous system damage.

Carcinogenicity/Other Information

IARC 2B - Possibly Carcinogenic to Humans

ACGIH A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Dichloromethane {Methylene chloride; R-30; Freon 30}	75-09-2	Possible	2B	A3	Yes
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	n.a.	n.a.	n.a.	n.a.
3. Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	8052-41-3	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

No information available for this product as a whole.

Methylene Chloride:

TOXICITY: LC50 310 mg/L 96 hrs (static) Fathead Minnow; LC50 220 mg/L 96 hrs (static) Bluegill Sunfish; LC50 256 mg/L 96 hrs Mysid Shrimp

PERSISTENCE AND DEGRADABILITY: If released to air, a vapor pressure of 435 mm Hg at 25 deg C indicates dichloromethane will exist solely as a vapor in the ambient atmosphere. This material released to the atmosphere will degrade by reaction with hydroxyl radicals with a half-life of several months. It is not subject to direct photooxidation. On land is expected to evaporate rapidly into the atmosphere due to its high vapor pressure. It is poorly adsorbed to soil and can leach into the groundwater. Calculated Adsorption Coefficient (log KOC) is 1. This material is subject to rapid evaporation, with estimated evaporative half-lives ranging from 3 to 5.6 hours under moderate mixing conditions. This material has a negligible rate of hydrolysis.

Biodegradation may occur in groundwater, but will be very slow compared with evaporation.

BIOACCUMULATIVE POTENTIAL: Bioconcentration potential in aquatic organisms is low with BCF of 2.

MOBILITY IN SOIL: If released to soil, dichloromethane is expected to have very high mobility based upon an estimated Koc of 24.

OTHER ADVERSE EFFECTS: No data.

Methanol:

TOXICITY: Methanol is of low toxicity to aquatic organisms. LC50 Pimephales promelas (fathead minnows) 29.4 g/L/96 hr, (28-29 days old), confidence limit= 28.5-30.4; Test conditions: Water temp= 25 deg C, dissolved oxygen= 7.3 mg/L, water hardness= 43.5 mg/l calcium carbonate, alkalinity= 46.6 calcium carbonate, tank volume= 6.3 L, additions= 5.71 V/D, pH= 7.66 (0.03).

PERSISTENCE AND DEGRADABILITY: If released to the atmosphere, a vapor pressure of 127 mm Hg at 25 deg C indicates that methanol will exist solely in the vapor phase. Vapor phase methanol is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 17 days. Volatilization from moist soil surfaces is expected to be an important fate process based upon a Henry's Law constant of 4.55X10⁻⁶ atm-cu m/mole. Methanol may also volatilize from dry soils based upon its vapor pressure. Biodegradation of methanol in soils is expected to occur rapidly based on half-lives in a sandy silt loam from Texas and a sandy loam from Mississippi of 1 and 3.2 days, respectively. If released into

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water, methanol is not expected to adsorb to suspended solids and sediment based upon the estimated Koc. Volatilization from water surfaces is expected to be an important fate process based upon this compound's Henry's Law constant. Estimated volatilization half-lives for a model river and model lake are 3 and 35 days, respectively. Biodegradation is expected to occur in natural waters since methanol is degraded quickly in soils and was biodegraded rapidly in various aqueous screening tests using sewage seed or activated sludge. Hydrolysis of methanol and photolysis in sunlit surface waters are not expected since methanol lacks functional groups that are susceptible to hydrolysis or photolysis under environmental conditions.

BIOACCUMULATIVE POTENTIAL: BCF values of less than 10, measured in fish suggests bioconcentration in aquatic organisms is low.

MOBILITY IN SOIL: If released to soil, methanol is expected to have very high mobility based upon an estimated Koc of 1.

Stoddard Solvent:

TOXICITY: This mixture contains components that are potentially toxic to freshwater and saltwater ecosystems. This material may be harmful to aquatic organisms and may cause long term adverse effects in the aquatic environment.

PERSISTENCE AND DEGRADABILITY: This material will normally float on water. Components will evaporate rapidly.

BIOACCUMULATIVE POTENTIAL: The octanol-water partition coefficient for this material is expected to be in the range of 2.1 to 5.

MOBILITY IN SOIL: No data.

OTHER ADVERSE EFFECTS: No data.

13. Disposal Considerations

Waste Disposal Method

Dispose in accordance with applicable local, state, and federal regulations.

Keep out of bodies of water.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name	Paint Related Material
DOT Hazard Class:	8
DOT Hazard Label:	CORROSIVE
UN/NA Number:	UN3066
Packing Group:	II

Additional Transport Information

For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

The supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

Limited quantities of 1 liter or less may be allowed depending on the mode of transportation. Refer to 49 CFR, IMDG Code or IATA Dangerous Goods Regulations for this information.

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15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Dichloromethane {Methylene chloride; R-30; Freon 30}	75-09-2	No	Yes 1000 LB	Yes	Yes
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	No	Yes 5000 LB	Yes	No
3. Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	8052-41-3	No	No	No	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Dichloromethane {Methylene chloride; R-30; Freon 30}	75-09-2	HAP, ODC ()	Yes	Inventory, 4 Test, 8A CAIR	Yes
2. Methanol {Methyl alcohol; Carbinol; Wood alcohol}	67-56-1	HAP, ODC ()	No	Inventory	No
3. Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	8052-41-3	HAP, ODC ()	No	Inventory	No

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

- Sec.302:** EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.
- Sec.304:** EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.
- Sec.313:** EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.
- Sec.110:** EPA SARA 110 Superfund Site Priority Contaminant List

TSCA (Toxic Substances Control Act) Lists:

- Inventory:** Chemical Listed in the TSCA Inventory.
- 5A(2):** Chemical Subject to Significant New Rules (SNURS)
- 6A:** Commercial Chemical Control Rules
- 8A:** Toxic Substances Subject To Information Rules on Production
- 8A CAIR:** Comprehensive Assessment Information Rules - (CAIR)
- 8A PAIR:** Preliminary Assessment Information Rules - (PAIR)
- 8C:** Records of Allegations of Significant Adverse Reactions
- 8D:** Health and Safety Data Reporting Rules
- 8D TERM:** Health and Safety Data Reporting Rule Terminations
- 12(b):** Notice of Export

Other Important Lists:

- CWA NPDES:** EPA Clean Water Act NPDES Permit Chemical
- CAA HAP:** EPA Clean Air Act Hazardous Air Pollutant
- CAA ODC:** EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)
- CA PROP 65:** California Proposition 65

International Regulatory Lists:

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

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Yes No Acute (immediate) Health Hazard
 Yes No Chronic (delayed) Health Hazard
 Yes No Fire Hazard
 Yes No Sudden Release of Pressure Hazard
 Yes No Reactive Hazard

Regulatory Information

Methylene Chloride WHMIS Classification: D1B, D2A, D2B

Methylene Chloride WHMIS Health Effects Criteria Met by this Chemical:

D2B - Eye irritation - toxic - other

D2B - Skin irritation - toxic - other

D2A - Carcinogenicity - very toxic - other

D2B - Mutagenicity - toxic - other

D1B - TDG class 6.1 packing group III - toxic - immediate

Methylene Chloride WHMIS Ingredient Disclosure List: Included for disclosure at 0.1% or greater.

Methanol CAS Registry Number: 67-56-1

Methanol WHMIS Classification: B2, D1B, D2A, D2B

Methanol WHMIS Health Effects Criteria Met by this Chemical:

D1B - TDG class 6.1 packing group unknown - toxic - immediate

D2A - Teratogenicity and embryotoxicity - very toxic - other

D2B - Eye irritation - toxic - other

Methanol WHMIS Ingredient Disclosure List: Included for disclosure at 1% or greater. Meets criteria for disclosure at 0.1%.

Stoddard Solvent CAS# 8052-41-3

WHMIS Classification:

B3 - Flammable and combustible material - Combustible liquid

D2B - Poisonous and infectious material - Other effects - Toxic

WHMIS Health Effects Criteria Met by this Chemical: D2B - Skin irritation - toxic - other

WHMIS Ingredient Disclosure List: Included for disclosure at 1% or greater.

This product has been classified according to the hazard criteria of the Controlled Products Regulations.

Concentrations reported in section 2 are weight/weight.

Ingredients disclosed in section 2 are on Canadian DSL.

16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

Material Safety Data Sheet

I. PRODUCT INFORMATION

TRADE NAME (as labeled): Plexus Plastic Cleaner Protectant and Polish

MANUFACTURER'S NAME: BTI

Address (complete mailing address):
638 Lindero Canyon Road, Suite 371
Agoura, CA 91301

Phone number for additional information: 1-800-405-6495

Date prepared or revised: 1/5/94

Name of preparer*: Ms. Barbara Belmont

II. HAZARDOUS INGREDIENTS

Chemical Names	CAS Number	Percent*	Exposure ACGIH TLV	Limits in Air OSHA PEL	(Indicate units) Other (specify)
Aliphatic Petroleum Distillates	64742-89-8	23	300 ppm	--	--
Propane	74-78-6	3	--	1000 ppm	--
Isobutane	75-28-5	12	800 ppm	--	--

III. PHYSICAL PROPERTIES

Vapor density (air=1): 1.4

Specific gravity: 0.91

Solubility in water: Negligible

Vapor pressure, mmHg at 20 degrees Celsius: 23

Appearance and odor: White/Off-White creamy emulsion with lemon odor in an aerosol can

Melting point or range, degrees Fahrenheit: 43 degrees

Boiling point or range, degrees Fahrenheit: 190 degrees

Evaporation rate (butyl acetate=1): 1

HOW TO DETECT THIS SUBSTANCE (warning properties of substance as a gas, vapor, dust, or mist): Lemon odor

IV. FIRE AND EXPLOSION

Flash Point, degrees Fahrenheit (give method): TCC 59 degrees

Auto Ignition temperature, degrees Fahrenheit: 968 degrees

Flammable limits in air, % by volume:

lower (LEL): 3

upper (UEL): 6.5

Fire extinguishing materials:

water spray

foam

carbon dioxide

dry chemical

other: _____

Special Fire Fighting Procedures: Wear self-contained breathing apparatus with full face-piece operated in positive pressure demand mode; cool uninvolved containers to prevent bursting.

Unusual fire and explosion hazards:

Vapors are heavier than air; flash point is sub-ambient; keep away from all ignition sources.

V. HEALTH HAZARD INFORMATION

SYMPTOMS OF OVEREXPOSURE (for each potential route of exposure)

Inhaled: Respiratory irritation; CNS effects

Contact with skin or eyes: Prolonged skin contact may cause irritation, defatting, dermatitis; eye contact may cause irritation, redness, tearing, blurry, vision

Absorbed through skin: --

Swallowed: Nausea, vomiting, diarrhea

HEALTH EFFECTS OR RISKS FROM EXPOSURE.

Acute: See Health Hazard Information above

Chronic: Sensitization dermatitis; respiratory sensitization; gastrointestinal distress

Reproductive: Unknown

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Bronchitis; asthma; dermatitis

POTENTIAL OR SUSPECTED CANCER AGENT?

NO. This products ingredients are not found in the lists below.
 YES. The ingredients below are regulated or listed as potential cancer agents by the indicated agency.



SAFETY DATA SHEET

ISOPROPYL ALCOHOL

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY:

PRODUCT NAME: ISOPROPYL ALCOHOL
PART No.: RM134, RM135
SYNONYMS, TRADE NAMES: sec-PROPYL ALCOHOL, ISOPROPANOL, PROPAN-2-OL, IPA
SUPPLIER: J M Loveridge plc
Southbrook Road, Southampton
Hampshire
SO15 1BH
Tel: 023 8022 2008
Fax: 023 8022 2117

2. COMPOSITION/INFORMATION ON INGREDIENTS:

EU INDEX No.: 603-117-00-0
EEC (EINECS) No. 200-661-7
CAS No.: 67-63-0

3. HAZARDS IDENTIFICATION:

Highly flammable. Irritating to eyes. Vapours may cause drowsiness and dizziness.

4. FIRST AID MEASURES:

GENERAL: IN ALL CASES OF DOUBT OR WHEN SYMPTOMS PERSIST, ALWAYS SEEK MEDICAL ATTENTION

INHALATION: Move affected person to fresh air. If recovery not rapid, seek medical attention. If breathing stops, provide artificial respiration. Keep affected person warm and at rest.

INGESTION: DO NOT INDUCE VOMITING. In case of spontaneous vomiting, be sure that vomit can freely drain because of danger of suffocation. Only when conscious, rinse mouth with plenty of water and give plenty of water to drink - (approx 500ml). Keep patient at rest and obtain medical attention.

SKIN: Remove contaminated clothing. Wash affected area with plenty of soap and water. If irritation persists, seek medical attention.

EYES: Rinse immediately with copious amounts of water. If irritation or discomfort persists, seek medical attention.

5. FIRE FIGHTING MEASURES:

EXTINGUISHING MEDIA:	Alcohol resistant foam. Dry chemicals, sand, dolomite etc. Halon. Carbon dioxide (CO ₂).
SPECIAL FIRE FIGHTING PROCEDURES:	Use gentle application of water spray to keep exposed containers cool or to dissipate vapour.
UNUSUAL FIRE & EXPLOSION HAZARDS:	May explode when heated or when exposed to flames or sparks. Vapour may travel considerable distance to source of ignition and flash back.
HAZARDOUS COMBUSTION PRODUCTS:	Burning will produce oxides of carbon.
PROTECTIVE MEASURES IN FIRE:	Fire fighters should wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES:

PERSONAL PRECAUTION IN SPILL:	Wear appropriate protective clothing. Eliminate all sources of ignition. Do not breathe vapour or fumes. Ventilate area to dispel residual vapour or fumes.
PRECAUTIONS TO PROTECT ENVIRONMENT:	Prevent contamination of soil, drains and surface water.
SPILL CLEANUP METHODS:	Take-up spillage with absorbent, inert material and place in a suitable and closable labelled container for recovery or disposal. Wash the area clean with water and detergent, observing environmental requirements. Absorb small quantities with paper towels or other inert material and allow to evaporate in safe place (fume hood/cupboard).

7. HANDLING AND STORAGE:

USAGE PRECAUTIONS:	HANDLING - Product should be used in accordance with good industrial principles for handling and storing of hazardous chemicals. Spillages will create a fire hazard. Avoid vapour formation and ignition sources. Avoid inhalation of vapours. Ensure good ventilation and local exhaust extraction in work place. (engineering controls must be to explosion/flameproof standard). Earth container and transfer equipment to eliminate accumulation of static charge.
STORAGE PRECAUTIONS:	Store in a cool, dry, well ventilated place, in securely closed original container. Flammable/combustible - Keep away from oxidising agents, heat and flames.
STORAGE CRITERIA:	Flammable liquid storage.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION:

INGREDIENT NAME:	CAS No.:	STD	LT EXP 8 Hrs	ST EXP 15 Min
ISOPROPYL ALCOHOL	67-63-0	OES	400 ppm	500 ppm

VENTILATION:	Provide adequate general and local exhaust ventilation. Work in fume cupboard.
RESPIRATORS:	For short periods of work, a suitable RPE fitted with a combination charcoal or organic vapour cartridge is recommended.
PROTECTIVE GLOVES:	Use impervious gloves made of butyl rubber or PVC.
EYE PROTECTION:	Approved chemical safety goggles or face protection.

OTHER PROTECTION:	Use engineering controls to reduce air contamination to permissible exposure level. Wear personal protective equipment appropriate to the quantity of material handled.
HYGIENIC WORK PRACTICES:	SKIN PROTECTION - apply barrier cream to hands and exposed skin.

9. PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE:	Clear colourless liquid.		
ODOUR/TASTE:	Characteristic, alcoholic odour.		
BOILING POINT (°C, interval):	~ 82	Pressure:	
MELT/FREEZ. POINT (°C, interval):	~ -88		
DENSITY/SPECIFIC GRAVITY (g/ml):	~ 0.79	Temperature (°C):	20
VAPOUR DENSITY (air=1):	2.07		
VAPOUR PRESSURE:	4100 Pa	Temperature (°C):	20
EVAPORATION RATE:	1.5	Reference:	BuAc=1
VOLATILE BY VOL. (%):	100		
SOLUBILITY DESCRIPTION:	Miscible with water. Soluble in: Organic solvents (most).		
FLASH POINT (°C):	~ 12	Method:	CC (Closed cup).
AUTO IGNITION TEMP. (°C):	~ 425		
FLAMMABILITY LIMIT - LOWER (%):	2		
FLAMMABILITY LIMIT - UPPER (%):	12		

10. STABILITY AND REACTIVITY:

STABILITY:	Stable under normal conditions of use.
CONDITIONS TO AVOID:	Avoid heat, flames and other sources of ignition. Avoid accumulation of static electricity.
MATERIALS TO AVOID:	Oxidising agents. Sulphuric acid, Nitric acid. Can react exothermically with aluminium.
HAZARDOUS DECOMP. PRODUCTS:	Thermal decomposition or burning will release oxides of carbon.

11. TOXICOLOGICAL INFORMATION:

TOXIC DOSE - LD 50:	5000 mg/kg (oral rat)
HEALTH HAZARDS, GENERAL:	Intoxicating if inhaled or ingested.
INHALATION:	May cause transient irritation to the respiratory system. Exposure to high vapour concentration may cause central nervous system depression or systemic effects similar to those of ingestion.
INGESTION:	May cause nausea, vomiting, dizziness and depression of CNS.
SKIN:	Repeated or prolonged contact may cause dermatitis.
EYES:	May cause transient eye irritation or damage.

HEALTH WARNINGS: On (prolonged) contact may cause mild drying (and/or cracking) of skin and eye irritation.

ROUTE OF ENTRY: Inhalation.

12. ECOLOGICAL INFORMATION:

Ecotoxicological data LC50 fish > 100 mg/l

ECOLOGICAL INFORMATION: Regarded as having low toxicity to aquatic organisms.

MOBILITY: Water soluble, will partition to aqueous phase. Lost within short period through evaporation and dissolution. Poorly absorbed onto soils or sediments.

BIO ACCUMULATION: Low bioaccumulation potential.

DEGRADABILITY: Readily biodegradable. Poses a risk of oxygen depletion in aquatic systems.

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHODS: This material and/or its container must be disposed of as hazardous waste according to Special Waste Regulations 1996 or according to local regulations, in compliance with Duty of Care Regulations and Special Waste Regulations.

WASTE CLASS: WASTE CODE: 0705** HAZARDOUS PROPERTY: H3-A, (H4)

14. TRANSPORT INFORMATION:

UN No. ROAD: 1219

UK ROAD PACK GR.: II

ADR CLASS No.: 3

ADR CLASS: Class 3: Flammable liquids.

ADR ITEM No.: 3°(b)

HAZARD No. (ADR): 33 Highly flammable liquid (flash-point below 23°C).

ADR MARGINAL: 2301

ADR LABEL No.: 3

HAZCHEM CODE: 2YE

PROPER SHIPPING NAME I: ISOPROPANOL (ISOPROPYL ALCOHOL)

ROAD TRANSPORT NOTES: Flash point: 12°C

UN No. SEA: UN 1219

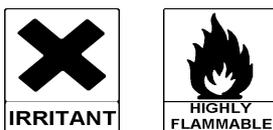
IMDG CLASS: 3.2

IMDG PAGE No.: 3244

IMDG PACK GR.: II
MARINE POLLUTANT: No.
UN No., AIR: UN-ID 1219
ICAO CLASS: 3
AIR PACK GR.: II

15. REGULATORY INFORMATION:

LABEL FOR SUPPLY:



RISK PHRASES: R-11 Highly flammable.
R-36 Irritating to eyes.
R-67 Vapours may cause drowsiness and dizziness.

SAFETY PHRASES: S-2 Keep out of reach of children.
S-7 Keep container tightly closed.
S-16 Keep away from sources of ignition - No Smoking.
S-24/25 Avoid contact with skin and eyes.
S-26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

UK REGULATORY REFERENCES: Classification, Packaging and Labelling Regulations 1984. Chemicals (Hazard Information & Packaging) Regulations 1993.

16. OTHER INFORMATION:

INFORMATION SOURCES: This product has been classified in accordance with CHIP3 regulations.

REVISION COMMENTS: Edition 01; Revised item(s):

ISSUED BY: MK

SDS No.: 253

DATE: 12/07/02

DISCLAIMER: The foregoing data has been compiled for safety information only and does not form part of any selling specification. Information contained in this Data Sheet is to the best of JMLs knowledge correct at the time of publication. Customers should always satisfy themselves, that the product which they have selected is entirely suitable for their purpose under their conditions of use and in compliance with current regulations. For any further information, please contact the supplier.

Imron® Industrial Strength Ultra Low VOC Polyurethane High Gloss Topcoat *Application Guide*



Description:

DuPont Imron® Industrial Strength is the next generation of Imron® technology. Based upon patented DuPont formulations and resin technology, Imron® Industrial Strength is the fastest Imron® yet, providing the “Wet Look that Lasts” with the lowest environmental impact. Imron® Industrial Strength is a high gloss, 0.3 lbs/gal VOC* conforming, low HAPS, polyurethane topcoat. The resulting finish product provides a brush, roll, or sprayable topcoat suitable for use in any environment where long term color and gloss retention are desired.

Imron® 9T-line and GN custom mix quality are Ultra Low VOC 2K Polyurethane Topcoats. They provide the high performance expected from a polyurethane at the low VOC. Addition of the VG-805™ accelerator provides cure and dry times better than many high solids urethane systems.

* Consult the Product Data Sheet for VOC and HAPS information.

Properties:

- Balanced Formulations - does not require separate mixing clears or tints.
- Application Latitude - can be brushed, rolled or sprayed.
- Easy to Mix, improved settling resistance and storage stability.
- Fast Cure - using Imron® VG-805™
- Very High Gloss and Excellent DOI (distinctness of image)
- Excellent Weathering Properties
- Durable Films, which exhibit very good chemical and solvent resistance, including Skydrol.

Safety 1st

Imron® Industrial Strength products are intended for professional use only. These are solventborne products that contain isocyanate activator. Care must be taken especially during spray application to reduce exposure to solvent vapor and airborne particles. Personal protective equipment (PPE) including a properly fitted respirator or fresh air supply is highly recommended. Please consult the MSDS for detailed safety information.

Suggested Uses:

As a high performance, tough, industrial strength polyurethane topcoat over properly prepared and primed aluminum, carbon steel, galvanized, concrete or dry wall where:

- Long term color and gloss retention are desired
- Low environmental footprint is necessary
- Application by spray, brush, or roll is desired
- Excellent chemical resistance required
- Very good Skydrol resistance is needed
- Outstanding flexibility is needed
- Faster dry times are desired
- Ease of field color shading is preferred

Not recommended for: Immersion service

Color:

Imron® Industrial Strength is a balanced intermix system. Separate mixing clears are not required. Standard colors are available as factory package. Custom colors are available as mix quality, GN custom color mix formulas. Mix formulas are available in Mobius, ColorNet®, and Acquire RX™ Systems. Saturated red, yellow or orange colors may require multiple coats for hiding. For best results when applying to hard to hide colors, apply over light colored primers.

For example: Apply reds and yellows over Medium or ANSI 61 Grey,
Apply oranges over white.

Color Availability:

9T01™ – White	9T10™ – Red
9T02™ – Black (match to 1640)	9T11™ – 1632 White
9T03™ – Yellow	9T12™ – Red Oxide
9T04™ – Violet	9T13™ – Orange
9T05™ – Yellow Orange Shade	9T14™ – Transparent Red
9T06™ – Red Orange Shade	9T15™ – Magenta
9T07™ – Blue Green Shade	9T16™ – Violet- Blue Shade
9T08™ – Yellow Oxide	9T17™ – Blue- Red Shade
9T09™ – Green	

When using Imron® Industrial Strength as a factory package, not in a mix formula, the following can be used as a guide to help with hiding.

<u>Color</u>	<u>Primer Color</u>
9T01™ – White	Good Hiding
9T02™ – Black (match to 1640)	Good Hiding
9T03™ – Yellow	White
9T04™ – Violet	Medium Grey
9T05™ – Yellow Orange Shade	White
9T06™ – Red Orange Shade	Good Hiding
9T07™ – Blue Green Shade	Medium Grey
9T08™ – Yellow Oxide	Good Hiding
9T09™ – Green	Medium Grey
9T10™ – Red	Medium Grey
9T11™ – White (match to 1632)	Good Hiding
9T12™ – Red Oxide	Medium Grey
9T13™ – Orange	Medium Grey
9T14™ – Transparent Red	Medium Grey
9T15™ – Magenta	Medium Grey
9T16™ – Violet- Blue Shade	Medium Grey
9T17™ – Blue- Red Shade	Medium Grey

Surface Preparation:

Surface preparation and mixing are critical to a quality finish.

- Substrates should be properly prepared and primed. Consult technical data sheets for primer and topcoat selection. Imron® Industrial Strength is not recommended for direct-to-metal application.
- All surfaces should be clean and dry before topcoating.
 - Contaminated surfaces should be cleaned with detergent/water wash, then blown dry.
 - Previously painted surfaces should have all loose paint removed and the edges feathered. Prime bare spots with appropriate primer.
- Primers should be allowed to dry according to their respective cure schedules before top coating
- Primer may be scuff sanded with medium grit or Scotchbrite to remove overspray
- D/A sanding the primer with 240 to 400 grit paper to remove texture from the primed surfaces can improve wet-in and overall appearance of the topcoat.

Mixing

**** Do Not Shake****

- Thoroughly mix factory package color (9TXX) or mix quality "GN" using a good shear mixer, such as a Jiffy mixer HS, ES, or PS blade. Mix at the recommended speed to prevent air entrapment, generally up to 800 or 1000 rpm max.



Do Not Shake!

ACTIVATION (MIX RATIO 4:1)

- To 4 parts Imron® 9TXX base, add 1 part Imron® 9T00-A™ Activator
 - Mix until uniform.
- Thin 5%-10% for Brush and Roll, 5% to 15% for Spray
- Use only recommended DIC thinners.**

4:1 Activation



Optional - Add up to **2 oz.** Imron® VG-805™ Accelerator per activated gallon.

4:1 Activation with 2oz per gallon Accelerator



ACTIVATION – cont'd

- Mix thoroughly after activating prior to adding thinner.
- Thin to recommended level for selected application.
- Thin to recommended viscosity with 9M01™ or 9M02™ Thinner
- Spray application requires 5% to 15% reduction
- For brush and roll use 5% to 10% reduction, then add 2 oz of Imron® 9M05™ Rolling additive, allow 5 minutes sweat in time. DuPont 9M05™ is not recommended for spray application
- Mix until uniform.
- Do not use high speed mixing.
- Avoid over mixing or beating air into the coating.
- To best manage pot life, apply soon after mixing. Up to 25% Imron® 9M01™ or 9M02™ Thinner may be added to help maximize pot life.

** Do Not Seal Containers** of activated Imron®, except for pressurized spray pots

Application: Apply by Spray, Brush and Roll

- Conventional pressure feed spray is recommended for best appearance. For spray application, thinning up to 25% may be used to achieve maximum appearance.
- 3 to 5 mils wet film build recommended
- To achieve higher dry film builds >4.0 mils, allow coats to dry, then recoat.
- Bright colors may be applied over white primer to aid uniform hiding.
- For best appearance, filter material prior to spray application.
- May be recoated by spray when tack-free.

Spray Equipment – See Table 2 for manufacturer model and tip Information

- Conventional Pressure Fed – best appearance, normal productivity
- HVLP Pressure Fed – good appearance, normal productivity
- Air Assisted Airless Spray – good appearance and higher productivity. Film build is harder to control.
- Airless Spray – highest productivity on large surfaces, level of appearance is slightly lower. Low film builds are difficult to control.
- Spray equipment should be conditioned before use. Thoroughly clean lines, rinse with Y32035 or acetone.
- Electrostatic Spray may require resistivity adjustment.

(i) Conventional and HVLP Application

- Pressurized pots or fluid delivery pumps are required
- Pressure feed setups
 - Pressure pot, 8 psi up to 50-psi pot pressure, line dependent.
 - Pump feed, 10 psi to 40-psi fluid pressure, line dependent.
- Fluid lines 3/8" ID or larger are required for proper fluid delivery.
- Test fluid flow and fan pattern and adjust according to equipment manufacturer specifications.
- Excessive air cap pressure may increase over-spray and reduce transfer efficiency
- Hold the spray gun perpendicular to the surface being sprayed.
- Maintain a 50% overlap and an 8" to 12" distance from the substrate to provide even coverage and reduce over-spray.
- Imron[®] Industrial Strength should be sprayed in medium cross coats. Avoid very high film build, which may cause gassing and dieback in the coating.



(ii) Airless and Air Assisted Airless Application

- *****Warning***** - High Pressure Equipment - Read Manufacturers Instructions and Safety Warnings Before Operating Equipment.
- Stainless steel parts are recommended for ease of clean up.
- Equipment should be conditioned before use. Thoroughly clean, rinse with Y32035 or acetone.
- High pressure pumps are required:
 - 1500psi air assisted pump
 - 2800psi to 4500 psi airless pump
- Fluid lines > 1/4" ID are recommended for lengths up to 25', 3/8" ID or larger are required for proper fluid delivery at lengths longer than 25'.
- Adjust pressure according to equipment manufacturer specifications.
- Airless - Increase pump pressure until tails disappear from fan pattern eliminated.
- Air assisted – turn cap/atomizing air off
 1. Adjust pump pressure to eliminate tails in the fan pattern.
 2. Reduce fluid pressure until tails reappear.
 3. Turn air pressure on 10psi, Increase air pressure until tails atomize into spray pattern.
- Hold the spray gun perpendicular to the surface being sprayed.
- Apply in a cross coat pattern. Each pass should be a light to medium cross coat applied as a fine mist.
- Maintain a 50% overlap and a 10" to 14" distance from the substrate to provide even coverage and reduce over-spray.
- Suggested film build is 4 to 5 mils wet.
- To achieve higher dry film builds, allow coats to dry, then recoat.
- Spray light to medium wet cross coats to provide a uniform film build.
- Avoid excessive film builds which may cause gassing and dieback in the coating.



1) Electrostatic Application

- Electrostatic spray may require an isolated delivery system due to high conductivity.
- Equipment suppliers have various methods of voltage/current isolation.
- Follow the equipment manufacturers' instructions and safety procedures for proper application procedures.



Table 1 - Cure Times for Sprav

Cure Times – hours @ 2.0 to 3.0 mils suggested DFT

	@ 77°F, 50% RH		@ 90°F (32°C) < 25% RH	
	20%-9M01 Reducer <u>Without VG-805™</u>	20% -9M01 Reducer <u>With 2 oz. VG-805™</u>	20%- 9M02 Reducer <u>Without VG-805</u>	20%- 9M02 Reducer <u>With 2 ozs VG-805</u>
To Touch	3	1	2	1
Tack Free	3	2	2	1
To Handle	4.5	2	3.5	2
To Recoat	4	2	3	2
Hard Dry	18	12	16	10
Pot Life	1.5	2	3	2
Full Cure	7 days	6 days	7 days	6 days

Cure times will vary with environmental conditions. Air flow, sunlight, temperature, humidity and dew point may all affect cure times. Dry times can be improved by adding up to 2 oz. of DuPont VG-805™ Accelerator per activated gallon. If accelerators have been used, recoating must be done within 48 hours. If more time has elapsed, scuff sand to ensure adhesion.

Brush and Roll – spray application is recommended for best results, but for touching up areas or in locations that will not allow spray, follow the basics.

- Brush – Good quality Wooster® China Bristle brush or equivalent.
- Roller – Good quality Short Nap ¼" to ½" for most surfaces.

- Work in approx 2' x 2' sections applying from dry into wet areas.
- For rolling, start with a W pattern to deposit paint evenly before rolling the entire section.
*may be cross rolled.



Use good techniques

- Applying too much pressure may ruin the brush or leave roller marks.
- Do not try to squeeze every last drop of paint out of the brush or roller before rewetting.
- Add 1 oz./gallon Imron[®] 9M05[™] Rolling Thinner to eliminate bubbles. Craters may develop if you exceed 2 oz./gallon.
- Add 5-10% Imron[®] 9M01[™] or 9M02[™] Thinner to maintain wet edge.
- May be cross-rolled. For best results, allow 5 minutes mix time after adding Imron[®] 9M05[™].
- Do not use Imron[®] 9M05[™] Rolling Thinner in spray applications.

(continued...)

**Table 2 – Equipment
Imron® Industrial Strength
Equipment Set Up**

Conventional Pressure Fed

	Model	Tip Size
Sata	K3 RP or LM 3000 RP	1.0 – 1.8mm
Devilbiss	JGA, MBC, or FLG	1.2 – 1.8mm
Graco	DeltaSpray XT	1.0 – 1.8mm
Iwata	W-77, W-71, or W-200	1.2 – 1.8mm
Binks	2001 or 95	1.2 – 1.8mm

- Fluid lines 3/8" ID or larger are required for proper fluid delivery.

HVLP Pressure Fed

Sata	3000RP HVLP	1.0 – 1.7mm
Devilbiss	JGVH, EXL, or FLG	1.3 – 1.8mm
Graco	DeltaSpray XT - HVLP	1.1 – 1.8mm
Iwata	LPH 200 L VLP	0.8 – 1.2mm
Binks	Mach 1 & 1SL	1.0 – 1.7mm

Air Assisted Airless Spray

		Tip	Cap
Graco	AA4000 HVLP	.021 - .027	AA10HP
	Alpha or Alpha Plus	.015 - .021	
Iwata	MSG 200 or 2000	Adjustable Tip	
Binks	AA 1500	.013 - .019	

- Fluid lines > 1/4" ID are recommended for lengths up to 25', 3/8" ID or larger are required for proper fluid delivery at lengths longer than 25'.

Airless Spray

Graco	Silver or Plus	.013 - .017	2500 to 4500 psi
Iwata	ALG or Airlessco Guns	.015 - .019	
Binks	Airless 1	.011 - .018	

- Fluid lines > 1/4" ID are recommended for lengths up to 25', 3/8" ID or larger are required for proper fluid delivery at lengths longer than 25'.

Electrostatic

Graco	PRO Xs3 or XS4 Electrostatic Gun
Nordson	Kinetix Systems AA, KVLP, & Conventional
Ransburg	REA 90 or AA90

Note: List contains most popular models; other models and equipment may also be suitable for application. Consult your equipment Manufacturer or Supplier for additional recommendations.

Orifice Size

in.	(mm)	in.	(mm)
.031	(0.8)	.055	(1.4)
.042	(1.0)	.067	(1.7)
.043	(1.1)	.070	(1.8)
.051	(1.3)	.080	(2.0)

All technical advice, recommendations and services are rendered by the Seller gratis. They are based on technical data which the Seller believes to be reliable, and are intended for professional use by persons having skill and know-how at their own discretion and risk. Seller assumes no responsibility for results obtained or damages incurred from their use by Buyer in whole or in part. Such recommendations, technical advice or services are not to be taken as a license to operate under or intended to suggest infringement of any existing patent.

E-R4987 / K-17880

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The miracles of science™

MEGUIAR'S G108 - TRIM DETAILER

Chemwatch Independent Material Safety Data Sheet
Issue Date: 9-Jun-2010
C9317EC

CHEMWATCH 4804-92
Version No:3
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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

MEGUIAR'S G108 - TRIM DETAILER

SYNONYMS

"Product Code: G108"

PRODUCT USE

Trim detailer.

SUPPLIER

Company: MotorActive
Address:
35 Slough Business Park, Holker St, reet
Silverwater
NSW, 2128
Australia
Telephone: +61 2 9737 9422
Telephone: 1800 350 622
Fax: +61 2 9737 9414
Email: info@motoractive.com.au

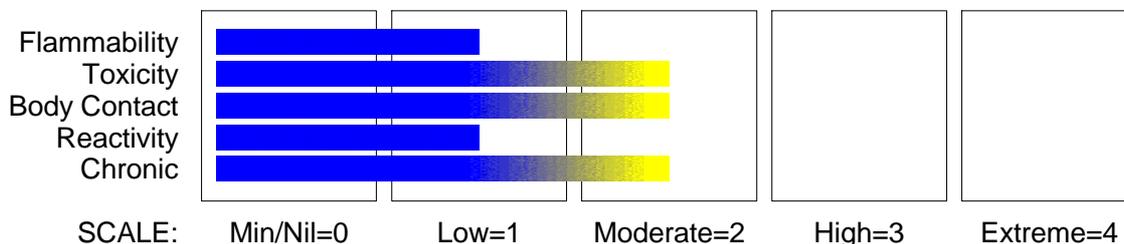
Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to NOHSC Criteria, and ADG Code.

COMBUSTIBLE LIQUID, regulated under AS1940 for Bulk Storage purposes only.

CHEMWATCH HAZARD RATINGS



POISONS SCHEDULE

None

RISK

Risk Codes

R65

R67

Risk Phrases

- HARMFUL- May cause lung damage if swallowed.
- Vapours may cause drowsiness and dizziness.

SAFETY

Safety Codes

S36

S401

S13

S46

Safety Phrases

- Wear suitable protective clothing.
- To clean the floor and all objects contaminated by this material use water and detergent.
- Keep away from food drink and animal feeding stuffs.
- If swallowed IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
polydimethylsiloxane	63148-62-9	30-50
distillates, petroleum, middle, hydrotreated	64742-46-7.	10-30
conditioners proprietary		1-5
2, 2, 4- trimethyl- 1, 3- pentanediol monoisobutyrate	25265-77-4	0.5-2

continued...

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Section 4 - FIRST AID MEASURES

SWALLOWED

- - If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Avoid giving milk or oils.
- Avoid giving alcohol.
- If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

EYE

- If this product comes in contact with the eyes:
 - Wash out immediately with fresh running water.
 - Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
 - Seek medical attention without delay; if pain persists or recurs seek medical attention.
 - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

- If skin contact occurs:
 - Immediately remove all contaminated clothing, including footwear.
 - Flush skin and hair with running water (and soap if available).
 - Seek medical attention in event of irritation.

INHALED

- - If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.

NOTES TO PHYSICIAN

- Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:
 - Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.
 - Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO₂ 50 mm Hg) should be intubated.
 - Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
 - A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax. Treat symptomatically.
 - Heavy and persistent skin contamination over many years may lead to dysplastic changes. Pre-existing skin disorders may be aggravated by exposure to this product.
 - In general, emesis induction is unnecessary with high viscosity, low volatility products, i.e. most oils and greases.
 - High pressure accidental injection through the skin should be assessed for possible incision, irrigation and/or debridement.
- NOTE: Injuries may not seem serious at first, but within a few hours tissue may become swollen, discoloured and extremely painful with extensive subcutaneous necrosis.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- - Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).

FIRE FIGHTING

- - Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Use water delivered as a fine spray to control fire and cool adjacent area.

FIRE/EXPLOSION HAZARD

- - High temperature decomposition products include silicon dioxide, small amounts of formaldehyde, formic acid, acetic acid and traces of silicon polymers.
 - These gases may ignite and, depending on circumstances, may cause the resin/polymer to ignite.
 - An outer skin of silica may also form. Extinguishing of fire, beneath the skin, may be difficult.
 - Combustible.
 - Slight fire hazard when exposed to heat or flame.
 - Heating may cause expansion or decomposition leading to violent rupture of containers.
 - On combustion, may emit toxic fumes of carbon monoxide (CO).
- Combustion products include: carbon dioxide (CO₂), silicon dioxide (SiO₂), other pyrolysis products typical of burning organic material.
- May emit poisonous fumes.
- May emit corrosive fumes.

continued...

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Section 5 - FIRE FIGHTING MEASURES

CARE: Water in contact with hot liquid may cause foaming and a steam explosion with wide scattering of hot oil and possible severe burns. Foaming may cause overflow of containers and may result in possible fire.

FIRE INCOMPATIBILITY

- - Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

HAZCHEM

None

PERSONAL PROTECTION

Glasses:

Safety Glasses.

Gloves:

PVC chemical resistant type.

Respirator:

Type A- P Filter of sufficient capacity

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- - Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.

MAJOR SPILLS

- - Silicone fluids, even in small quantities, may present a slip hazard.
 - It may be necessary to rope off area and place warning signs around perimeter.
 - Clean up area from spill, with suitable absorbant, as soon as practically possible.
 - Final cleaning may require use of steam, solvents or detergents.
- Moderate hazard.
- Clear area of personnel and move upwind.
 - Alert Fire Brigade and tell them location and nature of hazard.
 - Wear breathing apparatus plus protective gloves.
 - Prevent, by any means available, spillage from entering drains or water course.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- - Containers, even those that have been emptied, may contain explosive vapours.
- Do NOT cut, drill, grind, weld or perform similar operations on or near containers.
- DO NOT allow clothing wet with material to stay in contact with skin.
- Electrostatic discharge may be generated during pumping - this may result in fire.
- Ensure electrical continuity by bonding and grounding (earthing) all equipment.
- Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/sec until fill pipe submerged to twice its diameter, then ≤ 7 m/sec).
- Avoid splash filling.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.

SUITABLE CONTAINER

- - Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

- Traces of benzene, a carcinogen, may form when silicones are heated in air above 230 degrees C. Concentrated acids and bases cause degradation of polymer. Boiling water may soften and weaken material.
- CARE: Water in contact with heated material may cause foaming or a steam explosion with possible severe burns from wide scattering of hot material. Resultant overflow of containers may result in fire.
- Avoid reaction with oxidising agents.

STORAGE REQUIREMENTS

- - Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.

continued...

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA mg/m ³
Australia Exposure Standards	distillates, petroleum, middle, hydrotreated (Oil mist, refined mineral)	5

The following materials had no OELs on our records

- polydimethylsiloxane:
- 2, 2, 4- trimethyl- 1, 3- pentanediol monoisobutyrate:

CAS:63148- 62- 9

CAS:25265- 77- 4 CAS:77- 68- 9

PERSONAL PROTECTION

RESPIRATOR

Type A-P Filter of sufficient capacity

EYE

- - Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET

- - Wear chemical protective gloves, eg. PVC.
 - Wear safety footwear or safety gumboots, eg. Rubber.
- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:
- frequency and duration of contact,
 - chemical resistance of glove material,
 - glove thickness and
 - dexterity.

OTHER

- - Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.

ENGINEERING CONTROLS

- General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in special circumstances.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Creamy homogenous gel with a sweet odour; miscible with water.

PHYSICAL PROPERTIES

Liquid.
Mixes with water.

State	Liquid	Molecular Weight	Not Applicable
Melting Range (°C)	Not Available	Viscosity	Not Available
Boiling Range (°C)	100	Solubility in water (g/L)	Miscible
Flash Point (°C)	100	pH (1% solution)	Not Available
Decomposition Temp (°C)	Not Available	pH (as supplied)	8.0
Autoignition Temp (°C)	Not Available	Vapour Pressure (kPa)	3.19 @ 21°C
Upper Explosive Limit (%)	Not Available	Specific Gravity (water=1)	1.00
Lower Explosive Limit (%)	Not Available	Relative Vapour Density (air=1)	>1
Volatile Component (%vol)	Not Available	Evaporation Rate	<1

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Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Silicone fluids are stable under normal storage conditions.
- Hazardous polymerisation will not occur.
- At temperatures > 150 C, silicones can slowly react with the oxygen in air.
- When heated > 300 C, silicones can slowly depolymerise to volatile siloxanes whether or not air is present.
- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.
- Presence of heat source and ignition source.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

- HARMFUL- May cause lung damage if swallowed.
- Vapours may cause dizziness or suffocation.
- Vapours may cause drowsiness and dizziness.

CHRONIC HEALTH EFFECTS

- Not applicable.

TOXICITY AND IRRITATION

2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE:

POLYDIMETHYLSILOXANE:

- The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

DISTILLATES, PETROLEUM, MIDDLE, HYDROTREATED:

2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE:

POLYDIMETHYLSILOXANE:

- unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

- unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

- For siloxanes:

Effects which based on the reviewed literature do not seem to be problematic are acute toxicity, irritant effects, sensitization and genotoxicity. Some studies indicate that some of the siloxanes may have endocrine disrupting properties, and reproductive effects have caused concern about the possible effects of the siloxanes on humans and the environment.

Only few siloxanes are described in the literature with regard to health effects, and it is therefore not possible to make broad conclusions and comparisons of the toxicity related to short-chained linear and cyclic siloxanes based on the present evaluation. Data are primarily found on the cyclic siloxanes D4 (octamethylcyclotetrasiloxane) and D5 (decamethylcyclopentasiloxane) and the short-linear HMDS (hexamethyldisiloxane).

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

POLYDIMETHYLSILOXANE:

TOXICITY

Inhalation (rat) LC50: >1100 mg/m³*

Oral (rat) LD50: >35000 mg/kg*

Dermal (rabbit) LD50: >3000 mg/kg*

- For siloxanes:

Effects which based on the reviewed literature do not seem to be problematic are acute toxicity, irritant effects, sensitization and genotoxicity. Some studies indicate that some of the siloxanes may have endocrine disrupting properties, and reproductive effects have caused concern about the possible effects of the siloxanes on humans and the environment.

Only few siloxanes are described in the literature with regard to health effects, and it is therefore not possible to make broad conclusions and comparisons of the toxicity related to short-chained linear and cyclic siloxanes based on the present evaluation. Data are primarily found on the cyclic siloxanes D4 (octamethylcyclotetrasiloxane)

and D5 (decamethylcyclopentasiloxane) and the short-linear HMDS (hexamethyldisiloxane).

No toxic response noted during 90 day subchronic inhalation toxicity studies

The no observable effect level is 450 mg/m³.

Non-irritating and non-sensitising in human patch test. [Xerox]*

DISTILLATES, PETROLEUM, MIDDLE, HYDROTREATED:

TOXICITY

Inhalation (rat) LC50: 3400 ppm/4H None reported [EXXON]

Oral (rat) LD50: >8000 mg/kg [CCINFO- Shell]

Dermal (rat) LD50: >4000 mg/kg

typical for isoparaffinic hydrocarbons:

isoparaffinic hydrocarbon:

IRRITATION

Eye (rabbit): 100 mg/1h - Mild

IRRITATION

2,2,4-TRIMETHYL-1,3-PENTANEDIOL MONOISOBUTYRATE:

continued...

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Section 11 - TOXICOLOGICAL INFORMATION

TOXICITY

Oral (rat) LD50: 3200 mg/kg

Oral (rat) LD50: 3200 mg/kg ***

Dermal (rabbit) LD50: >16 ml/kg *

Dermal (g.pig) LD50: >16 ml/kg ***

Inhalation (rat) LC50: >3.55 mg/l/6h

Inhalation (rat) LC50: 1600 mg/kg ***

Oral (Mouse) LD50: 3200 mg/kg

Dermal (None) Guinea: pig LD50>20 ml/kg

• The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis.

Not a skin sensitiser (guinea pig, Magnusson-Kligman) ***

Ames Test: negative ***

Micronucleus, mouse: negative ***

Not mutagenic ***

No effects on fertility or foetal development seen in the rat ***

* [SWIFT]

** [Eastman]

*** [Perstop]

IRRITATION

Skin - Slight Irritant *

Skin (rabbit): Mild ***

Eyes - Moderate Irritant *

CARCINOGEN

Petroleum solvents

International Agency for Research on Cancer
(IARC) - Agents Reviewed by the IARC
Monographs

Group

3

Section 12 - ECOLOGICAL INFORMATION

No data

Ecotoxicity

Ingredient

Persistence:
Water/Soil

Persistence: Air

Bioaccumulation

Mobility

polydimethylsiloxane

2, 2, 4- trimethyl- 1, 3-

pentanediol monoisobutyrate

LOW

LOW

LOW

HIGH

Section 13 - DISPOSAL CONSIDERATIONS

• Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction.

- DO NOT allow wash water from cleaning or process equipment to enter drains.

- It may be necessary to collect all wash water for treatment before disposal.

- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.

- Where in doubt contact the responsible authority.

- Recycle wherever possible or consult manufacturer for recycling options.

- Consult State Land Waste Authority for disposal.

- Bury or incinerate residue at an approved site.

- Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

Labels Required: COMBUSTIBLE LIQUID, regulated under AS1940 for Bulk Storage purposes only.

HAZCHEM:

None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: ADG7, UN, IATA, IMDG

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE

None

continued...

MEGUIAR'S G108 - TRIM DETAILER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 9-Jun-2010

C9317EC

CHEMWATCH 4804-92

Version No:3

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Section 15 - REGULATORY INFORMATION

REGULATIONS

Regulations for ingredients

polydimethylsiloxane (CAS: 63148-62-9) is found on the following regulatory lists;

"Australia Inventory of Chemical Substances (AICS)", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances", "OECD Representative List of High Production Volume (HPV) Chemicals"

distillates, petroleum, middle, hydrotreated (CAS: 64742-46-7) is found on the following regulatory lists;

"Australia Hazardous Substances", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD Representative List of High Production Volume (HPV) Chemicals"

2,2,4-trimethyl-1,3-pentanediol monoisobutyrate (CAS: 25265-77-4,77-68-9) is found on the following regulatory lists;

"Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "OECD Representative List of High Production Volume (HPV) Chemicals"

No data for Meguiar's G108 - Trim Detailer (CW: 4804-92)

Section 16 - OTHER INFORMATION

Denmark Advisory list for selfclassification of dangerous substances

Substance	CAS	Suggested codes
2, 2, 4- trimethyl- 1, 3- pentanediol monoisobutyrate	25265- 77- 4	N R50
2, 2, 4- trimethyl- 1, 3- pentanediol monoisobutyrate	77- 68- 9	N R50

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
2, 2, 4- trimethyl- 1, 3- pentanediol monoisobutyrate	25265- 77- 4, 77- 68- 9

• Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

• The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

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Issue Date: 9-Jun-2010

Print Date: 11-Jun-2010

This is the end of the MSDS.



The Clorox Company

1221 Broadway
Oakland, CA 94612
Tel. 1-510-271-7000

**Material Safety
Data Sheet**

I Product: FORMULA 409® ANTIBACTERIAL ALL-PURPOSE CLEANER										
Description: CLEAR, GREEN, THIN LIQUID WITH A FLORAL, CITRUS ODOR										
Other Designations	Distributor									
EPA Reg. No. 5813-73	The Clorox Sales Company 1221 Broadway Oakland, CA 94612									
Emergency Telephone Nos.										
For Medical Emergencies, call 1-800-446-1014. For Transportation Emergencies, call 1-800-424-9300 (Chemtrec).										
II Health Hazard Data	III Hazardous Ingredients									
Causes moderate eye irritation. No medical conditions are known to be aggravated by exposure to this product. FIRST AID: EYE CONTACT: Hold eye open and rinse with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. If irritation persists, call a doctor. SKIN CONTACT: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. If irritation develops, call a doctor. INGESTION: Call a poison control center or doctor immediately for treatment advice. Have person sip a glassful of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. INHALATION: Move person to fresh air. If breathing problems develop, call a doctor.	<table border="1"> <thead> <tr> <th><u>Ingredient</u></th> <th><u>Concentration</u></th> <th><u>Worker Exposure Limit</u></th> </tr> </thead> <tbody> <tr> <td>Alkyl (40% C12, 50% C14, 10% C16) dimethyl benzyl ammonium chloride CAS # 68424-85-1</td> <td>0.2 - 0.4%</td> <td>Not established.</td> </tr> <tr> <td>Lauramine oxide CAS # 1643-20-5</td> <td>0.5 - 1.5%</td> <td>Not established.</td> </tr> </tbody> </table> <p>None of the materials in this product are on the IARC, OSHA, or NTP carcinogen lists.</p>	<u>Ingredient</u>	<u>Concentration</u>	<u>Worker Exposure Limit</u>	Alkyl (40% C12, 50% C14, 10% C16) dimethyl benzyl ammonium chloride CAS # 68424-85-1	0.2 - 0.4%	Not established.	Lauramine oxide CAS # 1643-20-5	0.5 - 1.5%	Not established.
<u>Ingredient</u>	<u>Concentration</u>	<u>Worker Exposure Limit</u>								
Alkyl (40% C12, 50% C14, 10% C16) dimethyl benzyl ammonium chloride CAS # 68424-85-1	0.2 - 0.4%	Not established.								
Lauramine oxide CAS # 1643-20-5	0.5 - 1.5%	Not established.								
IV Special Protection and Precautions	V Transportation and Regulatory Data									
<p>Hygienic Practices: Wash thoroughly with soap and water after handling.</p> <p>Engineering Controls: Use general ventilation to minimize exposure to product mist.</p> <p>Personal Protective Equipment: Wear safety glasses. Wear rubber or neoprene gloves for sensitive skin or if there is the potential for repeated or prolonged skin contact.</p> <p>Avoid contact with foods.</p>	<p>DOT/IATA/IMDG: Not restricted.</p> <p>EPA - SARA Title III/CERCLA: This product is regulated under Sections 311/312. This product contains no chemicals that are regulated under Section 313 and contains potassium hydroxide (CAS # 1310-58-3, <0.1%) that is regulated under Section 304/CERCLA.</p> <p>TSCA 8(b): All components of this product are either on the TSCA 8(b) Inventory or otherwise exempt from listing.</p> <p>TSCA 12(b): This product is not subject to TSCA 12(b) reporting requirements.</p>									
VI Spill Procedures/Waste Disposal	VII Reactivity Data									
<p>Spill Procedures: Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed-down material.</p> <p>Waste Disposal: Dispose of in accordance with all applicable federal, state, and local regulations.</p>	Stable under normal use and storage conditions.									
VIII Fire and Explosion Data	IX Physical Data									
<p>Flash Point: >93°C (closed cup).</p> <p>Fire Extinguishing Agents: Dry chemical, carbon dioxide (CO₂), foam, or water spray.</p>	<p>pH..... 9 -11.5</p> <p>Specific gravity.....~1.0</p> <p>Solubility in water.....Soluble</p>									

MATERIAL SAFETY DATA SHEET

Bulldog Aerosol Adhesion Promoter

Page: 1
 Printed: 02/11/2008
 Revision: 02/08/2008
 Supersedes Revision: 01/25/2008

1. Product and Company Identification

Product Code: A5000.4
Product Name: Bulldog Aerosol Adhesion Promoter
Reference #: A5000.4
Manufacturer Information
Company Name: W. M. Barr
 2105 Channel Avenue
 Memphis, TN 38113
Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892
Web site address: www.wmbarr.com
Preparer Name: W.M. Barr EHS Dept (901)775-0100
Synonyms
 ETPO123, ETPO123B

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA TWA	ACGIH TWA	Other Limits
1. Toluene {Benzene, Methyl-; Toluol}	108-88-3	25.0 -50.0 %	200 ppm	50 ppm	No data.
2. Styrene {Phenylethylene; Vinyl benzine; Styrol}	100-42-5	1.0 -10.0 %	100 ppm	20 ppm	No data.
3. Proprietary Resin	NA	1.0 -15.0 %	No data.	No data.	No data.
4. m-Xylene {Benzene, m-Dimethyl-}	108-38-3	1.0 -10.0 %	No data.	100 ppm	No data.
5. o-Xylene {Benzene, o-Dimethyl-}	95-47-6	1.0 -10.0 %	100 ppm	100 ppm	No data.
6. p-Xylene {Benzene, p-Dimethyl-}	106-42-3	1.0 -15.0 %	No data.	100 ppm	No data.
7. Ethylbenzene {Ethylbenzol; Phenylethane}	100-41-4	1.0 -10.0 %	100 ppm	100 ppm	No data.
8. Proprietary Resin	NA	1.0 -10.0 %	No data.	10 ppm	No data.
9. Methyl ethyl ketone {MEK; 2-Butanone}	78-93-3	10.0 -20.0 %	200 ppm	200 ppm	No data.
10. Butyl acetate {Acetic acid, Butyl ester}	123-86-4	10.0 -15.0 %	150 ppm	150 ppm	No data.
11. Ethylene glycol monobutyl ether acetate {(a glycol ether)}	112-07-2	< 5.0 %	No data.	20 ppm	No data.
12. Proprietary Resin	NA	1.0 -10.0 %	No data.	No data.	No data.
13. Methyl ether {Dimethyl ether}	115-10-6	30.0 %	No data.	No data.	No data.
Hazardous Components (Chemical Name)	CAS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Toluene {Benzene, Methyl-; Toluol}	108-88-3	500 ppm/(10min)	300 ppm	No data.	No data.
2. Styrene {Phenylethylene; Vinyl benzine; Styrol}	100-42-5	600 ppm/(5min/3hr)	200 ppm	40 ppm	No data.
3. Proprietary Resin	NA	No data.	No data.	No data.	No data.
4. m-Xylene {Benzene, m-Dimethyl-}	108-38-3	No data.	No data.	150 ppm	No data.
5. o-Xylene {Benzene, o-Dimethyl-}	95-47-6	No data.	No data.	150 ppm	No data.
6. p-Xylene {Benzene, p-Dimethyl-}	106-42-3	No data.	No data.	150 ppm	No data.
7. Ethylbenzene {Ethylbenzol; Phenylethane}	100-41-4	No data.	No data.	125 ppm	No data.
8. Proprietary Resin	NA	No data.	No data.	No data.	No data.
9. Methyl ethyl ketone {MEK; 2-Butanone}	78-93-3	No data.	No data.	300 ppm	No data.
10. Butyl acetate {Acetic acid, Butyl ester}	123-86-4	No data.	No data.	200 ppm	No data.
11. Ethylene glycol monobutyl ether acetate {(a glycol ether)}	112-07-2	No data.	No data.	No data.	No data.
12. Proprietary Resin	NA	No data.	No data.	No data.	No data.
13. Methyl ether {Dimethyl ether}	115-10-6	No data.	No data.	No data.	No data.

3. Hazards Identification

Emergency Overview

Danger! Flammable. Harmful or fatal if swallowed. Vapor Harmful. Skin and Eye Irritant.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic)

INHALATION ACUTE EXPOSURE EFFECTS:

Vapor Harmful. May cause dizziness, headache, irritation of the upper respiratory tract and lungs, irritation and injury to mucous membranes, watering of the eyes, weakness, drowsiness, nausea, loss of coordination, numbness in fingers, arms and legs, depression of the central nervous system, pulmonary edema, shortness of breath, loss of appetite, fatigue, stupor, anesthesia, narcosis, vomiting, lightheadedness, liver and kidney injury, insensibility and other central nervous system effects, blood disorders, nose tumors, brain damage, giddiness, olfactory changes, confusion, hearing impairment, slurred speech, coughing, hallucinations, irregular heartbeat, unconsciousness, coma, and death. Intentional misuse of this product by deliberately concentrating and inhaling vapors can be harmful or fatal.

SKIN CONTACT ACUTE EXPOSURE EFFECTS:

This product is a skin irritant. Product may be absorbed through the skin. May cause irritation, drying and cracking of the skin, defatting of the skin, dermatitis, itching, redness, swelling, tissue damage, inflammation, numbness in fingers and arms, discomfort or pain, erythema. May be absorbed readily to produce symptoms similar to those listed under ingestion.

EYE CONTACT ACUTE EXPOSURE EFFECTS:

This material is an eye irritant. May cause redness, tearing, corneal clouding, discomfort or pain with excessive blinking and tear production, excess redness and possible slight swelling of the conjunctiva, stinging, conjunctivitis, visual intolerance to light. If not promptly removed, will injure eye tissue, which may result in permanent damage.

INGESTION ACUTE EXPOSURE EFFECTS:

Harmful or fatal if swallowed. May cause dizziness, headache, drowsiness, nausea, weakness, loss of coordination, irritation to mouth, throat and stomach, vomiting, gastrointestinal irritation, diarrhea, loss of appetite, pain and discomfort, cough and hoarseness, salivation, changes in white blood cells, burning sensation in mouth and stomach, unconsciousness and coma. Ingestion of significant quantities may result in red blood cell hemolysis. Liquid aspirated into lungs can cause chemical pneumonitis, which can be fatal.

CHRONIC EXPOSURE EFFECTS:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged skin contact may result in absorption of a harmful amount of this material. Prolonged or repeated contact may cause dermatitis. May cause dizziness, headaches, weakness, eye irritation, drying and cracking of the skin, dermatitis, fatigue, nausea, numbness in the hands and feet, permanent central nervous system changes, some loss of memory, liver and kidney damage, blood disorders, thyroid effects, enlarged liver, and irritation to the respiratory tract. Prolonged or repeated contact may cause skin irritation, even a burn. Prolonged exposure may cause slight swelling of the conjunctiva, blurring of vision may occur. Prolonged skin contact may cause mild to moderate redness and swelling.

Signs and Symptoms Of Exposure

Primary Routes of Exposure: Inhalation, Skin Contact

Medical Conditions Generally Aggravated By Exposure

Diseases of the skin, liver, kidneys, cardiovascular system, and central nervous system.

4. First Aid Measures

Emergency and First Aid Procedures

INHALATION:

If user experiences breathing difficulty, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

SKIN CONTACT:

Wash with soap and water. Get medical attention if irritation develops or persists.

EYE CONTACT:

Immediately flush eyes with water for at least 15 minutes. Remove contact lenses if worn. Seek medical attention.

INGESTION:

If swallowed, do NOT induce vomiting. Call a physician, hospital emergency room, or poison control center immediately. Never give anything by mouth to an unconscious person.

5. Fire Fighting Measures

Flammability Classification:

LEVEL 3 AEROSOL

Flash Pt:

39.00 F Method Used: Setaflash Closed Cup (Rapid Setaflash)

Explosive Limits:

LEL: No data.

UEL: No data.

Fire Fighting Instructions

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved or equivalent) and full protective gear.

Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards

CPSC FLAMMABILITY: Flammable Aerosol

Flashpoint of dimethyl ether: -42 F (SCC)

Flashpoint of liquid product: 39 F (SCC)

Danger! Flammable! Keep away from heat, sparks, flame, and all other sources of ignition. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition during use and until all vapors are gone. Beware of static electricity that may be generated by synthetic clothing and other sources. Vapors can travel to a source of ignition and flash back.

Hazardous Combustion Products

Carbon monoxide and carbon dioxide. Irritating or toxic vapors and gases.

Extinguishing Media

Use carbon dioxide, dry powder, or foam.

Unsuitable Extinguishing Media

No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area. Wear appropriate personal protective equipment.

Small Spills: take up liquid with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large Spills: dike far ahead of spill for later disposal.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Precautions To Be Taken in Storing

Store in a cool dry place. Avoid extreme high or low temperatures.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

If the work area is not properly ventilated to keep airborne levels below their exposure limits, you must use a properly fitted and maintained NIOSH approved respirator for organic vapors. A dust mask does not provide protection against vapors.

Eye Protection

Safety glasses, chemical goggles, or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear impermeable gloves. Gloves contaminated with product should be discarded.

Other Protective Clothing

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure.

Engineering Controls (Ventilation etc.)

Use only with adequate ventilation to prevent the buildup of vapors. Do not use in areas where vapors can accumulate and concentrate. Whenever possible, use outdoors in an open air area. If using indoors, open all windows and doors and maintain a cross ventilation of moving fresh air across the work area away from the individual. If strong odor is noticed or you experience slight dizziness, headache, nausea, or other signs of inhalation exposure, STOP. The ventilation is inadequate. Leave the area immediately.

For OSHA controlled workplaces, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Work/Hygienic/Maintenance Practices

A source of clean water should be available in the work area for flushing of the eyes and skin. Wash hands thoroughly after use. Do not eat, drink, or smoke in the work area. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

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9. Physical and Chemical Properties

Physical States:	[] Gas [X] Liquid [] Solid
Melting Point:	No data.
Boiling Point:	No data.
Autoignition Pt:	No data.
Flash Pt:	39.00 F Method Used: Setaflash Closed Cup (Rapid Setaflash)
Explosive Limits:	LEL: No data. UEL: No data.
Specific Gravity (Water = 1):	0.895 - 0.905
Bulk density:	7.49 LB/GL
Vapor Pressure (vs. Air or mm Hg):	<=31 MM HG at 20.0 C
Vapor Density (vs. Air = 1):	> 1
Evaporation Rate (vs Butyl Acetate=1):	~ 1
Solubility in Water:	No data.
Percent Volatile:	90.6 % by weight.
Corrosion Rate:	No data.
pH:	No data.

Appearance and Odor

Hazy, Light Yellow

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents, strong caustics, acids, strong bases, hydrogen peroxide, nitric acid, nitrates, sulfuric acid, amines, chemically active metals, salts, aldehydes, ammonia, and halogens.

Hazardous Decomposition Or Byproducts

Thermal decomposition may produce carbon monoxide, carbon dioxide, acrylic monomers, acrid smoke and fumes.

Hazardous Polymerization: Will occur [] Will not occur [X]

Conditions To Avoid - Hazardous Polymerization

No data available.

11. Toxicological Information

No data available.

Carcinogenicity/Other Information

-Ethyl Benzene (CAS 100-41-4) is on the IARC list as a Group 2B: Possibly Carcinogenic to Humans.

-Styrene (CAS 100-42-5) is on the IARC list as a Group 2B: Possibly Carcinogenic to Humans.

-Toluene (CAS 108-88-3) is on the IARC list as a Group 3: Not Classifiable as to Carcinogenicity in Humans.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Toluene {Benzene, Methyl-; Toluol}	108-88-3	No	3	A4	No
2. Styrene {Phenylethylene; Vinyl benzene; Styrol}	100-42-5	No	2B	A4	No
3. Proprietary Resin	NA	n.a.	n.a.	n.a.	n.a.
4. m-Xylene {Benzene, m-Dimethyl-}	108-38-3	n.a.	n.a.	A4	n.a.

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Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
5. o-Xylene {Benzene, o-Dimethyl-}	95-47-6	n.a.	n.a.	A4	n.a.
6. p-Xylene {Benzene, p-Dimethyl-}	106-42-3	n.a.	n.a.	A4	n.a.
7. Ethylbenzene {Ethylbenzol; Phenylethane}	100-41-4	No	2B	A3	No
8. Proprietary Resin	NA	n.a.	n.a.	n.a.	n.a.
9. Methyl ethyl ketone {MEK; 2-Butanone}	78-93-3	n.a.	n.a.	n.a.	n.a.
10. Butyl acetate {Acetic acid, Butyl ester}	123-86-4	n.a.	n.a.	n.a.	n.a.
11. Ethylene glycol monobutyl ether acetate {(a glycol ether)}	112-07-2	n.a.	n.a.	A3	n.a.
12. Proprietary Resin	NA	n.a.	n.a.	n.a.	n.a.
13. Methyl ether {Dimethyl ether}	115-10-6	n.a.	n.a.	n.a.	n.a.

Carcinogenicity: NTP? Unknown IARC Monographs? Unknown OSHA Regulated? Unknown

12. Ecological Information

No data available.

13. Disposal Considerations

Waste Disposal Method

Dispose of in accordance with all applicable local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name UN1950, AEROSOLS, flammable, 2.1, LTD QTY
DOT Hazard Class: 2.1
DOT Hazard Label: FLAMMABLE GAS
UN/NA Number: 1950

MARINE TRANSPORT (IMDG/IMO)

IMDG/IMO Proper Shipping Name UN1950, AEROSOLS, flammable, 2.1, LTD QTY
UN Number: 1950
Marine Pollutant: No

Additional Transport Information

For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Toluene {Benzene, Methyl-; Toluol}	108-88-3	No	Yes 1000 LB	Yes	Yes
2. Styrene {Phenylethylene; Vinyl benzine; Styrol}	100-42-5	No	Yes 1000 LB	Yes	Yes
3. Proprietary Resin	NA	No	No	No	No
4. m-Xylene {Benzene, m-Dimethyl-}	108-38-3	No	Yes 1000 LB	Yes	No
5. o-Xylene {Benzene, o-Dimethyl-}	95-47-6	No	Yes 1000 LB	Yes	No
6. p-Xylene {Benzene, p-Dimethyl-}	106-42-3	No	Yes 100 LB	Yes	Yes
7. Ethylbenzene {Ethylbenzol; Phenylethane}	100-41-4	No	Yes 1000 LB	Yes	Yes
8. Proprietary Resin	NA	No	No	No	No
9. Methyl ethyl ketone {MEK; 2-Butanone}	78-93-3	No	Yes 5000 LB	No	Yes
10. Butyl acetate {Acetic acid, Butyl ester}	123-86-4	No	Yes 5000 LB	No	No
11. Ethylene glycol monobutyl ether acetate {(a glycol ether)}	112-07-2	No	No	Yes-Cat. N230	No
12. Proprietary Resin	NA	No	Yes 1000 LB	No	No

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Supercedes Revision: 01/25/2008

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
13. Methyl ether {Dimethyl ether}	115-10-6	No	No	No	No

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

Sec.302:	EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.
Sec.304:	EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.
Sec.313:	EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.
Sec.110:	EPA SARA 110 Superfund Site Priority Contaminant List

16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

1 Identification of the substance/mixture and of the company/undertaking

- Product identifier
- Trade name: Epifanes Rubbed Effect Varnish
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
W.Heeren & Zoon bv.
P.O. box 166
1430 AD Aalsmeer
Netherlands
tel.+31-(0)297-360366
fax +31-(0)297-342078
email: r&d@epifanes.nl
- Information department: environment protection department
- Emergency telephone number:
Heeren & Zoon b.v. 0297360366
See under Manufacturer/Supplier

2 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description:
Resin mixture
Solvent mixture with additives

· Dangerous components:

64742-48-9	naphta (petroleum), hydrotreated heavy  Xn R65 R10-66 <hr/>  H226  H304	25-50%
96-29-7	2-butanone oxime  Xn R21-40  Xi R41-43 Carc. Cat. 3 <hr/>  H351  H318  H312; H317	≤ 2.5%
64742-94-5	Solvent naphtha (petroleum), heavy arom.  Xn R65  N R51/53 <hr/>  H304	≤ 2.5%
136-52-7	cobalt bis(2-ethylhexanoate)  Xn R22  N R50/53 <hr/>  H301  H400; H410	≤ 2.5%

- Additional information:
For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

- Classification of the substance or mixture



GHS02 Flame

H226 Flammable liquid and vapour.

(Contd. on page 2)

Trade name: Epifanes Rubbed Effect Varnish

(Contd. of page 1)

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC
R10-66: Flammable. Repeated exposure may cause skin dryness or cracking.
- Information concerning particular hazards for human and environment:
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.
- Classification system:
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· Label elements

- Labelling according to EU guidelines:
The product has been classified and marked in accordance with directives on hazardous materials.
- Risk phrases:
10 Flammable.
66 Repeated exposure may cause skin dryness or cracking.
- Safety phrases:
2 Keep out of the reach of children.
23 Do not breathe fumes/aerosol.
24 Avoid contact with skin.
46 If swallowed, seek medical advice immediately and show this container or label.
51 Use only in well-ventilated areas.
56 Dispose of this material and its container to hazardous or special waste collection point.

- Special labelling of certain preparations:
Contains 2-butanone oxime, cobalt carboxylate. May produce an allergic reaction.
- Classification system:
- NFPA ratings (scale 0 - 4)



Health = 0
Fire = 2
Reactivity = 0

- HMIS-ratings (scale 0 - 4)



Health = 0
Fire = 2
Reactivity = 0

4 First aid measures

- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.

Trade name: Epifanes Rubbed Effect Varnish

(Contd. of page 2)

* **5 Firefighting measures**

- Suitable extinguishing agents:
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture
No further relevant information available.
- Protective equipment: Wear fully protective suit.

* **6 Accidental release measures**

- Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:
Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
- Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

* **7 Handling and storage**

- Handling:
Precautions for safe handling
Keep away from heat and direct sunlight.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- Information about protection against explosions and fires:
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- Storage:
Requirements to be met by storerooms and receptacles:
Store only in the original receptacle.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed.
- Specific end use(s) No further relevant information available.

* **8 Exposure controls/personal protection**

- Additional information about design of technical systems:
No further data; see item 7.
- Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information:
The lists that were valid during the creation were used as basis.

(Contd. on page 4)

Trade name: Epifanes Rubbed Effect Varnish

(Contd. of page 3)

- Personal protective equipment:
- General protective and hygienic measures:
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
- Breathing equipment:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Eye protection:



Tightly sealed goggles

- Body protection: Use protective suit.

9 Physical and chemical properties

- General Information
- Appearance:

Form:	Fluid
Color:	According to product specification
- Odor: Characteristic
- Odour threshold: Not determined.
- pH-value: Not determined.
- Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	150°C (302 °F)
- Flash point: > 41°C (> 106 °F)
- Flammability (solid, gaseous): Not applicable.
- Ignition temperature: 240°C (464 °F)
- Decomposition temperature: Not determined.

(Contd. on page 5)

Trade name: Epifanes Rubbed Effect Varnish

(Contd. of page 4)

· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits: Lower:	0.6 Vol %
Upper:	7.0 Vol %
· Vapor pressure at 20°C (68 °F):	1 hPa (1 mm Hg)
· Density at 20°C (68 °F):	0.911 g/cm ³ (7.602 lbs/gal) (ISO 2811)
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Segregation coefficient (n-octonol/ water):	Not determined.
· Viscosity: Dynamic:	Not determined.
Kinematic at 20°C (68 °F):	35 s (ISO 6 mm)
· Solvent content: Organic solvents:	46.9 %
VOC content:	46.9 %
	VOC content: 427.0 g/l / 3.56 lb/gl
Solids content:	51.9 % (SC% 1h150 C)
· Other information	No further relevant information available.

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Acute toxicity:

- LD/LC50 values that are relevant for classification:

96-29-7 2-butanone oxime

Oral	LD50	3700 mg/kg (rat)
Dermal	LD50	200-2000 mg/kg (rat)
Inhalative	LC50/4 h	20 mg/l (rat)

- Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.

(Contd. on page 6)

Trade name: Epifanes Rubbed Effect Varnish

(Contd. of page 5)

- Sensitization:
Sensitizing effect by skin contact is possible with prolonged exposure.

12 Ecological information

- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- Behavior in environmental systems:
- Bioaccumulative potential No further relevant information available.
- Additional ecological information:
- General notes:
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

- Waste treatment methods
- Recommendation:
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
- DOT, ADR, IMDG, IATA UN1263
- UN proper shipping name
- DOT, IMDG CONSUMER COMMODITY, ORM-D
- ADR PAINT
- IATA 1263 PAINT
- IATA PAINT

- Transport hazard class(es)
- DOT, IMDG, IATA



- Class 3 Flammable liquids.
- Label 3

- ADR



- Class 3 (F1) Flammable liquids
- Label 3

(Contd. on page 7)

Trade name: Epifanes Rubbed Effect Varnish

(Contd. of page 6)

· Packing group	III
· DOT, ADR, IMDG, IATA	III
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	30
· EMS Number:	F-E, S-E
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Remarks:	CERCLA/DOT RQ: 617gal./4786 lbs.
· IMDG	
· Remarks:	System Reference Code:5
· UN "Model Regulation":	UN1263, PAINT, 3, III

15 Regulatory information

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredient is listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

7631-86-9 silicon dioxide, chemically prepared

96-29-7 2-butanone oxime

64742-94-5 Solvent naphtha (petroleum), heavy arom.

60-33-3 linoleic acid, pure

463-40-1 linolenic acid, crude

112-80-1 oleic acid, pure

136-52-7 cobalt bis(2-ethylhexanoate)

131-56-6 2,4-dihydroxybenzophenone

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Cancerogenity categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

(Contd. on page 8)

Trade name: Epifanes Rubbed Effect Varnish

(Contd. of page 7)

· IARC (International Agency for Research on Cancer)		
7631-86-9	silicon dioxide, chemically prepared	3
136-52-7	cobalt bis(2-ethylhexanoate)	2B
· NTP (National Toxicology Program)		
None of the ingredients is listed.		
· TLV (Threshold Limit Value established by ACGIH)		
None of the ingredients is listed.		
· MAK (German Maximum Workplace Concentration)		
96-29-7	2-butanone oxime	2
112-80-1	oleic acid, pure	3A
· NIOSH-Ca (National Institute for Occupational Safety and Health)		
None of the ingredients is listed.		
· OSHA-Ca (Occupational Safety & Health Administration)		
None of the ingredients is listed.		

· National regulations:

· Technical instructions (air):

Class	Share in %
I	≤ 2,5
NK	25-50

· Water hazard class:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Abbreviations and acronyms:

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- ICAO: International Civil Aviation Organization
- ACGIH: American Conference of Governmental Industrial Hygienists
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent

· Sources J.J.van Dijk

· * Data compared to the previous version altered.

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Material Safety Data Sheet
 INTERGARD 740 1040Y10R YELLOW PT A

Sales
 Order: {SalesOrd}
 ECY52N
 11/30/2011
 A0-8

Bulk Sales Reference No.:
 MSDS Revision Date:
 MSDS Revision Number:



1. Identification of the preparation and company

Product Identity INTERGARD 740 1040Y10R YELLOW PT A
 Bulk Sales Reference No. ECY52N
 Company Name International Paint LLC
 6001 Antoine Drive
 Houston, Texas 77091

Emergency
 CHEMTREC (USA) (800) 424-9300
 International Paint (713) 682-1711
 Poison Control Center (800) 854-6813
 Customer Service
 International Paint (800) 589-1267
 Fax No. (800) 631-7481

2. Hazard identification of the product



GHS Classification;

Item	Category	Hazard
Flammability	3	Flammable liquid and vapor
Acute Toxicity (mouth)	Not classified	Not applicable
Acute Toxicity (skin)	Not classified	Not applicable
Acute Toxicity (inhalation)	Not classified	Not applicable
Acute Toxicity (ingestion)	Not classified	Not applicable
Skin corrosion/irritation	Not classified	Not applicable
Eye damage/irritation	Not classified	Not applicable
Sensitization (respiratory)	Not classified	Not applicable
Sensitization (skin)	Not classified	Not applicable
Germ toxicity	Not classified	Not applicable
Specific target organ systemic toxicity (single exposure)	1	central nerve system, kidneys, liver, respiratory system
	2	central nerve system
	3	narcotic effects, respiratory tract irritation
Specific target organ systemic Toxicity (repeated exposure)	1	central nerve system, lung, respiratory system
	2	Not applicable
Aspiration hazard	Not classified	Not applicable
Harmfulness to aquatic Environment (acute)	3	Harmful to aquatic life.
Harmfulness to aquatic Environment (long term effect)	4	May cause harm to aquatic life with long lasting effects
Carcinogenicity	Not classified	Not applicable

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Reproductive Toxicity	Not classified	Not applicable
Organic Peroxide	Not classified	Not applicable

Safety Phrases:

S23: Do not breathe vapor/spray.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S51: Use only in well-ventilated areas.

S61: Avoid release to the environment. Refer to special instructions/Safety data sheets.

Overview	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.			
Inhalation	Harmful if inhaled. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.			
Eyes	Causes severe eye irritation. Avoid contact with eyes.			
Skin	Causes skin irritation. May be harmful if absorbed through the skin.			
Ingestion	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.			
Chronic effects	Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.			
HMIS Rating	Health: 2*	Flammability: 3	Reactivity: 0	PPE: X

3. Composition/information on ingredients

Ingredient	CAS No.	Percent
1,2,4-Trimethyl benzene	0000095-63-6	1.0 – 10
Benzene, ethyl-	0000100-41-4	1.0 – 10
Propylene glycol monomethyl ether	0000107-98-2	1.0 – 10
1,3,5-Trimethylbenzene	0000108-67-8	1.0 – 10
Xylenes (o-, m-, p- isomers)	0001330-20-7	10 – 25
Kaolin	0001332-58-7	1.0 – 10
Barium sulfate	0007727-43-7	25 – 50
Titanium dioxide	0013463-67-7	10 – 25
Polymer of epoxy resin and bisphenol A	0025036-25-3	10 – 25
Petroleum naphtha, light aromatic	0064742-95-6	1.0 – 10

4. First aid measures

General	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. Fire-fighting measures

Flash Point	F: 81 C: 27
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Lower Explosive Limit (LEL) 1 (%vol in air) at Normal Atmospheric Temp and Pressure
 ERG Guide No. 128

6. Accidental release measures

Spill Response Procedures ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.

Public Safety CALL CHEMTREC at (800)–424–9300 for emergency response. Isolate spill or leak area immediately for at least 50 meters (150 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. **LARGE SPILLS:** Consider initial downwind evacuation for at least 300 meters (1000 feet).

ERG Guide No. 128

7. Handling and storage

Storage Temperature Store between 40–100F (4–38C).

Handling and Storage Precautions Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Avoid contact with eyes and clothing. Avoid prolonged or repeated contact with skin. Close container after each use. Wash thoroughly after handling.

8. Exposure controls and personal protection

Exposure			
CAS No.	Ingredient	Source	Value
0000095–63–6	1,2,4–Trimethyl benzene	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	25 ppm TWA; 125 mg/m3 TWA
		Supplier	No Established Limit
		OHSA, CAN	No Established Limit
		Mexico	No Established Limit
		Brazil	No Established Limit
0000100–41–4	Benzene, ethyl–	OSHA	100 ppm TWA; 435 mg/m3 TWA 125 ppm STEL; 545 mg/m3 STEL
		ACGIH	100 ppm TWA 125 ppm STEL
		NIOSH	100 ppm TWA; 435 mg/m3 TWA 125 ppm STEL; 545 mg/m3 STEL 800 ppm IDLH (10% LEL)
		Supplier	No Established Limit
		OHSA, CAN	100 ppm TWA 125 ppm STEL
		Mexico	100 ppm TWA; 435 mg/m3 TWA 125 ppm STEL; 545 mg/m3 STEL
		Brazil	78 ppm TWA; 340 mg/m3 TWA
0000107–98–2	Propylene glycol monomethyl ether	OSHA	150 ppm STEL; 540 mg/m3 STEL
		ACGIH	100 ppm TWA 150 ppm STEL
		NIOSH	100 ppm TWA; 360 mg/m3 TWA 150 ppm STEL; 540 mg/m3 STEL
		Supplier	No Established Limit
		OHSA, CAN	100 ppm TWA 150 ppm STEL
		Mexico	No Established Limit

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0000108-67-8	1,3,5-Trimethylbenzene	Brazil	No Established Limit
		OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	25 ppm TWA; 125 mg/m3 TWA
		Supplier	No Established Limit
		OHSA, CAN	No Established Limit
		Mexico	No Established Limit
		Brazil	No Established Limit
0001330-20-7	Xylenes (o-, m-, p- isomers)	OSHA	100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
		ACGIH	100 ppm TWA150 ppm STEL
		NIOSH	No Established Limit
		Supplier	No Established Limit
		OHSA, CAN	100 ppm TWA150 ppm STEL
		Mexico	100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
		Brazil	78 ppm TWA; 340 mg/m3 TWA
		0001332-58-7	Kaolin
ACGIH	2 mg/m3 TWA (particulate matter containing no asbestos and		
NIOSH	10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)		
Supplier	No Established Limit		
OHSA, CAN	2 mg/m3 TWA (containing no Asbestos and		
Mexico	10 mg/m3 TWA20 mg/m3 STEL		
Brazil	No Established Limit		
0007727-43-7	Barium sulfate		
		ACGIH	10 mg/m3 TWA
		NIOSH	10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)
		Supplier	No Established Limit
		OHSA, CAN	10 mg/m3 TWA (total dust)
		Mexico	No Established Limit
		Brazil	No Established Limit
		0013463-67-7	Titanium dioxide
ACGIH	10 mg/m3 TWA		
NIOSH	5000 mg/m3 IDLH		
Supplier	No Established Limit		
OHSA, CAN	10 mg/m3 TWA (total dust)		
Mexico	10 mg/m3 TWA (as Ti)20 mg/m3 STEL (as Ti)		
Brazil	No Established Limit		
0025036-25-3	Polymer of epoxy resin and bisphenol A		
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
		OHSA, CAN	No Established Limit
		Mexico	No Established Limit
		Brazil	No Established Limit
		0064742-95-6	Petroleum naphtha, light aromatic
ACGIH	No Established Limit		
NIOSH	No Established Limit		

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	Supplier	No Established Limit
	OHSA, CAN	No Established Limit
	Mexico	No Established Limit
	Brazil	No Established Limit

Health Data

CAS No.	Ingredient	Source	Value
0000095-63-6	1,2,4-Trimethyl benzene	NIOSH	No Established Limit
0000100-41-4	Benzene, ethyl-	NIOSH	Eye skin
0000107-98-2	Propylene glycol monomethyl ether	NIOSH	Eye nose
0000108-67-8	1,3,5-Trimethylbenzene	NIOSH	No Established Limit
0001330-20-7	Xylenes (o-, m-, p- isomers)	NIOSH	Central nervous system depressant; respiratory and eye irritation
0001332-58-7	Kaolin	NIOSH	Skin and mucous membrane injury respiratory effects
0007727-43-7	Barium sulfate	NIOSH	Eye nose
0013463-67-7	Titanium dioxide	NIOSH	Lung tumors in animals
0025036-25-3	Polymer of epoxy resin and bisphenol A	NIOSH	No Established Limit
0064742-95-6	Petroleum naphtha, light aromatic	NIOSH	No Established Limit

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000095-63-6	1,2,4-Trimethyl benzene	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0000100-41-4	Benzene, ethyl-	OSHA	Select Carcinogen: Yes
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: Yes; Group 3: No; Group 4: No;
0000107-98-2	Propylene glycol monomethyl ether	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0000108-67-8	1,3,5-Trimethylbenzene	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0001330-20-7	Xylenes (o-, m-, p- isomers)	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No;
0001332-58-7	Kaolin	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0007727-43-7	Barium sulfate	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0013463-67-7	Titanium dioxide	OSHA	Select Carcinogen: Yes
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: Yes; Group 3: No; Group 4: No;
0025036-25-3	Polymer of epoxy resin and bisphenol A	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

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0064742-95-6	Petroleum naphtha, light aromatic	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

Respiratory	Select equipment to provide protection from the ingredients listed in Section 3 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes	Avoid contact with eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 3 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 3 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls	Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
Other Work Practices	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

9. Physical and chemical properties

Physical State	Liquid Coloured
pH	No Established Limit
Specific Gravity	1.55
Boiling Point F	210
Vapor Density	Heavier than air
VOC %	Refer to the Technical Data Sheet or label where information is available.
Evaporation Rate	Slower than ether

10. Stability and reactivity

General	This product is stable and hazardous polymerization will not occur. Not sensitive to mechanical impact. Excessive heat and fumes generation can occur if improperly handled.
Incompatible Materials	Strong oxidizing agents.
Hazardous Decomposition	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

11. Toxicological information

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L4hr
1,2,4-Trimethyl benzene - (0000095-63-6)	3,400.00, Rat - Category: 5	3,160.00, Rabbit - Category: 5	-----
Benzene, ethyl- - (0000100-41-4)	3,500.00, Rat - Category: 5	15,354.00, Rabbit - Category: NA	17.20, Rat - Category: 4
Propylene glycol monomethyl ether - (0000107-98-2)	5,200.00, Rat - Category: NA	13,000.00, Rabbit - Category: NA	54.60, Rat - Category: NA

ECY52N_A0

1,3,5-Trimethylbenzene – (0000108–67–8)	5,000.00, Rat – Category: 5	-----	-----
Xylenes (o-, m-, p- isomers) – (0001330–20–7)	4,300.00, Rat – Category: 5	1,700.00, Rabbit – Category: 4	29.08, rat – Category: NA
Kaolin – (0001332–58–7)	-----	-----	-----
Barium sulfate – (0007727–43–7)	-----	-----	-----
Titanium dioxide – (0013463–67–7)	10,000.00, Rat – Category: NA	10,000.00, Rabbit – Category: NA	6,082.00, Rat – Category: NA
Polymer of epoxy resin and bisphenol A – (0025036–25–3)	-----	-----	-----
Petroleum naphtha, light aromatic – (0064742–95–6)	8,400.00, Rat – Category: NA	2,000.00, Rabbit – Category: 4	5.20, Rat – Category: 3

General NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Sections 8 and 11 for chemical specific data.

12. Ecological information

Not Defined
No additional information provided for this product. See Sections 8 and 11 for chemical specific data.

13. Disposal considerations

Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. Transport information

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name	PAINT	IMDG Proper Shipping Name	PAINT
DOT Hazard Class	3	IMDG Hazard Class	3 – Flammable and Combustible liquid
UN / NA Number	UN 1263	UN / NA Number	UN 1263
DOT Packing Group	III	IMDG Packing Group	III
CERCLA/DOT RQ	66 gal. / 857 lbs.	System Reference Code	2

15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

WHMIS Classification B2:D2B

DOT Marine Pollutants (10%):
(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):
(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs (>.1%) :

- Cumene (5000 lb final RQ; 2270 kg final RQ)
- Benzene, ethyl- (1000 lb final RQ; 454 kg final RQ)
- Xylenes (o-, m-, p- isomers) (100 lb final RQ; 45.4 kg final RQ)

EPCRA 302 Extremely Hazardous (>.1%) :
(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals (>.1%) :

- 1,2,4-Trimethyl benzene
- Cumene

Benzene, ethyl-
 Xylenes (o-, m-, p- isomers)
 Mass RTK Substances (>1%) :
 1,2,4-Trimethyl benzene
 Barium sulfate
 Benzene, ethyl-
 Kaolin
 Propylene glycol monomethyl ether
 Titanium dioxide
 1,3,5-Trimethylbenzene
 Xylenes (o-, m-, p- isomers)
 Mass Extraordinarily Haz Sub (>.01%) :
 Quartz
 Penn RTK Substances (>1%) :
 1,2,4-Trimethyl benzene
 Barium sulfate
 Benzene, ethyl-
 Kaolin
 Propylene glycol monomethyl ether
 Titanium dioxide
 Xylenes (o-, m-, p- isomers)
 Penn Special Hazardous Substances (>.01%) :
 (No Product Ingredients Listed)
 Rhode Island Hazardous Substances (>.1%) :
 Cumene
 Diisobutylketone
 Benzene, ethyl-
 Kaolin
 Propylene glycol monomethyl ether
 Titanium dioxide
 Xylenes (o-, m-, p- isomers)
 RCRA Status (%):
 N.J. RTK Substances (>1%) :
 1,2,4-Trimethyl benzene
 Barium sulfate
 Benzene, ethyl-
 Kaolin
 Propylene glycol monomethyl ether
 Titanium dioxide
 Xylenes (o-, m-, p- isomers)
 N.J. Special Hazardous Substances (>.01%) :
 Cumene
 Benzene, ethyl-
 Isobutyl alcohol
 Propylene glycol monomethyl ether
 Quartz
 Xylenes (o-, m-, p- isomers)
 N.J. Env. Hazardous Substances (>.1%) :
 1,2,4-Trimethyl benzene
 Cumene
 Benzene, ethyl-
 Xylenes (o-, m-, p- isomers)
 Proposition 65 – Carcinogens (>0%):
 Cumene
 Benzene, ethyl-
 Formaldehyde
 Nickel

ECY52N_A0

Quartz

Proposition 65 – Female Repro Toxins (>0%):
(No Product Ingredients Listed)

Proposition 65 – Male Repro Toxins (>0%):
(No Product Ingredients Listed)

Proposition 65 – Developmental Toxins (>0%):
(No Product Ingredients Listed)

Risk Phrases:

R20: Harmful by inhalation.

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.



PETTIT PAINT

MATERIAL SAFETY DATA SHEET

Supplier:	Kop-Coat, Inc. Marine Group 36 Pine Street Rockaway, NJ 07866	EMERGENCIES: Health/spills:.....: Chemtrec Assistance.....: Chemtrec Outside USA.....:	800-548-0489 800-424-9300 703-527-3887
		Kop-Coat, Inc. Product Information.....: Outside USA.....:	800-221-4466 973-625-3100

1. Product Information

Product name	3720 Easyoxy Dark Gray Topside Paint
Product code	1372000\1

Issuing date: 03/10/2011 **Contact person:** Environmental Health & Safety Mgr

2. Hazards identification

Emergency Overview

Appearance: Gray Liquid **Odor:** Hydrocarbon

Hazards: WARNING!
Harmful or fatal if swallowed. Causes eye and skin irritation. Harmful if inhaled. May be harmful if absorbed through skin. Vapor harmful.

Potential health effects

Primary Routes of Entry: Eye contact, ingestion, skin contact, inhalation, and absorption.

Eye contact:

May cause eye irritation. Symptoms may include stinging, tearing, and redness of eyes.

Ingestion:

Aspiration of this product into the lungs during ingestion, gagging or vomiting may cause lung damage, which can be fatal. May cause gastrointestinal distress. Symptoms may include irritation to the mouth, throat and stomach and gastrointestinal disturbances such as nausea, vomiting or diarrhea.

Skin contact:

May cause skin irritation. Symptoms may include dryness, itching, burning sensation, redness, cracking and swelling depending on the extent of exposure. May be harmful if absorbed through the skin in toxic amounts and cause systemic effects.

Inhalation:

May cause irritation to the nose, throat and respiratory tract. Inhalation of high concentrations of vapors may cause respiratory tract irritation and central nervous system depression. Symptoms may include headache, nausea, dizziness and drowsiness. Continued inhalation may result in unconsciousness or death.

Chronic effects:

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Prolonged or repeated dermal exposure to this product can cause skin dermatitis characterized by red, dry, scaly skin.

Target Organs: Not Determined

This product contains carcinogens or potential carcinogens as listed by IARC or NTP. See Section 3 NTP, IARC (Carc.) columns for chemical identification.

3. Composition/information on ingredients

Chemical Name	CAS-No.	Weight %	Carc
Aliphatic petroleum distillates (mineral spirits)	64742-88-7	20 - 30	
Cobalt C9-13 Carboxylates	68955-83-9	< 1	*
Calcium carbonate (Limestone)	1317-65-3	10 - 20	
Titanium dioxide	13463-67-7	1 - 10	*
Petroleum distillates, hydrotreated light	64742-47-8	1 - 10	
Aliphatic Hydrocarbon (Stoddard type)	8052-41-3	1 - 10	
Kerosene	8008-20-6	1 - 10	
Ethylene glycol monobutyl ether	111-76-2	1 - 10	
Carbon Black	1333-86-4	< 1	*
Cobalt Neodecanoate	27253-31-2	< 1	*

4. FIRST AID MEASURES

Eye contact:

Quickly and gently blot or brush chemical off the face. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Take care not to rinse contaminated water into unaffected eye or onto the face. Call poison control center, hospital emergency room, or physician immediately.

Ingestion:

NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 2 to 8 oz. (60 to 240 mL) of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water again. Immediately obtain medical advice.

Skin contact:

As quickly as possible, remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Quickly and gently blot or brush away excess chemical. Immediately wash with lukewarm, gently flowing water and non-abrasive soap for 15-20 minutes. Immediately obtain medical advice. Completely decontaminate clothing, shoes and leather goods before reuse or discard.

Inhalation:

This product is combustible/flammable. Take proper precautions (e.g. remove any sources of ignition). Remove source of contamination or move victim to fresh air. Keep victim quiet and warm until emergency help arrives.

Note to Physician :

There is no specific antidote for effects from overexposure to this material. Treatment should be directed at the control of symptoms and the clinical condition.

5. FIRE-FIGHTING MEASURES

Flash point 106 deg F /41 deg C

Extinguishing media:

Use alcohol foam, dry chemical, carbon dioxide or any Class B fire extinguishing agent. Water may be unsuitable for extinguishing fires. Water may be used to cool and prevent the rupture of containers that are exposed to the heat from a fire.

Hazardous combustion products:

See Section 10 for potential decomposition products.

Protective equipment and precautions for firefighters:

Evacuate all persons from the fire area to a safe location. Move non-burning material, as feasible, to a safe location as soon as possible. Fire fighters should be protected from potential explosion hazards while extinguishing the fire. Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use. Containers of this material may build up pressure if exposed to heat (fire). Use water spray to cool fire-exposed containers. Use water spray to disperse vapors if a spill or leak has not ignited. DO NOT extinguish a fire resulting from the flow of flammable liquid until the flow of the liquid is effectively shut off. This precaution will help prevent the accumulation of an explosive vapor-air mixture after the initial fire is extinguished.

6. ACCIDENTAL RELEASE MEASURES

Personal & Environmental Precautions:

Remove sources of ignition immediately. Stop flow of material if safe to do so. Contain spill and keep out of water courses. Ventilate area. Absorb spill in sand, earth or other suitable material. Transfer to appropriate container for disposal using non-sparking tools. Follow personal protective equipment recommendations found in Section 8. Personal protection needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the training and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits.

Methods of Containment & Clean-up and Other Information:

This product, if released in large enough quantities, may need to be reported to the US Coast Guard National Response Center at 1-800-424-8802. Contain spills with dikes and absorbents (sand, earth, dry chemical absorbent) to prevent migration and entry into waterways.

7. HANDLING AND STORAGE

Handling:

Keep container closed and upright when not in use. To prevent generation of static discharges, use bonding/grounding connection when transferring material. Vapors may accumulate and travel to distant ignition sources and flashback. Extinguish all sources of ignition including pilot lights, non-explosion proof motors and electrical equipment until vapors dissipate. Since empty containers may retain product residue and flammable vapors, observe precautions even after container is emptied. Do not cut, puncture, or weld on or near empty containers. Do not smoke where product is used or stored. Avoid contact with eyes, skin or clothing. Avoid inhalation (vapor, mist, dust or fume, as applicable). Use only with adequate ventilation. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling.

Storage:

Store in areas/buildings designed to comply with OSHA 1910.106. Store away from sources of ignition and heat. Keep containers closed when not in use. Store in cool, well ventilated space away from incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	CAS-No.	Z-1 PEL	Z-2 PEL	ACGIH TLV
Aliphatic petroleum distillates (mineral spirits)	64742-88-7			
Cobalt C9-13 Carboxylates	68955-83-9			
Calcium carbonate (Limestone)	1317-65-3	15 MGM3		
Titanium dioxide	13463-67-7	15 MGM3		10 MGM3

3720 Epoxy Dark Gray Topside Paint

Petroleum distillates, hydrotreated light	64742-47-8		
Aliphatic Hydrocarbon (Stoddard type)	8052-41-3	2900 MGM3 (500 PPM)	100 PPM
Kerosene	8008-20-6		200 MGM3
Ethylene glycol monobutyl ether	111-76-2	240 MGM3 (50 PPM)	20 PPM
Carbon Black	1333-86-4	3.5 MGM3	3.5 MGM3
Cobalt Neodecanoate	27253-31-2		0.02 MGM3

Engineering measures:

Use adequate ventilation to maintain airborne concentrations at levels below permissible or recommended occupational exposure limits. Supplementary local exhaust ventilation may be necessary in poorly ventilated spaces, during spraying, heating or other non-routine activities.

Eye/face protection:

Wear chemical-resistant glasses and/or goggles and a face shield when eye and face contact is possible due to splashing or spraying of material.

Skin protection:

Chemical-resistant, flexible-type gloves (Viton(R), neoprene, nitrile or equal) to prevent contact. Gloves should be rinsed and removed immediately after use. Wash hands after removing gloves. Wear chemical-resistant clothing (e.g. apron, pants, coveralls) and safety footwear as appropriate.

Respiratory protection:

Respiratory protection may be necessary under certain use conditions. Under such conditions, an appropriate, properly fitted NIOSH-approved respirator must be worn. If respirators are used, a program should be instituted to assure compliance with 29 CFR 1910.34 and 42 CFR 84.

General hygiene considerations:

Facilities utilizing this material should be equipped with an eyewash station and safety shower. Thoroughly clean shoes and wash contaminated clothes before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Appearance:	Gray Liquid
Odor	Hydrocarbon
pH	Not applicable.
Boiling point	not determined
Flash point	106 deg F /41 deg C
Solubility in water:	Negligible
Specific Gravity:	1.08
Weight per gallon (LB/GAL) :	9.01
Evaporation rate (n-Butyl acetate = 1):	<1
Volatile by Weight (including water and exempt compounds) (%):	37%
Volatile Organic Content (VOC):	375 g/L

10. STABILITY AND REACTIVITY

Stability:

Stable under normal conditions.

Incompatibility:

Oxidizing and reducing agents. Keep away from heat, sparks and open flames.

Hazardous decomposition products:

Carbon monoxide, carbon dioxide, oxides of nitrogen and other toxic organic compounds.

11. TOXICOLOGICAL INFORMATION

Ethylene glycol monobutyl ether (CAS#111-76-2): Laboratory studies on experimental animals indicate that exposure may cause red blood cell damage and damage to the kidney and liver. These effects have not been observed in humans. Laboratory animal studies have reported adverse reproductive and developmental effects from overexposure.

Titanium dioxide (CAS# 13463-67-7): While IARC has concluded there is sufficient evidence in experimental animals for the carcinogenicity of titanium dioxide, several epidemiological studies have found no association between occupational exposure to titanium dioxide and risk for cancer. In addition, IARC states that, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as in paints."

Kerosene: This material/or its components have been associated with developmental and/or reproductive toxicity, genotoxicity, neurological conditions, liver or kidney dysfunction. Laboratory data have associated some middle distillates, such as kerosene, with skin cancer when the material is applied repeatedly over the lifetime of the test animal. Middle distillates, such as kerosene, have been associated with liver and kidney damage in subchronic (90day) inhalation studies of male rats.

12. ECOLOGICAL INFORMATION

Ecological evaluation of this material has not been performed; however do not allow the product to be released to the environment without governmental approval/permits.

13. DISPOSAL CONSIDERATIONS

Waste from this material may be a listed and/or characteristic hazardous waste. Dispose of material, contaminated absorbent, container and unused contents in accordance with local, state, and federal regulations.

14. TRANSPORT INFORMATION

Transportation: This product is not regulated by the U.S. DOT when shipped by ground in containers < 119 gallons.

By Ground:

DOT Hazard Class:

DOT Proper Shipping Name: Not regulated in containers < 119 gal.

DOT Packing Group:

DOT UN Number:

By Air:

IATA Hazard Class: 3

IATA Proper Shipping Name: Paint

IATA Packing Group: III
IATA UN Number: UN1263
By Sea:
IMDG Hazard Class: 3
IMDG Proper Shipping Name: Paint
IMDG Packing Group: III
IMDG UN Number: UN1263

15. REGULATORY INFORMATION

EPA registration number: Not applicable.

Pest Registration Act number: Not applicable.

Other:

Not applicable.

Chemical Name	CAS-No.	TSCA 12B	SARA 313	TSCA	DSL	EINECS	Prop 65	Whmis
Aliphatic petroleum distillates (mineral spirits)	64742-88-7			*	*	*		
Calcium carbonate (Limestone)	1317-65-3			*				
Titanium dioxide	13463-67-7		*	*	*	*		
Petroleum distillates, hydrotreated light	64742-47-8			*	*			
Aliphatic Hydrocarbon (Stoddard type)	8052-41-3			*	*	*		*
Kerosene	8008-20-6			*	*	*		*
Ethylene glycol monobutyl ether	111-76-2		*	*	*	*		*
Carbon Black	1333-86-4			*	*	*	*	*

16. OTHER INFORMATION

HMIS Health: 2* **HMIS Flammability: 2** **HMIS Physical Hazard: 0**

NFPA Health: 2 **NFPA Flammability: 2** **NFPA Instability/Reactivity: 0**

NOTICE: This document is generated for the purpose of distributing health, safety, and environmental data. The information on this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed, or implied, regarding correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. Kop-Coat makes no warranty with respect thereto and disclaims all liability from reliance thereon.

Key:

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service Registry Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLA RQ	CERCLA Reportable Quantity
CFR	Code of Federal Regulations
CPR	Cardiopulmonary resuscitation
DSL	Domestic Substances List of Canada
EINECS	European Inventory of Existing Chemical Substances
EPCRA	Emergency Planning and Community Right-to-know Act
EPCRA EHS	EPCRA Extremely Hazardous Substance
EPCRA TPQ	EPCRA Threshold Planning Quantity

oF	Fahrenheit degrees
g/l	Grams per liter
gal	Gallons
Group A3	Carcinogen Category - Confirmed Animal Carcinogen with Unknown Relevance to Humans
Group A4	Carcinogen Category - Not Classifiable as a Human Carcinogen
HMIS	Hazardous Materials Identification System - Chemical Rating
IARC	International Agency for Research on Cancer
lbs or LBS	Pounds
MGM3	Milligrams per cubic meter
MIR	Maximum Incremental Reactivity
MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PPM	Parts per million
Proposition 65	California's Safe Drinking Water and Toxic Enforcement Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
VOL	Volume
WT	Weight
WHMIS	Canadian Workplace Hazardous Materials Information System
UN	United Nations

ANSI KC 1.74



Material Safety Data Sheet

“Dymel” 152a

(“DYMEL” is a registered trademark of DuPont)

1. Chemical Product and Company Identification

Product Trade Name: DUST-OFF® DUSTER



Chemical Family: Ethane, 1,1-Difluoro
FSP Model No: DPS, DPSCN, DPSX, DPSR, DPSRCN, DPSRX, DPSXL, DPSXLCN, DPSXLCN2, DPSXLX, DSXLP, DPSXL3, DPSJB, DPSJB2, DPSJBCN, DPSJC, DPSJCCN, DPSJBX, DPSMB, DPSMW, DPSJMB, DPSJMBCN, DPSJMB2, DPSXL12, DSXLPW, DCPJB, DCPJBCN, FGS, FGSCN, FGSRCN, FGSR.

Chemical Manufacturer: Dupont
Address: 1007 Market Street
Wilmington, DE 19898 USA
Phone: 1-800-441-7515
Product Manufacturer: Falcon Safety Products, Inc.
Address: 25 Imclone Drive
Branchburg, NJ 08876
Phone: 1-908-707-4900

Emergency Telephone USA: (800) 498-7192

2. Composition/Information on Ingredients

Chemical Name	Wt.%Range	TLV Units
1,1-Difluoroethane	100%	
CAS #75-37-6		

3. Hazard Identification

Potential Health Effects:

Inhalation of high concentrations of vapor is harmful and may cause heart irregularities, unconsciousness, or death. Intentional misuse or deliberate inhalation may cause death without warning. Vapor reduces oxygen available for breathing and is heavier than air. Liquid contact can cause frostbite.

Human Health Effects:

Higher exposures may lead to irritation of nose, throat, and lungs with cough, difficulty breathing or shortness of breath, temporary alteration of the heart's electrical activity with irregular pulse, palpitations, or inadequate circulation, or abnormal kidney function as detected by laboratory tests. Gross overexposure may be fatal.

Medical Conditions Aggravated by Exposure:

Individual with preexisting diseases of the central nervous, cardiovascular system, lungs, or kidneys may have increased susceptibility to the toxicity of excessive exposures.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

Material Safety Data Sheet

“Dymel” 152a

(“DYMEL” is a registered trademark of DuPont)

4. First Aid Measures

- Inhalation:** If high concentrations are inhaled, immediately remove to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.
- Skin Contact:** Promptly flush skin with water until all chemical is removed. If there is evidence of frostbite, bathe (do not rub) with lukewarm (not hot) water. If water is not available, cover with a clean, soft cloth or similar covering. Get medical attention if symptoms persist.
- Eye Contact:** Immediately flush eyes with large amounts of water for at least 15 minutes (in case of frostbite water should be lukewarm, not hot) lifting eyelids occasionally to facilitate irrigation. Get medical attention if symptoms persist.
- Ingestion:** Ingestion is not considered a potential route of exposure.

Notes to Physicians:

Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used with special caution only in situations of emergency life support.

5. Firefighting Measures

- Flash Point:** <-50°C (<-58°F)
- Auto ignition Temperature:** 454°C (849°F)
- Flammable Limits in Air:** LEL/UEL: 3.9-16.9 (% by volume)
- Fire and Explosion Hazards:** Aerosol cans may erupt with force at temperatures above 49° C (120° F) HFC 152a fire decomposition by-products will include hydrofluoric acid, and possibly carbonyl fluoride. Avoid contact with these materials, which are toxic and irritating. Evacuate personnel immediately in the event of a fire involving HFC-152a.
- Extinguishing Media:** Water Spray, Water fog, Dry Chemical, Carbon dioxide. “Alcohol” foam.
- Special Firefighting Procedures:**
- Cool cans with water spray. If gas exiting can ignites, stop flow of gas. Do not put out fire unless leak can be stopped. Self-contained breathing apparatus (SCBA) is required if containers rupture and contents are released under fire conditions.
- National Fire Protection Association (NFPA 30B)**
Level 1 Aerosols (lowest flammability rating)

6. Accidental Release Measures

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

- Spill or Leak:** Although the chances of a large spill or leak are unlikely in aerosol containers. If a spill can cause a concentration in excess of 1,000 ppm, stop flow and remove ignition sources. Evacuate area. Ventilate area, especially low places where heavy vapors might collect. Wear self-contained breathing apparatus (SCBA).

If this product is spilled and not recovered, or is recovered as a waste for treatment or disposal, the CERCLA Reportable Quantity is 100 lbs. (Release of an unlisted Hazardous Waste characteristic of ignitability).

Material Safety Data Sheet

“Dymel” 152a

(“DYMEL” is a registered trademark of DuPont)

7. Handling and Storage

Avoid breathing vapors or mist. Keep containers closed. Use only with adequate ventilation. Avoid repeated or prolonged contact with eyes, skin or clothing. Wash thoroughly after handling. Do not store in direct sunlight. Store in cool dry place, away from heat, sparks or flames which may generate toxic decomposition products. Vapors are heavy and may concentrate in low poorly ventilated areas.

8. Exposure Controls/Personal Protection

- Engineering Controls:** Ground all equipment and cylinders before use. Do not use near any spark producing electrical devices such as paper shredders.
- Respiratory Protection:** Use only with adequate ventilation. Keep container closed. Use approved NIOSH self-contained or supplied air respirators for emergencies and in situations where air may be displaced by vapors.
- Eye Protection:** Use chemical protective safety glasses.
- Protective Clothing:** Where there is potential for skin contact, use appropriate impervious gloves, apron, pants and jacket.
- Exposure Guidelines:** Applicable Exposure Limits.

Difluoroethane:

PEL (OSHA)	None Established
TLV (ACGIH)	None Established
AEL (DuPont)	1000 ppm, 8 Hr. TWA
WEEL (AIHA)	1000 ppm, 8 Hr. TWA

NFPA, NPCA-HIMIS RATING:

Health	1
Flammability	4
Reactivity	1

Personal Protection rating to be supplied by user depending on use conditions.

9. Physical and Chemical Properties

Physical Form:	Liquefied Gas
Odor:	Slight Ethereal
Boiling Point:	-25°C (-13°F)
pH:	Not Applicable
Solubility in Water:	0.28 WT% @ 25°C (77°F) and 87 psia.
Specific Gravity:	0.909
% Volatile by Weight:	100
Vapor Pressure:	87 psia at 25°C (77°F)
Density:	.90 g/cc at 25°C (77°F) - Liquid
Vapor Density (air=1):	2.4 (Air = 1.0) at 25°C (77°F)
Color:	Clear, colorless

10. Reactivity

- Chemical Stability:** Material is stable. However, avoid open flames and high temperatures.
- Hazardous Polymerization:** Will not occur.
- Incompatibilities:** Incompatible with alkali or alkaline earth metal –powdered Al, Zn, Be, etc.
- Decomposition Products:** Decomposition products are hazardous. This material can be decomposed by **high temperatures** forming hydrofluoric acid and possibly carbonyl fluoride

Material Safety Data Sheet

“Dymel” 152a

(“DYMEL” is a registered trademark of DuPont)

11. Toxicological Information

Animal Data:

Oral ALD: >1500 mg/kg in rats Inhalation ALC, 4 hr: 383,000 ppm in rats HFC-152a has not been tested for skin and eye irritancy, nor for animal sensitization. Ingestion of single high doses of HFC-152a caused weight loss and lethargy.

Carcinogenicity:

Inhalation of high levels of HFC-152a caused labored breathing, lung irritation, lethargy, incoordination and loss of consciousness. Cardiac sensitization occurred in dogs exposed to a concentration of 150,000 ppm in air and given an intravenous epinephrine challenge. Repeated inhalation exposures caused increased urinary fluoride, reduced kidney weight, and reversible kidney changes. Based on an independent peer review the reversible kidney changes are considered artifacts of the tissue and slide processing and not a compound related effect. Animal testing demonstrate no carcinogenic activity nor developmental effects. No animal data are available to define reproductive effects of HFC-152a. HFC-152a has not produced genetic damage in bacterial cultures. There are reports indicating that HFC-152a produced genetic damage in some mammalian cell culture tests. A weak genotoxic effect in germ cells of *Drosophila melanogaster* has been reported. It has not been tested in animals.

12. Ecological Information

Aquatic Toxicity:

Not Available

13. Disposal Considerations

Waste Disposal: Reclaim by distillation, incinerate, or remove to a permitted waste facility. Comply with Federal, State, and local regulations.

This material may be a RCRA Hazardous waste upon disposal due to the ignitability characteristic.

14. Transportation Information

Transport for Aerosol Packaging:

Shipping Information

DOT/IMO

Proper Shipping Name : 1,1-DIFLUOROETHANE

Hazard Class : 2.1

UN No. : 1030

DOT/IMO Label : FLAMMABLE GAS

Special Information : CARGO AIRCRAFT ONLY

NOTE: Falcon Safety Products has been granted a DOT exemption that allows this product to be shipped similar to a Consumer Commodity (ORM-D). A copy of the DOT exemption can be obtained by calling Falcon Safety Products, Inc at 908-707-4900.

15. Regulatory Information

U.S. Federal Regulations

TSCA Inventory Status : Reported/Included.

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : Yes

Chronic : No

Fire : Yes

Reactivity : No

Material Safety Data Sheet

“Dymel” 152a

(“DYMEL” is a registered trademark of DuPont)

Regulatory Information continued.....

Pressure : Yes

LISTS:

SARA Extremely Hazardous Substance -No

CERCLA Hazardous Substance -(*)

SARA Toxic Chemicals -No

*See Disposal Information

"DYMEL" 152a is a flammable gas as defined by OSHA in 29CFR 1910.1200(c). Use of this product may require compliance with 29CFR 1910.119, Process Safety Management of Highly Hazardous Chemicals.

This information must be included in all MSDSs that are copied and distributed for this material.

California V.O.C. Data: This product contains 0 grams total VOC per liter.

16. Other Information

NFPA, NPCA-HMIS

NPCA-HMIS Rating

Health : 1

Flammability : 4

Reactivity : 1

WHIMIS - Canada

Class A - Compressed Gas

Class B-1 - Flammable Gas

CEPA DSL: difluoroethane

Personal Protection rating to be supplied by user depending on use

Falcon Safety Products, Inc. expressly disclaim all express or implied warranties for merchantability and fitness for a particular purpose, with respect to the product or information provided herein.

All information appearing herein is based upon data obtained from the manufacturer. While the information is believed to be accurate, Falcon Safety Products, Inc. makes no representation as to its accuracy or sufficiency. Conditions of use are beyond Falcon Safety Products, Inc. control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risk of their use, handling and disposal of the product, or from the publication, or use of, or reliance upon, information contained herein. This information relates only to the product designated here and does not relate to its use in combination with any other material or in any other process. This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.



Signature

Dermot McLeer

Printed Name

Technical Manager

Title

10/30/2006

Revision Date

Material Safety Data Sheet



Date of issue 21 January 2014

Version 9

1. Product and company identification

Product name : Concept Mixing Bases
Code : DMC-1
Supplier : PPG Industries, Inc.
One PPG Place,
Pittsburgh, PA 15272
Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
Technical Phone Number : (740) 363-9610 (DELAWARE, OH) 8:00 a.m. - 5:00 p.m. EST

2. Hazards identification

Emergency overview : DANGER!
FLAMMABLE LIQUID AND VAPOR. HARMFUL OR FATAL IF SWALLOWED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. ASPIRATION HAZARD. CAN ENTER LUNGS AND CAUSE DAMAGE. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. SUSPECT CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER. May form explosive peroxides. Risk of explosion by shock, friction, fire or other sources of ignition. Add this product only to water. Never add water to this product.
This material increases the risk of fire and may aid combustion. Keep away from heat, sparks and flame. Keep away from flames, such as a pilot light, and any object that sparks, such as an electric motor. Keep away from heat. Do not smoke. Keep away from combustible material. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Irritating to respiratory system. Can irritate eyes, nose, mouth and throat. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion : Harmful or fatal if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage.
Skin : Harmful in contact with skin. Irritating to skin.
Eyes : Severely irritating to eyes. Risk of serious damage to eyes.

Over-exposure signs/symptoms

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

2. Hazards identification

See toxicological information (Section 11)

3. Composition/information on ingredients

Name	CAS number	%
n-butyl acetate	123-86-4	30 - 60
Acrylic Resin	Not available.	15 - 40
titanium dioxide	13463-67-7	10 - 30
xylene	1330-20-7	10 - 30
diiron trioxide	1309-37-1	10 - 30
2-methoxy-1-methylethyl acetate	108-65-6	7 - 13
Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, brominated chlorinated	68512-13-0	7 - 13
polychloro copper phthalocyanine	1328-53-6	3 - 7
ethyl 3-ethoxypropionate	763-69-9	3 - 7
carbon black respirable	1333-86-4	3 - 7
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	147-14-8	3 - 7
Aluminium powder (stabilized)	7429-90-5	1 - 5
2-butoxyethyl acetate	112-07-2	1 - 5
ethylbenzene	100-41-4	1 - 5
Solvent naphtha (petroleum), light aromatic	64742-95-6	1 - 5
butan-1-ol	71-36-3	1 - 5
Stoddard solvent	8052-41-3	0.5 - 1.5
1,2,4-trimethylbenzene	95-63-6	0.5 - 1.5
Zinc Salt	Not available.	0.5 - 1.5
Resin acids and Rosin acids, calcium salts	9007-13-0	0.5 - 1.5
quino[2,3-b]acridine-6,7,13,14(5H,12H)-tetrone	1503-48-6	0.5 - 1.5
calcium molybdate	7789-82-4	0.5 - 1.5
toluene	108-88-3	0.1 - 1
mesitylene	108-67-8	0.1 - 1
styrene	100-42-5	0.1 - 1
2-methoxypropyl acetate	70657-70-4	0.1 - 1
methyl methacrylate	80-62-6	0.1 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5 . Fire-fighting measures

Flammability of the product : Flammable liquid. Risk of explosion by shock, friction, fire or other sources of ignition. May form explosive peroxide. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard. Avoid shock and friction. Keep away from heat, sparks and flame.

Extinguishing media

Suitable : Use dry chemical, CO₂, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
nitrogen oxides
sulfur oxides
halogenated compounds
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Use spark-proof tools and explosion-proof equipment. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Do not absorb in sawdust or other combustible material. It may lead to a fire risk when it dries out. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Do not absorb in sawdust or other combustible material. It may lead to a fire risk when it dries out. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not breathe vapor or mist. Do not swallow. Do not get in eyes or on skin or clothing. Avoid shock and friction. Avoid all possible sources of ignition (spark or flame). Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made

7. Handling and storage

from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. Vapors are heavier than air and may spread along floors. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Keep away from combustible material. Add this product only to water. Never add water to this product. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage

- Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Separate from reducing agents and combustible materials. See NFPA 430, Code for the Storage of Liquid and Solid Oxidizers. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store above the following temperature: 120F / 49C.

8. Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
n-butyl acetate	TWA	150 ppm	150 ppm	150 ppm	150 ppm	Not established
	STEL	200 ppm	Not established	200 ppm	200 ppm	Not established
titanium dioxide	TWA	10 mg/m ³	15 mg/m ³ TD	10 mg/m ³ TD	10 mg/m ³ (as Ti)	Not established
	STEL	Not established	Not established	Not established	20 mg/m ³ (as Ti)	Not established
xylene	TWA	100 ppm	100 ppm	100 ppm	100 ppm	Not established
	STEL	150 ppm	Not established	150 ppm	150 ppm	Not established
diiron trioxide	TWA	5 mg/m ³ R	10 mg/m ³	5 mg/m ³ R	5 mg/m ³ (as Fe)	Not established
	STEL	Not established	Not established	Not established	10 mg/m ³ (as Fe)	Not established
2-methoxy-1-methylethyl acetate	TWA	Not established	Not established	50 ppm	Not established	50 ppm
ethyl 3-ethoxypropionate	TWA	Not established	Not established	50 ppm	Not established	50 ppm
	STEL	Not established	Not established	Not established	Not established	100 ppm
carbon black respirable	TWA	3 mg/m ³	3.5 mg/m ³	3 mg/m ³	3.5 mg/m ³	Not established
	STEL	Not established	Not established	Not established	7 mg/m ³	Not established

8 . Exposure controls/personal protection

Aluminium powder (stabilized)	TWA	1 mg/m ³ R	15 mg/m ³ (as Al) TD 5 mg/m ³ (as Al) R	1 mg/m ³ R	5 mg/m ³ 5 mg/m ³	Not established
2-butoxyethyl acetate	TWA	20 ppm	Not established	20 ppm	Not established	Not established
ethylbenzene	TWA	20 ppm	100 ppm	20 ppm	100 ppm	Not established
	STEL	Not established	Not established	Not established	125 ppm	Not established
butan-1-ol	TWA	20 ppm	100 ppm	20 ppm	Not established	Not established
	STEL	Not established	Not established	Not established	50 ppm S C	Not established
Stoddard solvent	TWA	100 ppm	500 ppm	100 ppm	100 ppm	Not established
	STEL	Not established	Not established	Not established	200 ppm	Not established
1,2,4-trimethylbenzene	TWA	25 ppm	Not established	25 ppm	25 ppm	Not established
	STEL	Not established	Not established	Not established	35 ppm	Not established
calcium molybdate	TWA	0.5 mg/m ³ (as Mo) R 10 MG/M3 TD 3 MG/M3 R	5 mg/m ³ (as Mo) 10 mg/m ³	0.5 mg/m ³ (as Mo) R	5 mg/m ³ (as Mo)	Not established
	STEL	Not established	Not established	Not established	10 mg/m ³ (as Mo)	Not established
toluene	TWA	20 ppm	200 ppm Z	20 ppm	50 ppm S	Not established
	STEL	Not established	500 ppm Z A 300 ppm Z C	Not established	Not established	Not established
mesitylene	TWA	25 ppm	Not established	25 ppm	25 ppm	Not established
	STEL	Not established	Not established	Not established	35 ppm	Not established
styrene	TWA	20 ppm S	100 ppm Z	35 ppm	50 ppm S	Not established
	STEL	40 ppm S	600 ppm Z A 200 ppm Z C	100 ppm	100 ppm S	Not established
methyl methacrylate	TWA	50 ppm SS	100 ppm	50 ppm SS	100 ppm	Not established
	STEL	100 ppm SS	Not established	100 ppm SS	125 ppm	Not established

Key to abbreviations

A = Acceptable Maximum Peak
ACGIH = American Conference of Governmental Industrial Hygienists.
C = Ceiling Limit

S = Potential skin absorption
SR = Respiratory sensitization
SS = Skin sensitization

8 . Exposure controls/personal protection

F	= Fume	STEL	= Short term Exposure limit values
IPEL	= Internal Permissible Exposure Limit	TD	= Total dust
OSHA	= Occupational Safety and Health Administration.	TLV	= Threshold Limit Value
R	= Respirable	TWA	= Time Weighted Average
Z	= OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances		

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Chemical splash goggles.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Gloves : For prolonged or repeated handling, use the following type of gloves:

Recommended: butyl rubber, nitrile rubber

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state	: Liquid.
Flash point	: Closed cup: 4.44°C (40°F)
Material supports combustion.	: Yes.
Color	: <input checked="" type="checkbox"/> Not available.
Odor	: Not available.
pH	: Not available.
Boiling/condensation point	: >37.78°C (>100°F)
Melting/freezing point	: Not available.
Specific gravity	: 1.04
Density (lbs / gal)	: 8.68
Vapor pressure	: Not available.
Vapor density	: Not available.
Volatility	: 57% (v/v), 49% (w/w)
Evaporation rate	: Not available.
Partition coefficient: n-octanol/water	: Not available.
% Solid. (w/w)	: 50.73

Physical property values shown in this section are calculated averages. For specific product information, contact your PPG Sales Representative.

10 . Stability and reactivity

Stability	: The product may not be stable under certain conditions of storage or use.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Drying on clothing or other combustible materials may cause fire. Avoid increased storage temperature. Pressure hazard
Materials to avoid	: Reactive or incompatible with the following materials:,water,combustible materials, organic materials,metals,acids,alkalis,oxidizing materials,reducing materials
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<input checked="" type="checkbox"/> -butyl acetate	LD50 Oral	Rat	10.768 g/kg	-
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LC50 Inhalation	Rat	>21.1 mg/l	4 hours
titanium dioxide	LD50 Oral	Rat	>10 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
	LD50 Dermal	Rabbit	>1.7 g/kg	-
xylene	LC50 Inhalation	Rat	5000 ppm	4 hours
	Vapor			
	LD50 Oral	Rat	10 g/kg	-
diiron trioxide	LD50 Oral	Rat	8532 mg/kg	-
	LD50 Oral	Rat	>5 g/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
2-methoxy-1-methylethyl acetate	LD50 Oral	Rat	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, brominated chlorinated	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	3200 mg/kg	-

11 . Toxicological information

carbon black respirable	LD50 Dermal	Rabbit	10 mL/kg	-
	LD50 Oral	Rat	>15400 mg/kg	-
29H,31H-phthalocyaninato(2-)-N29,N30, N31,N32 copper	LD50 Dermal	Rabbit	>3 g/kg	-
2-butoxyethyl acetate	LD50 Oral	Rat	5.1 g/kg	-
ethylbenzene	LD50 Oral	Rat	1.6 g/kg	-
	LD50 Dermal	Rabbit	1.48 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LC50 Inhalation Vapor	Rat	4000 ppm	4 hours
Solvent naphtha (petroleum), light aromatic	LD50 Oral	Rat	8400 mg/kg	-
butan-1-ol	LD50 Dermal	Rabbit	3.48 g/kg	-
	LD50 Oral	Rat	0.79 g/kg	-
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LC50 Inhalation Vapor	Rat	8000 ppm	4 hours
Stoddard solvent	LD50 Oral	Rat	>5 g/kg	-
1,2,4-trimethylbenzene	LD50 Oral	Rat	5 g/kg	-
	LC50 Inhalation	Rat	18000 mg/m3	4 hours
Zinc Salt	LD50 Oral	Rat	>0.552 g/kg	-
calcium molybdate	LD50 Oral	Rat	0.101 g/kg	-
toluene	LD50 Oral	Rat	636 mg/kg	-
	LD50 Dermal	Rabbit	8.39 g/kg	-
	LC50 Inhalation	Rat	49 g/m3	4 hours
mesitylene	LD50 Oral	Rat	5000 mg/kg	-
	LC50 Inhalation	Rat	24000 mg/m3	4 hours
styrene	LD50 Oral	Rat	1 g/kg	-
	LC50 Inhalation Vapor	Rat	2700 ppm	4 hours
2-methoxypropyl acetate	LD50 Oral	Rat	8532 mg/kg	-
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LC50 Inhalation	Rat	>5320 ppm	4 hours
methyl methacrylate	LD50 Oral	Rat	7872 mg/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
	LC50 Inhalation Vapor	Rat	78000 mg/m3	4 hours

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Defatting irritant

: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Target organs

: Contains material which causes damage to the following organs: brain, central nervous system (CNS), eye, lens or cornea.

Contains material which may cause damage to the following organs: blood, kidneys, lungs, the nervous system, liver, spleen, lymphatic system, gastrointestinal tract, upper respiratory tract, skin, bone marrow, ears, testes.

Carcinogenicity**Carcinogenicity**

: Contains material which may cause cancer. Risk of cancer depends on duration and level of exposure.

Classification

11 . Toxicological information

Product/ingredient name	ACGIH	IARC	NTP	OSHA
Titanium dioxide	A4	2B	-	-
xylene	A4	3	-	-
diiron trioxide	A4	3	-	-
carbon black respirable	A3	2B	-	-
Aluminium powder (stabilized)	A4	-	-	-
2-butoxyethyl acetate	A3	-	-	-
ethylbenzene	A3	2B	-	-
calcium molybdate	A3	-	-	-
toluene	A4	3	-	-
styrene	A4	2B	Reasonably anticipated to be a human carcinogen.	-
methyl methacrylate	A4	3	-	-

Carcinogen Classification code: ACGIH: A1, A2, A3, A4, A5
IARC: 1, 2A, 2B, 3, 4
NTP: Proven, Possible
OSHA: +
Not listed or regulated as a carcinogen: -

Teratogenicity

Teratogenicity : Contains material which may cause birth defects, based on animal data.

Reproductive toxicity

Developmental effects : Contains material which may cause developmental abnormalities, based on animal data.

Fertility effects : Contains material which may impair female fertility, based on animal data.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
n-butyl acetate	Acute LC50 18000 to 19000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
xylene	Acute LC50 3300 to 4093 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
ethylbenzene	Acute LC50 4200 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
	Acute LC50 5100 to 5700 ug/L Marine water	Fish - Atlantic silverside - Menidia menidia	96 hours
	Acute EC50 2930 to 4400 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 3300 ug/L Marine water	Fish - Atlantic silverside - Menidia menidia	96 hours
	Chronic NOEC 6800 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
butan-1-ol	Acute LC50 100 to 500 mg/L Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours

12 . Ecological information

	Acute EC50 1983000 to 2072000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
1,2,4-trimethylbenzene	Acute LC50 7720 to 8280 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
toluene	Acute LC50 5800 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
	Acute EC50 6000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 28000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
styrene	Acute LC50 4020 to 4990 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Acute LC50 9.1 to 16 ppm Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
	Acute EC50 4700 to 7400 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 4000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Chronic NOEC 5.1 to 16000 ppm Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
	Chronic NOEC 1900 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
methyl methacrylate	Acute LC50 130000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours

13 . Disposal considerations**Waste disposal**

- : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14. Transport information

	DOT	TDG	Mexico	IMDG
UN number	<input checked="" type="checkbox"/> N1263	<input checked="" type="checkbox"/> N1263	<input checked="" type="checkbox"/> N1263	<input checked="" type="checkbox"/> N1263
UN proper shipping name	<input checked="" type="checkbox"/> AINT	<input checked="" type="checkbox"/> AINT	<input checked="" type="checkbox"/> AINT	<input checked="" type="checkbox"/> AINT
Transport hazard class(es)	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Packing group	II	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Environmental hazards	<input checked="" type="checkbox"/> No.	<input checked="" type="checkbox"/> No.	<input checked="" type="checkbox"/> No.	<input checked="" type="checkbox"/> No.
Marine pollutant substances	<input checked="" type="checkbox"/> Not applicable.	<input checked="" type="checkbox"/> Not applicable.	Not applicable.	<input checked="" type="checkbox"/> Not applicable.
Product RQ (lbs)	<input checked="" type="checkbox"/> 10.32	Not applicable.	Not applicable.	Not applicable.
RQ substances	<input checked="" type="checkbox"/> (xylene, n-butyl acetate)	Not applicable.	Not applicable.	Not applicable.

Additional information

- DOT** : Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
- TDG** : None identified.
- Mexico** : None identified.
- IMDG** : None identified.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15. Regulatory information

- United States inventory (TSCA 8b)** : All components are listed or exempted.
- Australia inventory (AICS)** : At least one component is not listed.
- Canada inventory (DSL)** : At least one component is not listed.
- China inventory (IECSC)** : At least one component is not listed.
- Europe inventory (REACH)** : Please contact your supplier for information on the inventory status of this material.
- Japan inventory (ENCS)** : At least one component is not listed.
- Korea inventory (KECI)** : At least one component is not listed.
- New Zealand (NZIoC)** : Not determined.
- Philippines inventory (PICCS)** : At least one component is not listed.

United States

United States - TSCA 5(a)2 - Final significant new use rules:

- 2-ethoxyethyl acetate Listed
- 2-ethoxyethanol Listed

SARA 302/304: Hydrogen chloride

15. Regulatory information

ERCLA: Hazardous substances.: methyl methacrylate: 1000 lbs. (454 kg); styrene: 1000 lbs. (454 kg); [N,N,N',N',N'',N''-hexaethyl-29H,31H-phthalocyaninetrimethylaminato(2-)-N29,N30,N31,N32]copper: No RQ is being assigned to the generic or broad class.; toluene: 1000 lbs. (454 kg); Zinc, oxo tall-oil fatty acid aluminum complexes: No RQ is being assigned to the generic or broad class.; Naphthenic acids: 100 lbs. (45.4 kg); butan-1-ol: 5000 lbs. (2270 kg); ethylbenzene: 1000 lbs. (454 kg); 2-butoxyethyl acetate: No RQ is being assigned to the generic or broad class.; 29H, 31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper: No RQ is being assigned to the generic or broad class.; polychloro copper phthalocyanine: No RQ is being assigned to the generic or broad class.; Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, brominated chlorinated: No RQ is being assigned to the generic or broad class.; xylene: 100 lbs. (45.4 kg); n-butyl acetate: 5000 lbs. (2270 kg);

SARA 311/312 SDS Distribution - Chemical Inventory - Hazard Identification:

<u>Chemical name</u>	<u>CAS #</u>	<u>Acute</u>	<u>Chronic</u>	<u>Fire</u>	<u>Reactive</u>	<u>Pressure</u>
n-butyl acetate	123-86-4	Y	N	Y	N	N
Acrylic Resin	Not available.	Y	N	N	N	N
titanium dioxide	13463-67-7	N	Y	N	N	N
xylene	1330-20-7	Y	N	Y	N	N
diron trioxide	1309-37-1	N	N	N	N	N
2-methoxy-1-methylethyl acetate	108-65-6	Y	N	Y	N	N
ethyl 3-ethoxypropionate	763-69-9	Y	N	Y	Y	N
carbon black respirable	1333-86-4	N	Y	N	N	N
Aluminium powder (stabilized)	7429-90-5	N	N	N	Y	N
2-butoxyethyl acetate	112-07-2	Y	Y	Y	N	N
ethylbenzene	100-41-4	Y	Y	Y	N	N
Solvent naphtha (petroleum), light aromatic	64742-95-6	Y	N	Y	N	N
butan-1-ol	71-36-3	Y	N	Y	N	N
Stoddard solvent	8052-41-3	Y	N	Y	N	N
1,2,4-trimethylbenzene	95-63-6	Y	N	Y	N	N
quino[2,3-b]acridine-6,7,13,14(5H,12H)-tetrone	1503-48-6	Y	N	N	N	N
Resin acids and Rosin acids, calcium salts	9007-13-0	Y	N	N	N	N
calcium molybdate	7789-82-4	Y	N	N	N	N
toluene	108-88-3	Y	Y	Y	N	N
styrene	100-42-5	Y	Y	Y	Y	N
2-methoxypropyl acetate	70657-70-4	Y	Y	Y	N	N
methyl methacrylate	80-62-6	Y	Y	Y	Y	N
Product as-supplied :		Y	Y	Y	Y	N

SARA 313

<u>Supplier notification</u>	<u>Chemical name</u>	<u>CAS number</u>	<u>Concentration</u>
	bismuth vanadium tetraoxide	14059-33-7	15 - 40
	xylene	1330-20-7	10 - 30
	Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, brominated chlorinated	68512-13-0	7 - 13
	Aluminium powder (stabilized)	7429-90-5	1 - 5
	2-butoxyethyl acetate	112-07-2	1 - 5
	ethylbenzene	100-41-4	1 - 5
	butan-1-ol	71-36-3	1 - 5
	1,2,4-trimethylbenzene	95-63-6	0.5 - 1.5
	styrene	100-42-5	0.1 - 1

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Canada

15 . Regulatory information

WHMIS (Canada) : Class B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). Class D-1B: Material causing immediate and serious toxic effects (Toxic). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 3 **Health** : 3 **Reactivity** : 1

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 3 * **Flammability** : 3 **Physical hazards** : 1

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 3 **Flammability** : 3 **Instability** : 1

Date of previous issue : 6/17/2013.

Organization that prepared the MSDS : EHS

✔ Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

Material Safety Data Sheet



Date of issue 27 September
2013

Version 17

1. Product and company identification

Product name : REDUCER
Code : DT870
Supplier : PPG Industries, Inc.
One PPG Place,
Pittsburgh, PA 15272
Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
Technical Phone Number : 1-800-647-6050

2. Hazards identification

Emergency overview : DANGER!
FLAMMABLE LIQUID AND VAPOR. CAUSES RESPIRATORY TRACT AND EYE IRRITATION. MAY BE HARMFUL IF INHALED OR SWALLOWED. ASPIRATION HAZARD. CAN ENTER LUNGS AND CAUSE DAMAGE. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.
Keep away from flames, such as a pilot light, and any object that sparks, such as an electric motor. Keep away from heat. Do not smoke. Do not swallow. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Irritating to respiratory system. Can irritate eyes, nose, mouth and throat.
Ingestion : May be harmful if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage.
Skin : May cause skin dryness and irritation.
Eyes : Irritating to eyes.

Over-exposure signs/symptoms

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (Section 11)

3 . Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>%</u>
butanone	78-93-3	15 - 40
2-methoxy-1-methylethyl acetate	108-65-6	10 - 30
toluene	108-88-3	10 - 30
Ligroine	8032-32-4	10 - 30
Solvent naphtha (petroleum), light aliph.	64742-89-8	1 - 5
heptane	142-82-5	1 - 5
methylcyclohexane	108-87-2	1 - 5

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Extinguishing media

- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon oxides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Use spark-proof tools and explosion-proof equipment. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. Vapors are heavier than air and may spread along floors. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.
- Storage** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store above the following temperature: 120F / 49C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	IPEL
Butanone	TWA	200 ppm	200 ppm	200 ppm	200 ppm	Not established
	STEL	300 ppm	Not established	300 ppm	300 ppm	Not established
2-methoxy-1-methylethyl acetate	TWA	Not established	Not established	50 ppm	Not established	50 ppm
toluene	TWA	20 ppm	200 ppm Z	20 ppm	50 ppm S	Not established
	STEL	Not established	500 ppm Z A 300 ppm Z C	Not established	Not established	Not established
Ligroine	TWA	Not established	Not established	Not established	300 ppm	Not established
	STEL	Not established	Not established	Not established	400 ppm	Not established
heptane	TWA	400 ppm	500 ppm	400 ppm	400 ppm S	Not established
	STEL	500 ppm	Not established	500 ppm	500 ppm S	Not established
methylcyclohexane	TWA	400 ppm	500 ppm	400 ppm	400 ppm	Not established
	STEL	Not established	Not established	Not established	500 ppm	Not established

Key to abbreviations

A	= Acceptable Maximum Peak	S	= Potential skin absorption
ACGIH	= American Conference of Governmental Industrial Hygienists.	SR	= Respiratory sensitization
C	= Ceiling Limit	SS	= Skin sensitization
F	= Fume	STEL	= Short term Exposure limit values
IPEL	= Internal Permissible Exposure Limit	TD	= Total dust
OSHA	= Occupational Safety and Health Administration.	TLV	= Threshold Limit Value
R	= Respirable	TWA	= Time Weighted Average
Z	= OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances		

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

8 . Exposure controls/personal protection

- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Respiratory** : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

- Physical state** : Liquid.
- Flash point** : Closed cup: -5°C (23°F)
- Explosion limits** : Lower: 1.5%
- Color** : Not available.
- Odor** : Not available.
- pH** : Not available.
- Boiling/condensation point** : 37.22°C (99°F)
- Melting/freezing point** : Not available.
- Specific gravity** : 0.83
- Density (lbs / gal)** : 6.93
- Vapor pressure** : 5.5 kPa (41.4 mm Hg) [room temperature]
- Vapor density** : Not available.
- Volatility** : 100% (v/v), 100% (w/w)
- Evaporation rate** : 3.46 (butyl acetate = 1)
- Partition coefficient: n-octanol/water** : Not available.

10 . Stability and reactivity

- Stability** : Stable under recommended storage and handling conditions (see Section 7).
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
- Materials to avoid** : Reactive or incompatible with the following materials: oxidizing materials, strong acids, strong alkalis
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.

Product code DT870	Date of issue 27 September 2013	Version 17
Product name REDUCER		

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
butanone	LD50 Oral	Rat	2737 mg/kg	-
	LD50 Dermal	Rabbit	6480 mg/kg	-
	LC50 Inhalation Vapor	Rat	11243 ppm	4 hours
2-methoxy-1-methylethyl acetate	LD50 Oral	Rat	8532 mg/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
toluene	LD50 Oral	Rat	636 mg/kg	-
	LD50 Dermal	Rabbit	8.39 g/kg	-
	LC50 Inhalation	Rat	49 g/m3	4 hours
Ligroine	LC50 Inhalation	Rat	3400 ppm	4 hours
	LC50 Inhalation	Rat	103 g/m3	4 hours
heptane	LC50 Inhalation	Rat	103 g/m3	4 hours
methylcyclohexane	LD50 Oral	Rat	4 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Defatting irritant

: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Target organs

: Contains material which causes damage to the following organs: brain, central nervous system (CNS).

Contains material which may cause damage to the following organs: blood, kidneys, the nervous system, the reproductive system, liver, heart, peripheral nervous system, upper respiratory tract, skin, eye, lens or cornea.

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	NTP	OSHA
toluene	A4	3	-	-

Carcinogen Classification code:
 ACGIH: A1, A2, A3, A4, A5
 IARC: 1, 2A, 2B, 3, 4
 NTP: Proven, Possible
 OSHA: +
 Not listed or regulated as a carcinogen: -

Teratogenicity

Developmental effects : Contains material which may cause developmental abnormalities, based on animal data.

Fertility effects : Contains material which may impair female fertility, based on animal data.

12 . Ecological information

Environmental effects : Water polluting material. May be harmful to the environment if released in large quantities.

Aquatic ecotoxicity

12 . Ecological information

Product/ingredient name	Result	Species	Exposure
butanone	Acute LC50 3220000 to 3320000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Acute LC50 >400 ppm Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
	Acute LC50 >520000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 400 ppm Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
	Chronic NOEC <70000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
toluene	Acute LC50 5800 ug/L Fresh water	Fish - Rainbow trout, donaldson trout - Oncorhynchus mykiss	96 hours
	Acute EC50 6000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 28000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	1263	PAINT RELATED MATERIAL	3	II	-
IMDG	1263	PAINT RELATED MATERIAL. Marine pollutant (heptane)	3	II	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Product code DT870	Date of issue 27 September 2013	Version 17
Product name REDUCER		

14 . Transport information

DOT	1263	PAINT RELATED MATERIAL	3	II	Reportable quantity 5268.7 lbs / 2392 kg [763.27 gal / 2889.3 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
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PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: butanone: 5000 lbs. (2270 kg); toluene: 1000 lbs. (454 kg);

15 . Regulatory information

- United States inventory (TSCA 8b)** : All components are listed or exempted.
Australia inventory (AICS) : All components are listed or exempted.
Canada inventory (DSL) : All components are listed or exempted.
China inventory (IECSC) : All components are listed or exempted.
Europe inventory (REACH) : Please contact your supplier for information on the inventory status of this material.
Japan inventory (ENCS) : All components are listed or exempted.
Korea inventory (KECI) : All components are listed or exempted.
New Zealand (NZIoC) : At least one component is not listed.
Philippines inventory (PICCS) : All components are listed or exempted.

United States

U.S. Federal regulations :

SARA 302/304: No products were found.

CERCLA: Hazardous substances.: butanone: 5000 lbs. (2270 kg); toluene: 1000 lbs. (454 kg);

SARA 311/312 SDS Distribution - Chemical Inventory - Hazard Identification:

<u>Chemical name</u>	<u>CAS #</u>	<u>Acute</u>	<u>Chronic</u>	<u>Fire</u>	<u>Reactive</u>	<u>Pressure</u>
butanone	78-93-3	Y	N	Y	N	N
2-methoxy-1-methylethyl acetate	108-65-6	Y	N	Y	N	N
toluene	108-88-3	Y	Y	Y	N	N
Ligroine	8032-32-4	Y	N	Y	N	N
Solvent naphtha (petroleum), light aliph.	64742-89-8	Y	N	N	N	N
methylcyclohexane	108-87-2	Y	N	Y	N	N
heptane	142-82-5	Y	N	Y	N	N
Product as-supplied :		Y	Y	Y	N	N

SARA 313

Supplier notification : Chemical name : toluene CAS number : 108-88-3 Concentration : 10 - 30

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada

Product code DT870	Date of issue 27 September 2013	Version 17
Product name REDUCER		

15 . Regulatory information

WHMIS (Canada) : Class B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 4 **Health** : 2 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability** : 4 **Physical hazards** : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability** : 4 **Instability** : 0

Date of previous issue : 8/11/2013.

Organization that prepared the MSDS : EHS

✔ Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

MATERIAL SAFETY DATA SHEET

DATE OF PREPARATION: June 6, 1998 EMERGENCY TELEPHONE #: (954) 565-8475

UPDATE OF MSDS September 9, 2009

AFTER HOURS: 800-424-9300

SECTION I PRODUCT IDENTIFICATION

Product Name: DEBOND MARINE FORMULA
Product Number:
Product Class: AEROSOL
D.O.T. Shipping Class: ORM-D Consumer Commodity

SECTION II HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	OCCUPATIONAL EXPOSURE LIMITS		NFPA HEALTH RATING	CAS#
		TLV	PEL		
PROPRIETARY BLEND					
TRADE SECRET: As defined in Hazard Communication Act 29 CFR 1910.1200 Para 1 (i) end Appendix D to CFR 1910.1200 glycol					
Terpenes Solvents	60-70 %	N/E	N/E	0	88917-22-0
Terpenes 110111	5-10 %	5mg/M3	100PPM	1	138-86-03
Nonionic Surfactant	1-3 %	N/E	N/E	0	5989-27-05
PROPELLANT A-70 Hydrocarbon Blend 45 PSIG @ 70 °F	5-10 %	N/E	N/E	1	127087-87-55 75-28-5/74-9-66
N/E = Not Established					

SECTION III PHYSICAL DATA

Boiling Range: 400° F
Vapor Density: < 1
Percentage Volatile by weight: 99
Evaporation Rate: SLOW
Weight per gallon: >8.168 lbs.
Specific Gravity: 1.021
Appearance: Clear Liquid
Odor: Slight ether like odor, citrus
VOC CONTENT 267.7 GRAMS PER LITER
26% VOC
Test Method SCAQMD
Rule 443.1
CARB/OTC Title 17 SC 8.5

SECTION IV FIRE AND SAFETY EXPLOSION HAZARD DATA

Flammability Classification OSHA: Flammable
Shipping Classification D.O.T.: ORM-D
Flash Point: 150° F
Flammable Levels in Air: Lower: N/A Upper: N/A
Extinguishing Media: Foam, Water Fog, CO₂

Unusual Fire and Explosion Hazards: Do not expose to heat or flame or store above 120° F as high internal pressures may cause leaking. This material may produce a floating fire hazard.

Special Fire Fighting Procedures: Do not direct a solid stream of water or foam into hot burning spots may cause frothing and increase fire intensity.

SECTION V HEALTH HAZARD DATA

PRIMARY ROUTE (S) OF ENTRY: Dermal, Inhalation

EMERGENCY AND FIRST AID PROCEDURE:

EYES: Flush eyes with large quantities of water to speed recovery. Face subject into wind or forced air source such as fans or air conditioning outlet.

SKIN CONTACT: Wash affected area with soap and water. Use no creams or salves.

INHALATION: No danger exists for asphyxiation. Remove persons to fresh air.

INGESTION: Severe burning heartburn sensation may cause nausea. Seek medical attention if nausea persists.

PHYSIOLOGICAL EFFECTS AND HEALTH INFORMATION

EYE EFFECTS: Tearing and redness may occur. Has been found to have minor non persistent eye irritation, to be non toxic, and not to cause dermatitis.

SECTION VI REACTIVITY DATA

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID: Heat, open flames, electrical and static discharges.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong Acids, Alkalies and Oxidizers.

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Ventilate area. Remove all possible sources of ignition. Avoid prolonged breathing of vapors. Confine spill with inert absorbent. Wear protective equipment during clean up.

WASTE DISPOSAL: Incinerate in an approved incinerator or dispose of in accordance with Local, State and Federal Regulations.

SECTION VIII SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION: Use NIOSH/MSHA approved Chemical/Mechanical type filter system to remove a combination or particles, gas & vapor. Use air line if necessary.

VENTILATION: Use adequate ventilation in volume and pattern to keep LEL and TLV's in Section II below recommended level to produce explosion or fire. General mechanical ventilation should comply with OSHA 1910.94.

PROTECTIVE GLOVES: Use rubber gloves.

EYE PROTECTION: Safety glasses or goggles with splash guards or side shields.

OTHER PROTECTIVE EQUIPMENT: Prevent prolonged skin contact to contaminated clothing.

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in a cool dry area away from sources of ignition. When storing large quantities, store in building designed and protected against fire.

DO NOT STORE IN DIRECT SUNLIGHT OR ABOVE 120^o F.

OTHER PRECAUTIONS: Do not take internally. If ingested, DO NOT INDUCE VOMITING. Consult a physician.

THE INFORMATION CONTAINED HEREIN IS BASED ON TECHNICAL DATA WHICH WE BELIEVE TO BE RELIABLE, HOWEVER, SINCE THE CONDITIONS UNDER WHICH THIS INFORMATION MAY BE APPLIED ARE BEYOND OUR CONTROL WE CAN ASSUME NO LIABILITY FOR RESULTS OF ITS APPLICATION. THIS INFORMATION SHOULD BE USED ONLY BY PERSONS HAVING SUFFICIENT TECHNICAL SKILL TO MAKE INFORMED JUDGEMENTS REGARDING ITS APPLICATION.



Self-Polishing Copolymer Antifoulant

- High Quality Multi-Season Performance
- Self-Polishing Coating Eliminates Heavy Buildup of Bottom Paint
- May Be Taken In and Out of Water Without Affecting Properties
- Harder Self-Polishing for Higher Speeds



CUKOTE Self-Polishing Premium Performance

3400 Series



Product Description

Cukote's high loading of cuprous oxide makes this formulation a top performer, even in the most severe fouling areas. As an abrasive, self-polishing coating, there is no buildup of bottom paint over time. Your hull's underwater surface remains smooth and clean. Cukote copolymer can also withstand removal from water without affecting its antifouling properties. Cukote is the premium self-polishing antifouling paint that has established the standard in the industry.

Product Information

Colors Available: Red 3441, Blue 3442, Green 3443, Black 3445, Dark Blue 3430, Shark White 3410, Burgundy 3428, Brown 3432, Teal 3434

Finish/Sheen: Semi-Gloss

Converter: One Pack

Copper Content: 47.57% All Colors

Volume Solids: 54% ($\pm 2\%$)

Mix Ratio: One Pack

Shipping Weight: 18-20 Lbs./Gal.

Flash Point: 100°F

VOC: 298 Grams/Liter

Typical Film Thickness:

Pleasure Craft: 2.5 mils dry film thickness (DFT) per coat by roller application (5.0 mils wet film thickness (WFT))

Commercial Marine: Average 4.0-5.0 mils DFT per coat by spray application (7.5-9.0 mils WFT)

Theoretical Coverage: 173 Sq.Ft. @ 5.0 mils DFT, 346 Sq. Ft. @ 2.5 mils

Recommended Coats: 2 Full Coats with 3 at the water line and other high wear areas, depending on intended service.

Features and Benefits

- Self Polishing Ablative with Multi-Season Performance on Both Pleasure Craft, Coastal and Deep Sea Vessels
- Harder Ablative Finish Makes Cukote Ideal for Fast Moving Vessels including: Pleasure Craft Power Boats, High Speed Transports, Supply Vessels, and Ferries
- May Be Taken In and Out of the Water Without Affecting Antifouling Characteristics
- Does Not Contain Any Organotin Compounds (TBT)
- May Be Used on All Steel, Fiberglass, and Wood Vessels Below the Waterline That Have Been Planned Drydockings of Less Than Three Years

Application Controls

Method: Airless and Conventional Spray, Solvent Resistant Rollers and Brushes.

Dry Times and Overcoating Intervals:

Pleasure Craft Drying time in Hours

Substrate Temp.	Touch	Min	Max	Launch
41°F (5°C)	N/A	N/A	N/A	N/A
73°F (23°C)	2 hr	1 hr	N/A	12 hrs
95°F (35°C)	1 hr	1 hr	N/A	12 hrs

Limitations: Apply in good weather when air and surface temperatures are above 50°F (10°C). Surface temperature must be a least 50°F (10°C) above dew point. For optimum application properties, bring material to 70-80°F (21-27°C) temperature range prior to mixing and application. Unmixed material (in closed containers) should be maintained in protected storage between 40° and 100°F (4-38°C). Prolonged atmospheric exposure of this product may detract from performance. Technical and application data herein is for the purpose of establishing a general guideline of the coating and proper coating application procedures. As application, environmental and design factors can vary significantly due care should be exercised in the selection, verification of performance, and use of the coating.

NEW NAUTICAL COATINGS, INC.

14805 49th Street North • Clearwater, FL 33762 • 727.523.8053 • 800.528.0997 • FAX 727.523.7325 www.SeaHawkPaints.com

Surface Preparation

Paint only clean, dry surfaces. Remove all grease, oil, wax, or other foreign material by solvent or detergent washing. (SSPC-SPI)

Compatibility: For pleasure craft applications, please refer to our [Sea Hawk Compatibility Chart](#) to ensure compatibility when applying Cukote antifouling paint over existing bottom paint.

Previously Painted Surfaces: Cukote is suitable for this substrate. For correct procedures please refer to the [Application Guidelines for Fiberglass/Gelcoat](#).

Fiberglass or Vinyl Ester Hulls: Cukote is suitable for this substrate. For correct procedures please refer to the [Application Guidelines for Fiberglass/Gelcoat](#).

Wood Surfaces: New Work - Sand the wood surface with 80 grit sandpaper, remove the sanding dust with Sea Hawk S-90 Cleaner, allow to dry and apply the first coat of Cukote bottom paint. Reduce the first coat (only) 20% with Sea Hawk 2033 Thinner to maximize surface penetration. Next, apply whatever seam compound if needed, allow to dry in accordance with the product label and apply two more coats of Cukote without any Thinner reduction.

Aluminum: Cukote Antifouling paint may be used on an aluminum hull only when used with the proper barrier coat system described in [Technical Bulletin AL1284](#). Cukote is not to be used on bare aluminum.

Steel Vessels: Sea Hawk Cukote antifouling paint is normally used as part of a paint system for underwater hull areas on steel vessels. Nominally, Cukote is applied over a properly cleaned existing surface of another antifouling paint or sealer. The surface must be clean and dry prior to application, free of all surface contamination. We highly recommend the hull bottom be high pressure water washed immediately upon haul out with 2,500-3,000 psi clean fresh water. Some areas may need to be cleaned in accordance with SSPC-SP-1 Solvent Cleaning to ensure all oils, grease, and other contaminants are removed. Please refer to additional data below and the section on recommended systems for steel below.

Additional Data For Painting Steel Hulls: If the surface to be painted is also to be repaired with an epoxy primer system, we recommend the area first be grit blasted to SSPC-SP-10 'near white metal', cleaned free of dust and blast media and primed in accordance with the primer system specifications. Please refer to the specified primer data sheet for application details. Make sure the first coat is applied within the proper over coating window of the last coat of epoxy primer which is normally while the epoxy is still tacky but cannot be removed with the thumb. Apply at least two coats of antifouling for best performance.

Limitations:

Apply in good weather when air and surface temperatures are above 50°F (10°C). Surface temperature must be at least 50°F (10°C) above dew point. For optimum application properties, bring material to 70-80°F (21-27°C) temperature range prior to mixing and application. Unmixed material (in closed containers) should be maintained in protected storage between 40° and 100°F (4-38°C). Prolonged atmospheric exposure of this product may detract from performance. Technical and application data herein is for the purpose of establishing a general guideline of the coating and proper coating application procedures. As application, environmental and design factors can vary significantly due care should be exercised in the selection, verification of performance, and use of the coating.

CUKOTE

*Self-Polishing
Premium Performance*

3400 Series



Application Data

Mixing: Cukote antifouling paint contains a moderate concentration of copper oxide and may have settled in transit. Product must be thoroughly mixed with power mixer/shaker until uniform.

Additives: You may use up to two pints of BioBoost paint additive per gallon.

Induction Time: Not Applicable

Thinning: If necessary, maximum 10% Sea Hawk 2033, 2035

Cleaning: Sea Hawk 2033, 2035, Xylene

Pot Life: Not Applicable

Brush/Rolling: Solvent Resistant Roller Cover 3/8" pile (nap), smooth to medium. Prewash roller cover to remove loose fibers prior to use.

Airless Spray: Minimum 33:1-2 GPM ratio pump; "0.017-0.026" orifice tip; 3/8" ID high-pressure material hose; 90 PSI line pressure; 60 mesh filter.

Conventional Spray: Please contact your Sea Hawk representative for more specific information.

Safety: Prior to use, obtain and consult the "Material Safety Data Sheet" of this product for health and safety information. Read and observe all precautionary notices on container labels.

BELS/SMITH
P.O. Box 20901 Richmond, CA 94803
510-222-1520

MATERIAL SAFETY DATA SHEET

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: **CLEAR PENETRATING EPOXY SEALER** **Cold Weather Formula**
EITHER PART A OR PART B

INFOTRAC 24 HOUR EMERGENCY PHONE NO.: 1-800-535-5053

DISTRIBUTOR: BELS/SMITH
P.O. Box 20901 Richmond, CA 94803
510-222-1520

MANUFACTURER: SMITH & CO.
5100 CHANNEL AVENUE, RICHMOND CA 94804

REVISED: 12/07/2009

SECTION II - INGREDIENTS

Hazardous Ingredients	CAS #	OSHA PEL	ACGIH TL	WEIGHT%
Aromatic Hydrocarbon	64742-95-6	100 PPM (TWA)	100 PPM (5MIN)	< 50
Xylene (Xylol)	1330-20-7	100 PPM (TWA)	100 PPM (TWA)	< 50
Toluene (Toluol)	108-88-3	100 PPM (TWA)	100 PPM (TWA)	< 50
Isopropyl Alcohol (2-Propanol)	67-63-?	400 PPM (TWA)	400 PPM (TWA)	< 50
2-Butanone	78-93-3	200 PPM (TWA)	200 PPM (TWA)	< 50
4-Methyl 2-Pentanone	108-10-1	100 PPM (TWA)	75 PPM (TWA)	< 50
2-Heptanone	110-43-0	100 PPM (TWA)	50 PPM (TWA)	< 50
4-Methyl 2-hexanone	110-12-3	50 PPM (TWA)	50 PPM (TWA)	< 50
2-Pentanone	107-87-9	200 PPM (TWA)	250 PPM (TWA)	< 50
Dipropylene Glycol Monomethylether	034590-94-8	100 PPM (TWA)	150 PPM (TWA)	< 50
Diisobutyl Ketone	108-83-8	25 PPM (TWA)	25 PPM (TWA)	< 50
Ethyl Acetate	141-78-6	N/A	400 PPM (TWA)	< 50
Isobutyl Acetate	110-19-0	N/A	150 PPM (TWA)	< 50
Ethyl 3-Ethoxy Propionate	763-69-9	N/A	50 PPM (TWA)	< 50
Propylene Glycol Monomethylether Acetate	108-65-6	N/A	1000 PPM (TWA)	< 50
Hexyl Acetate	7789-99-3	N/A	50 PPM (TWA)	< 50
Isobutyl Isobutyrate	97-85-8	100 PPM (TWA-MFGR)	N/A	< 50
Diacetone Alcohol	123-42-2	50 PPM (TWA)	50 PPM (TWA)	< 50
Cyclohexanone	108-94-1	50 PPM (TWA)	25 PPM (skin)	< 50

Suspected Cancer Agent: NO

SECTION III - HAZARDS IDENTIFICATION

*** EMERGENCY OVERVIEW ***

DANGER!

Flammable liquid
Causes severe skin and eye irritation or burns.
May cause irritation of respiratory tract.
Clear liquid with solvent odor. Part A has an amber tint. Part B is relatively colorless.

SKIN CONTACT:

Causes severe skin irritation or burns. Not considered toxic by skin absorption but prolonged exposure may result in absorption of harmful amounts.

EYE CONTACT:

Causes severe eye irritation or burns. May cause permanent visual impairment.

INHALATION:

Excessive inhalation can cause respiratory irritation, dizziness, nausea, headache, unconsciousness, or asphyxiation.

INGESTION:

May cause gastrointestinal irritation, burns or ulceration. May cause nausea, vomiting or diarrhea.

CHRONIC EFFECTS:

Dermatitis, chemical pneumonia, central nervous system excitation, injury to bone marrow, blood, liver, kidneys, heart, testes, apprehensiveness, memory impairment, tingling of skin, tremors, impaired lung function, weakness, vertigo. May aggravate existing skin, eye, lung, kidney, liver, heart, blood, and nervous system conditions.

OTHER HEALTH EFFECTS:

None known to Smith & Co.

PRIMARY ROUTES OF EXPOSURE: Inhalation, skin.

SECTION IV - FIRST AID MEASURES

SKIN CONTACT:

Immediately flush with water for at least 15 minutes while removing contaminated clothing. Call a physician.

EYE CONTACT:

Immediately flush with water for at least 15 minutes. Call physician.

INHALATION:

Move to fresh air. If breathing is labored, administer oxygen. If breathing has stopped, administer artificial respiration and seek emergency medical assistance.

INGESTION:

Do not induce vomiting. Give a large quantity of milk or water. Do not give fluids to an unconscious person. Call a physician.

SECTION V - FIRE FIGHTING MEASURES

FLASH POINT: 52°F/>11°C Tag closed cup

LEL: Not determined UEL: Not determined

AUTOIGNITION TEMP:
Not determined

RECOMMENDED EXTINGUISHING MEDIA:

Water spray, foam, carbon dioxide, dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES:

Cool fire-exposed containers with water. When fire fighting, wear full protective equipment including self-contained breathing apparatus.

UNUSUAL FIRE OR EXPLOSION HAZARDS:

Heating may cause pressure build-up and possible rupture of the container. May produce hazardous fumes or hazardous decomposition products.

HAZARDOUS COMBUSTION PRODUCTS:

Carbon monoxide and carbon dioxide, oxides of nitrogen, partly decomposed organic compounds.

SECTION VI - ACCIDENTAL RELEASE MEASURES

STEPS TO TAKE IN CASE OF SPILL OR LEAK:

Remove ignition sources. Add dry material to absorb spill. (if large spill, dike to contain). Using recommended protective and explosion-proof equipment, pick up and containerize for recovery or disposal. Flush area with water, collect for disposal.

SECTION VII - HANDLING AND STORAGE

Do not store or handle product in the presence of heat, sparks or open flame. Ground and bond container when transferring.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION:

Chemical goggles.

SKIN PROTECTION:

Rubber or plastic gloves.

RESPIRATORY PROTECTION:

Not applicable with local exhaust.

Respirator with organic vapor cartridge.

ENGINEERING CONTROLS:

Local exhaust.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

APPEARANCE: Clear liquid with solvent odor. Part A has an amber tint, Part B is relatively colorless.

ODOR: Solvent

PH: Not determined

MELTING POINT: Not determined

BOILING POINT: Not determined

SPECIFIC GRAVITY: 0.75-0.9 g/cc

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES - **CONTINUED**

SOLUBILITY IN WATER: Appreciable (>10%)
PERCENT VOLATILES (by weight): Not determined
VAPOR DENSITY: Heavier than air
VAPOR PRESSURE: < 30 MM Hg
EVAPORATION RATE (N-BUTYL ACETATE=1): Not determined
VOC CONTENT (EPA Method 24): Not determined

SECTION X - STABILITY AND REACTIVITY

STABILITY:

Normal stable

HAZARDOUS POLYMERIZATION:

Will not occur.

INCOMPATIBLE MATERIALS:

Acid and/or base.

CONDITIONS TO AVOID:

Heating may cause pressure build-up and possible rupture of the container.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon monoxide and carbon dioxide, oxides of nitrogen, partly decomposed organic compounds.

SECTION XI - TOXICOLOGICAL INFORMATION

No toxicity information available or testing conducted on this product. Any health or toxicological information included in Section III was based on data associated with the components or an analogue product.

SECTION XII - ECOLOGICAL INFORMATION

ECOLOGICAL TOXICITY:

Not determined.

ENVIRONMENTAL FATE:

Not determined.

SECTION XIII - DISPOSAL CONSIDERATIONS

This product, if disposed as shipped, meets EPA criteria of a hazardous waste as specified in 40 CFR 261 on the basis of its ignitability. Dispose of in a licensed hazardous waste facility in accordance with applicable laws.

SECTION XIV - TRANSPORTATION INFORMATION

PROPER SHIPPING NAME: Paint

UN/NA: UN 1263

DOT HAZARD CLASS: 3

EMERGENCY RESPONSE GUIDE NUMBER: 128

PACKING GROUP: II

SECTION XV - REGULATORY INFORMATION

TSCA INVENTORY STATUS:

This product and/or all of its components are included on the TSCA inventory of chemical substances.

TSCA 12(b) COMPONENTS:

0)

SARA 311/312 HAZARD CATEGORIES:

Acute, chronic, fire.

SARA 313 TOXIC CHEMICALS:

NONE

SARA 302 EXTREMELY HAZARDOUS SUBSTANCES:

None

CERCLA HAZARDOUS SUBSTANCES:

NONE

CALIFORNIA PROPOSITION 65 COMPONENTS:

None deliberately added. However, Detectable amounts of chemicals known to the State of California to cause cancer, birth defects or other reproductive harm may be found in this material, its containers, or the paper labels or the packing materials associated therewith.

(California State Health & Safety Code Section 25249.6)

This product is inherently unsafe. It cannot be made safe.

(California State Product Liability Warning (Business and Professions Code, Section 1714.45)).

SECTION XVI - OTHER INFORMATION

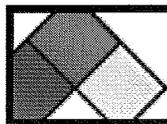
HMIS RATINGS:

Health: 3 FLAMMABILITY: 3 REACTIVITY: 1

NFPA RATINGS:

HEALTH: 3 FLAMABILITY: 3 REACTIVITY: 1 OTHER: None.

11-7-06



Get the most comprehensive
MSDS/HazCom program on the market!

Material Safety Data Sheet

SECTION I - Material Identity
 SECTION II - Manufacturer's Information
 SECTION III - Physical/Chemical Characteristics
 SECTION IV - Fire and Explosion Hazard Data
 SECTION V - Reactivity Data
 SECTION VI - Health Hazard Data
 SECTION VII - Precautions for Safe Handling and Use
 SECTION VIII - Control Measures
 SECTION IX - Label Data
 SECTION X - Transportation Data
 SECTION XI - Site Specific/Reporting Information
 SECTION XII - Ingredients/Identity Information

SECTION I - Material Identity

Item Name	
Part Number/Trade Name	COLORPLACE (R) SPRAY ENAMEL (20007- 20018, 20025, 20028, 20036)
National Stock Number	8010L4161932027
CAGE Code	1PFF0
Part Number Indicator	A
MSDS Number	191591
HAZ Code	B

SECTION II - Manufacturer's Information

Manufacturer Name	COLOR PLACE (DIST. WAL-MART STORES, INC)
City	BENTONVILLE
State	AR
Country	US
Zip Code	72716
Emergency Phone	216-566-2917
Information Phone	216-566-2902

MSDS Preparer's Information

Date MSDS Prepared/Revised	17APR00
Active Indicator	Y

Alternate Vendors

SECTION III - Physical/Chemical Characteristics

Appearance/Odor	AEROSOL PAINT
Boiling Point	<0-395F
Melting Point	NA
Vapor Pressure	NR
Vapor Density	> AIR
Specific Gravity	0.81
Evaporation Rate	> ETHER
Solubility in Water	NA
Percent Volatiles by Volume	94
Container Type	R
Container Pressure Code	2
Temperature Code	4
Product State Code	L

SECTION IV - Fire and Explosion Hazard Data

Flash Point	0
Flash Point Method	PMCC
Lower Explosion Limit	1.0
Upper Explosion Limit	12.8
Extinguishing Media	CARBON DIOXIDE, DRY CHEMICAL, FOAM
Special Fire Fighting Procedures	FULL PROTECTIVE EQUIPMENT INCLUDING SCBA SHOULD BE USED. WATER SPRAY MAY BE INEFFECTIVE. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE. WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTOIGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT
Unusual Fire/Explosion Hazards	ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS, AND OPEN FLAME. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. APPLICATION TO HOT SURFACES REQUIRES SPECIAL PRECAUTIONS. DURING EMERGENCY CONDITIONS OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD.

SYMPTOMS MAY NOT BE
IMMEDIATELY APPARENT. OBTAIN
MEDICAL ATTENTION

SECTION V - Reactivity Data

Stability	N/K
Stability Conditions to Avoid	NONE KNOWN
Materials to Avoid	NONE KNOWN
Hazardous Decomposition Products	BY FIRE - CARBON DIOXIDE, CARBON MONOXIDE
Hazardous Polymerization	NO
Polymerization Conditions to Avoid	WILL NOT OCCUR

SECTION VI - Health Hazard Data

Route of Entry: Skin	YES
Route of Entry: Ingestion	NO
Route of Entry: Inhalation	YES
Health Hazards - Acute and Chronic	IRRITATION OF EYES, SKIN AND RESPIRATORY SYSTEM. MAY CAUSE NERVOUS SYSTEM DEPRESSION. EXTREME OVEREXPOSURE MAY RESULT IN UNCONSCIOUSNESS AND POSSIBLY DEATH
Carcinogenity: NTP	NO
Carcinogenity: IARC	POSSIBLE
Carcinogenity: OSHA	NO
Explanation of Carcinogenity	CARBON BLACK IS LISTED AS POSSIBLE CARCINOGEN BY IARC
Symptoms of Overexposure	[[INHAL] IRRITATION OF RESPIRATORY SYSTEM. MAY CAUSE NERVOUS SYSTEM DEPRESSION. EXTREME OVEREXPOSURE MAY RESULT IN UNCONSCIOUSNESS AND POSSIBLY DEATH. HEADACHE, DIZZINESS, NAUSEA, AND LOSS OF COORDINATION. [EYE/SKIN] REDNESS AND ITCHING OR BURNING SENSATION MAY INDICATE EYE OR EXCESSIVE SKIN EXPOSURE
Medical Cond. Aggrevated by Exposure	NR
Emergency/First Aid Procedures	[[INHAL] REMOVE FROM EXPOSURE. RESTORE BREATHING. KEEP WARM AND QUIET. [SKIN] WASH AFFECTED AREA THOROUGHLY WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND LAUNDER BEFORE RE-USE. [EYE] FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR 15 MIN. GET MED ATTEN. [INGEST] NEVER GIVE

ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. DO NOT INDUCE VOMITING. GIVE SEVERAL GLASSES OF WATER. GET MED ATTEN

SECTION VII - Precautions for Safe Handling and Use

Steps if Material Released/Spilled	REMOVE ALL SOURCES OF IGNITION. VENTILATE AND REMOVE WITH INERT ABSORBENT
Waste Disposal Method	WASTE FROM THESE PRODUCTS MAY BE HAZARDOUS AS DEFINED UNDER THE RCRA (40 CFR 261). WASTE MUST BE TESTED FOR IGNITABILITY TO DETERMINE THE APPLICABLE EPA HAZARDOUS WASTE NUMBERS. DO NOT INCINERATE. DEPRESSURIZE CONTAINER. DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS
Handling and Storage Precautions	KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME. VAPORS WILL ACCUMULATE READILY AND MAY IGNITE EXPLOSIVELY. DURING USE AND UNTIL ALL VAPORS ARE GONE. KEEP AREA VENTILATED - DO NOT SMOKE. EXTINGUISH ALL FLAMES, PILOT LIGHTS, AND HEATERS. TURN OFF STOVES, ELECTRIC TOOLS, APPLIANCES, ANY OTHER SOURCE OF IG
Other Precautions	USE APPROVED BONDING AND GROUNDING PROCEDURES. CONTENTS UNDER PRESSURE. HEAT FROM SUNLIGHT, RADIATORS, STOVES, HOT WATER, AND OTHER HEAT SOURCES COULD CAUSE CONTAINER TO BURST. DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN

SECTION VIII - Control Measures

Respiratory Protection	IF PERSONAL EXPSOURE CANNOT BE CONTROLLED BELOW APPLICABLE LIMITS BY VENTILATION, WEAR A PROPERLY FITTED ORGANIC VAPOR/PARTICULATE RESPIRATOR APPROVED BY NIOSH/MSHA FOR PROTECTION AGAINST MATERIALS
Ventilation	LOCAL EXHAUST PREFERABLE. GENERAL EXHAUST ACCEPTABLE IF THE EXPOSURE TO MATERIALS IS

Protective Gloves	MAINTAINED BELOW PEL
Eye Protection	CHEMICAL RESISTANT GLOVES
	WEAR SAFETY SPECTACLES WITH UNPERFORATED SIDESHIELDS
Other Protective Equipment	NR
Work Hygenic Practices	WASH THOROUGHLY AFTER HANDLING
Supplemental Health/Safety Data	INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL

SECTION IX - Label Data

Protect Eye	YES
Protect Skin	YES
Protect Respiratory	YES
Chronic Indicator	YES
Contact Code	SLIGHT
Fire Code	UNKNOWN
Health Code	UNKNOWN
React Code	UNKNOWN
Specific Hazard and Precaution	TARGET ORGANS: LIVER, URINARY SYSTEM, BLOOD FORMING SYSTEM, CARDIOVASCULAR SYSTEM, REPRODUCTIVE SYSTEM

SECTION X - Transportation Data

SECTION XI - Site Specific/Reporting Information

Volatile Organic Compounds (P/G)	3.92
Volatile Organic Compounds (G/L)	469.7682

SECTION XII - Ingredients/Identity Information

Ingredient #	01
Ingredient Name	PROPANE (15-18%)
CAS Number	74986
Proprietary	NO
Percent	18
Ingredient #	02
Ingredient Name	BUTANE (15-17%)
CAS Number	106978
Proprietary	NO
Percent	17

OSHA PEL	800 PPM
ACGIH TLV	800 PPM
Ingredient #	03
Ingredient Name	SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPH. (7-15%)
CAS Number	64742898
Proprietary	NO
Percent	15
OSHA PEL	100 PPM
ACGIH TLV	100 PPM
Ingredient #	04
Ingredient Name	BENZENE, METHYL- (11-45%)
CAS Number	108883
Proprietary	NO
Percent	45
OSHA PEL	100 PPM
ACGIH TLV	100 PPM
Ingredient #	05
Ingredient Name	BENZENE, 1,3,5-TRIMETHYL- (0- 1%)
CAS Number	108678
Proprietary	NO
Percent	1
OSHA PEL	25 PPM
ACGIH TLV	25 PPM
Ingredient #	06
Ingredient Name	BENZENE, 1,2,4-TRIMETHYL- (0- 2%)
CAS Number	95636
Proprietary	NO
Percent	2
OSHA PEL	25 PPM
ACGIH TLV	25 PPM
Ingredient #	07
Ingredient Name	ETHANOL, 2-BUTOXY- (0-3%)
CAS Number	111762
Proprietary	NO
Percent	3
OSHA PEL	25 PPM
ACGIH TLV	25 PPM
Ingredient #	08
Ingredient Name	2-PROPANONE (6-24%)
CAS Number	67641
Proprietary	NO
Percent	24
OSHA PEL	1000 PPM
ACGIH TLV	500 PPM
Ingredient #	09

Ingredient Name	*TALC (0-14%)
CAS Number	14807966
Proprietary	NO
Percent	14
OSHA PEL	2 MG/M3
ACGIH TLV	2 MG/M3
Ingredient #	10
Ingredient Name	*TITANIUM DIOXIDE (0-8%)
CAS Number	13463677
Proprietary	NO
Percent	8
OSHA PEL	10 MG/M3
ACGIH TLV	10 MG/M3
Ingredient #	11
Ingredient Name	*CARBON BLACK (0-0.4%)
CAS Number	1333864
Proprietary	NO
Percent	0.4
OSHA PEL	3.5 MG/M3
ACGIH TLV	3.5 MG/M3
Ingredient #	12
Ingredient Name	2-PROPANOL, 1-BUTOXY- (IN 20014 ONLY)
CAS Number	5131668
Proprietary	NO
Percent	2
OSHA PEL	NE
ACGIH TLV	NE
Ingredient #	13
Ingredient Name	* AMORPHOUS PRECIPITATED SILICA (IN 20018 ONLY)
CAS Number	112926008
Proprietary	NO
Percent	2
OSHA PEL	6 MG/M3
ACGIH TLV	10 MG/M3
Ingredient #	14
Ingredient Name	SOLVENT NAPHTHA, PETROLEUM, MEDIUM ALIPH. (IN 20012 ONLY)
CAS Number	64742887
Proprietary	NO
Percent	1
OSHA PEL	100 PPM
ACGIH TLV	100 PPM
Ingredient #	15
Ingredient Name	*BRONZE PIGMENT (IN 20013 ONLY)
CAS Number	1003

Proprietary	NO
Percent	5
OSHA PEL	NE
ACGIH TLV	NE

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND MANUFACTURER'S INFORMATION	
NFPA Rating: Health-2; Flammability-0; Reactivity-0; Special-- Manufactured for : Aftermarket Auto Parts Alliance, Inc. Address: 14351 Blanco Road San Antonio, TX 78216-7723	HMIS Rating: Health-2; Flammability-0; Reactivity-0; Personal Protection-B DOT Hazard Classification: ORM-D Identity (trade name as used on label): PARTS MASTER BRAKE & PARTS CLEANER #1733
Date Prepared: 07/1/05 Prepared By: LF/DL/IB	MSDS Number: A00733 Revision- 14
Information Calls: (210) 492-4868	NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA
EMERGENCY RESPONSE NUMBER: 1(800)255-3924	

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION					
COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
PERCHLOROETHYLENE	127-18-4	Yes	25	25	a,b
ACETONE	67-64-1	No	1000	750	d
CARBON DIOXIDE	124-38-9	No	5000	5000	d
WARNING: This product contains a chemical or chemicals known to the State of California to cause cancer.					

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS	
Boiling Point: N/A	Specific Gravity (H2O=1): Concentrate Only = 1.60
Vapor Pressure: PSIG @ 70°F (Aerosols): 85-100	Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A
Vapor Density (Air = 1): N/E	Evaporation Rate (n-butyl acetate= 1): 2.1 (concentrate only)
Solubility in Water: Insoluble	Water Reactive: No
Appearance and Odor: Clear, colorless spray with chlorinated solvent odor.	VOC (Federal EPA Definition) = 0% (by weight)

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA		
FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) NON-FLAMMABLE	Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E
FLASH POINT AND METHOD USED (non-aerosols): N/A	EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide.	
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.		
Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.		

SECTION 4 - REACTIVITY HAZARD DATA	
STABILITY [X] STABLE [] UNSTABLE	HAZARDOUS POLYMERIZATION [] WILL [X] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Reactive metals, aluminum, magnesium, strong oxidizing agents.	Conditions to Avoid: Open flame, welding arcs, heat.
Hazardous Decomposition Products: CO2, CO, HCl, small amounts of phosgene and chlorine.	

SECTION 5 - HEALTH HAZARD DATA	
PRIMARY ROUTES OF ENTRY: [X] INHALATION [] INGESTION [X] SKIN ABSORPTION [] EYE [] NOT HAZARDOUS	
ACUTE EFFECTS:	
Inhalation: Excessive inhalation of vapors can be harmful and may cause headache, dizziness, asphyxia, anesthetic effects and possible unconsciousness.	
Eye Contact: Irritation	Skin Contact: Irritation due to defatting of skin.
Ingestion: Possible chemical pneumonitis if aspirated into lungs. Nausea.	
CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) May cause liver abnormalities, kidney, spleen, lung or brain damage, cardiac abnormalities. Perchloroethylene has been shown to increase the rate of spontaneously occurring malignant tumors in certain laboratory rats and mice.	
Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.	

EMERGENCY FIRST AID PROCEDURES	
Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.	Skin Contact: Wash with soap and water. If irritated, seek medical attention.
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.	
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.	

SECTION 6 - CONTROL AND PROTECTIVE MEASURES	
Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by U.S. Bureau of Mines for organic vapor.	Eye Protection: Safety glasses recommended.
Protective Gloves: Neoprene gloves recommended.	
Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.	
Other Protective Clothing & Equipment: None	
Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.	

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE	
Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or Federal regulations. Allow to evaporate if small spill. DO NOT FLUSH TO SEWER.	
Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.	
Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.	
Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination. Avoid inhalation of vapors.	

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.
 ** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only
 THIS MSDS IS CURRENT AS OF February 24, 2009. The DATE PREPARED section is the original date assembled and remains current until a change is necessary. This is tracked internally at the manufacturer by these date codes and therefore must remain as the originating date.



Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Product name Calcium, Lime & Rust Stain Remover
Product code ZURUST
Date of issue 11/17/08 **Supersedes** 10/19/07

Emergency Telephone Numbers

For MSDS Information:
 Compliance Services 404-352-1680

For Medical Emergency
 INFOTRAC: (877) 541-2016 Toll Free - All Calls Recorded

For Transportation Emergency
 CHEMTREC: (800) 424-9300 - All Calls Recorded
 In the District of Columbia (202) 483-7616

Prepared By
 Compliance Services
 1420 Seaboard Industrial Blvd.
 Atlanta, GA 30318

Section 2. Hazards Identification

Emergency overview

*Hazard Determination System (HDS): Health, Flammability, Reactivity

DANGER !

CAUSES EYE AND SKIN BURNS. HARMFUL IF SWALLOWED.

3	0	0
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NOTE: MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse effects are lessened by following all prescribed safety precautions, including the use of proper personal protective equipment.

Acute Effects

Routes of Entry

Dermal contact. Eye contact. Inhalation.

- Eyes** Causes eye burns. Direct contact with the eyes can cause irreversible damage, including blindness.
- Skin** Causes skin burns. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering. May cause allergic reactions in certain individuals.
- Inhalation** Avoid breathing vapors, spray or mists. Over-exposure by inhalation may cause respiratory irritation.
- Ingestion** Harmful if swallowed. May cause burns to mouth, throat and stomach.

Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray or mist may produce respiratory tract irritation, leading to frequent attacks of bronchial infection. Contains material which may cause damage to the following organs: kidneys, liver, gastrointestinal tract.

Carcinogenicity Ingredients: Not listed as carcinogen by OSHA, NTP or IARC.

Additional Information: See Toxicological Information (Section 11)

Section 3. Composition/Information on Ingredients

HYDROCHLORIC ACID; muriatic acid; hydrogen chloride; HCl	7647-01-0	1 - 5
HYDROXYACETIC ACID; glycolic acid; hydroxyethanoic acid	79-14-1	1 - 5
SULFAMIC ACID; amidosulfonic acid; amidosulfuric acid	5329-14-6	1 - 5

Section 4. First Aid Measures

- Eye Contact** Check for and remove any contact lenses. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Continue to rinse for at least 10 minutes. Get medical attention immediately.
- Skin Contact** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If irritation persists, get medical attention.
- Ingestion** Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If affected person is conscious, give plenty of water to drink. Get medical attention immediately.

Section 5. Fire Fighting Measures

National Fire Protection Association (U.S.A.)



Flash Point	None.
Flammable Limits	Not available.
Flammability	Non-combustible.
Fire hazard	In a fire or if heated, a pressure increase will occur and the container may burst. May emit toxic fumes under fire conditions.
Fire-Fighting Procedures	Use an extinguishing agent suitable for the surrounding fire. Do not release runoff from fire to sewers or waterways.

Section 6. Accidental Release Measures

Spill Clean up	Put on appropriate personal protective equipment (see section 8). Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
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Section 7. Handling and Storage

Handling	Put on appropriate personal protective equipment (see section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Do not use with other products. Do not reuse container. Observe label precautions. Wash thoroughly after handling.
Storage	Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection**Product name**

HYDROCHLORIC ACID; muriatic acid; hydrogen chloride; HCl

Exposure limits

ACGIH TLV/OSHA PEL (United States).

CEIL: 5 ppm 8 hour(s).

OSHA PEL (United States).

CEIL: 7 mg/m³ 8 hour(s).**Personal Protective Equipment (PPE)**

Eyes	Splash goggles.
Body	Wear appropriate protective clothing to prevent skin contact. Recommended: Neoprene gloves. Rubber gloves. Wear apron or coverall if there is a risk of exposure to splashes.
Respiratory	Use with adequate ventilation. A respirator is not needed under normal and intended conditions of product use.

**Section 9. Physical and Chemical Properties**

Physical State	Liquid.	Color	Clear. Light yellow.
pH	<1	Odor	Sour. Acidic.
Boiling Point	100°C (212°F)	Vapor Pressure	Not determined.
Specific Gravity	1.067	Vapor Density	Not determined.
Solubility	Easily soluble in the following materials: cold water.	Evaporation Rate	Not determined.
		VOC (Consumer)	0 (g/l).

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Incompatibility	Do not use with other products. Reactive or incompatible with the following materials: oxidizing materials, organic materials, metals and alkalis.
Hazardous Polymerization	Will not occur.
Hazardous Decomposition Products	

Section 11. Toxicological Information**Acute Toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Sulfamic Acid	LD50 Oral	Rat	3160 mg/kg	-
Hydrochloric Acid	LD50 Oral	Rabbit	900 mg/kg	-
	LC50 Inhalation Vapor	Rat	3124 ppm	1 hours
Hydroxyacetic Acid	LD50 Oral	Rat	1938 mg/kg	-
	LC50 Inhalation Vapor	Rat	5.2 mg/L	4 hours
	LC50 Inhalation Vapor	Rat	3.6 mg/L	4 hours

Section 12. Ecological Information

Environmental Effects No known significant effects or critical hazards.

Aquatic Ecotoxicity

Not available.

Section 13. Disposal Considerations**Waste Information**

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities for additional information.

Waste Stream Code: D002
 Classification: - [Hazardous waste.]
 Origin: - [RCRA waste.]

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label
DOT Classification	UN3264	Corrosive liquid, acidic, inorganic, n.o.s.(Hydrochloric acid, Sulfamic acid)	8	II	
TDG Classification	UN3264	Corrosive liquid, acidic, inorganic, nos (Hydrochloric acid, Sulfamic acid)	8 (9)	II	 
IMDG Class	Not determined.				

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment.

PG* : Packing group

Section 15. Regulatory Information**U.S. Federal Regulations**

SARA 313 toxic chemical notification and release reporting:

No products were found.

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: Hydrochloric Acid (RQ 5,000 lbs)

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

All Components of this product are listed or exempt from listing on TSCA Inventory.

State Regulations

California Prop 65 No products were found.

Canada**WHMIS (Canada)**

Class D-1B: Material causing immediate and serious toxic effects (Toxic).

Class D-2B: Material causing other toxic effects (Toxic).

Class E: Corrosive material

Section 16. Other Information

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

*NOTE: Hazard Determination System (HDS) ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although these ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HDS ratings are to be used with a fully implemented program to relay the meanings of this scale.

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

MEGUIAR'S G11 - CLAY BAR FOR QUIK DETAILING SYSTEM

SYNONYMS

"Product Code: G11, C2000"

PRODUCT USE

■ Used according to manufacturer's directions.
 Cleaning agent.

SUPPLIER

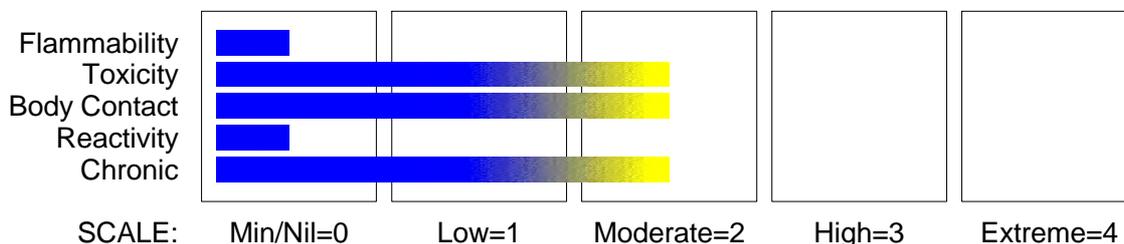
Company: MotorActive
 Address:
 35 Slough Business Park, Holker Street
 Silverwater
 NSW, 2128
 Australia
 Telephone: +61 2 9737 9422
 Telephone: 1800 350 622
 Fax: +61 2 9737 9414
 Email: info@motoractive.com.au

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to NOHSC Criteria, and ADG Code.

CHEMWATCH HAZARD RATINGS



RISK

Risk Codes
 R36/37/38

Risk Phrases

- Irritating to eyes, respiratory system and skin.

SAFETY

Safety Codes
 S401

Safety Phrases

- To clean the floor and all objects contaminated by this material, use water and detergent.
- If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).

S46

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
limestone	1317-65-3	20-30
titanium dioxide	13463-67-7	1-10
magnesium oxide	1309-48-4.	1-10
calcium carbonate	471-34-1	1-10
kaolin	1332-58-7	1-10
aluminium tristearate	637-12-7	1-10

Section 4 - FIRST AID MEASURES

SWALLOWED

- - If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.

EYE

- If this product comes in contact with the eyes:
 - Wash out immediately with fresh running water.
 - Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
 - Seek medical attention without delay; if pain persists or recurs seek medical attention.
 - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

- If skin contact occurs:
 - Immediately remove all contaminated clothing, including footwear.
 - Flush skin and hair with running water (and soap if available).
 - Seek medical attention in event of irritation.

INHALED

- - If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.

NOTES TO PHYSICIAN

- Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- - There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

FIRE FIGHTING

- - Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves for fire only.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.

FIRE/EXPLOSION HAZARD

- - Non combustible.
 - Not considered a significant fire risk, however containers may burn.
- May emit poisonous fumes.

FIRE INCOMPATIBILITY

- None known.

HAZCHEM

None

Personal Protective Equipment

Gloves, boots (chemical resistant).

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- - Remove all ignition sources.
- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Control personal contact by using protective equipment.

MAJOR SPILLS

- Moderate hazard.
- CAUTION: Advise personnel in area.
- Alert Emergency Services and tell them location and nature of hazard.
- Control personal contact by wearing protective clothing.
- Prevent, by any means available, spillage from entering drains or water courses.

MEGUIAR'S G11 - CLAY BAR FOR QUIK DETAILING SYSTEM

Chemwatch Independent Material Safety Data Sheet
Issue Date: 21-Jan-2011
C9317EC

CHEMWATCH 4910-93
Version No:5
CD 2010/4 Page 3 of 7
Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- - Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.

SUITABLE CONTAINER

- - Polyethylene or polypropylene container.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

- None known.

STORAGE REQUIREMENTS

- - Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry area protected from environmental extremes.
- Store away from incompatible materials and foodstuff containers.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA mg/m ³	Notes
Australia Exposure Standards	limestone (Calcium carbonate)	10	(see Chapter 14)
Australia Exposure Standards	(a) magnesium oxide (Magnesium oxide fume)	10	
Australia Exposure Standards	kaolin (Silica - Amorphous Fumed silica (respirable dust))	2	(see Chapter 14)

PERSONAL PROTECTION

RESPIRATOR

Particulate

EYE

- - Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET

- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:
 - frequency and duration of contact,
 - chemical resistance of glove material,
 - glove thickness and
 - dexterity.

Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.

- polychloroprene
- nitrile rubber
- butyl rubber
- fluorocautchouc.

OTHER

- - Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.

ENGINEERING CONTROLS

- - Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
- Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.

continued...

MEGUIAR'S G11 - CLAY BAR FOR QUIK DETAILING SYSTEM

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

- If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered. Such protection might consist of:

(a): particle dust respirators, if necessary, combined with an absorption cartridge;

(b): filter respirators with absorption cartridge or canister of the right type;

(c): fresh-air hoods or masks

- Build-up of electrostatic charge on the dust particle, may be prevented by bonding and grounding.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Off-white solid pliable clay bar with a slight odour; not miscible with water.

PHYSICAL PROPERTIES

Does not mix with water.

State	Divided Solid	Molecular Weight	Not Applicable
Melting Range (°C)	Not Available	Viscosity	Not Available
Boiling Range (°C)	Not Available	Solubility in water (g/L)	Immiscible
Flash Point (°C)	Not Applicable	pH (1% solution)	Not Available
Decomposition Temp (°C)	Not Available	pH (as supplied)	Neutral
Autoignition Temp (°C)	Not Applicable	Vapour Pressure (kPa)	Not Available
Upper Explosive Limit (%)	Not Applicable	Specific Gravity (water=1)	Not Available
Lower Explosive Limit (%)	Not Applicable	Relative Vapour Density (air=1)	Not Available
Volatile Component (%vol)	Not Available	Evaporation Rate	Not Available

Section 10 - STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY

■ - Presence of incompatible materials.

- Product is considered stable.

- Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

■ Irritating to eyes, respiratory system and skin.

CHRONIC HEALTH EFFECTS

■ Not applicable.

TOXICITY AND IRRITATION

■ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

KAOLIN:

ALUMINIUM TRISTEARATE:

MEGUIAR'S G11 - CLAY BAR FOR QUIK DETAILING SYSTEM:

■ No significant acute toxicological data identified in literature search.

CALCIUM CARBONATE:

MEGUIAR'S G11 - CLAY BAR FOR QUIK DETAILING SYSTEM:

■ Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound.

LIMESTONE:

CALCIUM CARBONATE:

MEGUIAR'S G11 - CLAY BAR FOR QUIK DETAILING SYSTEM:

■ The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis.

■ The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

LIMESTONE:

TOXICITY

Oral (rat) LD50: 6450 mg/kg

No evidence of carcinogenic properties. teratogenic effects.

IRRITATION

Skin (rabbit): 500 mg/24h- Moderate

Eye (rabbit) 0.75: mg/24h -

TITANIUM DIOXIDE:

continued...

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Section 11 - TOXICOLOGICAL INFORMATION

TOXICITY

Oral (Rat) LD50: >20000 mg/kg *

Oral (Mouse) LD50: >10000 mg/kg *

■ The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis.

For titanium dioxide:

Humans can be exposed to titanium dioxide via inhalation, ingestion or dermal contact. In human lungs, the clearance kinetics of titanium dioxide is poorly characterized relative to that in experimental animals.

* IUCLID

IRRITATION

Skin (human): 0.3 mg /3D (int)- Mild *

MAGNESIUM OXIDE:

TOXICITY

Inhalation (human) TClO: 400 mg/m³

IRRITATION

Nil Reported

CALCIUM CARBONATE:

TOXICITY

Oral (Rat) LD50: 6450 mg/kg

IRRITATION

Skin (rabbit): 500 mg/24h- Moderate

Eye (rabbit): 0.75 mg/24h - SEVERE

No evidence of carcinogenic properties.
teratogenic effects.

No evidence of mutagenic or

KAOLIN:

■ for bentonite clays:

Bentonite (CAS No. 1302-78-9) consists of a group of clays formed by crystallisation of vitreous volcanic ashes that were deposited in water.<</>.

ALUMINIUM TRISTEARATE:

■ Fatty acid salts are of low acute toxicity. Their skin and eye irritation potential is chain length dependent and decreases with increasing chain length - they are poorly absorbed through the skin nor are they skin sensitisers.

Section 12 - ECOLOGICAL INFORMATION

No data

Ecotoxicity

Ingredient

Persistence:

Persistence: Air

Bioaccumulation

Mobility

titanium dioxide

Water/Soil
HIGH

LOW

HIGH

Section 13 - DISPOSAL CONSIDERATIONS

■ Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction.
- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Bury residue in an authorised landfill.
- Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM:

None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: ADG7, UN, IATA, IMDG

continued...

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE None

REGULATIONS

Regulations for ingredients

limestone (CAS: 1317-65-3) is found on the following regulatory lists;

"Australia Exposure Standards", "Australia Inventory of Chemical Substances (AICS)", "OECD Representative List of High Production Volume (HPV) Chemicals"

titanium dioxide (CAS: 13463-67-7,1317-70-0,1317-80-2,12188-41-9,1309-63-3,100292-32-8,101239-53-6,116788-85-3,12000-59-8,12701-76-7,12767-65-6,12789-63-8,1344-29-2,185323-71-1,185828-91-5,188357-76-8,188357-79-1,195740-11-5,221548-98-7,224963-00-2,246178-32-5,252962-41-7,37230-92-5,37230-94-7,37230-95-8,37230-96-9,39320-58-6,39360-64-0,39379-02-7,416845-43-7,494848-07-6,494848-23-6,494851-77-3,494851-98-8,55068-84-3,55068-85-4,552316-51-5,62338-64-1,767341-00-4,97929-50-5,98084-96-9) is found on the following regulatory lists;

"Australia Exposure Standards", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "Australia Therapeutic Goods Administration (TGA) Substances that may be used as active ingredients in Listed medicines", "Australia Therapeutic Goods Administration (TGA) Sunscreening agents permitted as active ingredients in listed products", "CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "International Fragrance Association (IFRA) Survey: Transparency List", "OECD Representative List of High Production Volume (HPV) Chemicals"

magnesium oxide (CAS: 1309-48-4) is found on the following regulatory lists;

"Australia Exposure Standards", "Australia Hazardous Substances", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "Australia National Pollutant Inventory", "Australia Therapeutic Goods Administration (TGA) Substances that may be used as active ingredients in Listed medicines", "CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD Representative List of High Production Volume (HPV) Chemicals"

calcium carbonate (CAS: 471-34-1,13397-26-7,15634-14-7,1317-65-3) is found on the following regulatory lists;

"Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "Australia Therapeutic Goods Administration (TGA) Substances that may be used as active ingredients in Listed medicines", "CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD Representative List of High Production Volume (HPV) Chemicals"

kaolin (CAS: 1332-58-7) is found on the following regulatory lists;

"Australia Exposure Standards", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 18: List of products to which the Code does not apply", "OECD Representative List of High Production Volume (HPV) Chemicals"

aluminium tristearate (CAS: 637-12-7) is found on the following regulatory lists;

"Australia Inventory of Chemical Substances (AICS)", "OECD Representative List of High Production Volume (HPV) Chemicals"

No data for Meguiar's G11 - Clay Bar For Quik Detailing System (CW: 4910-93)

Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
titanium dioxide	13463- 67- 7, 1317- 70- 0, 1317- 80- 2, 12188- 41- 9, 1309- 63- 3, 100292- 32- 8, 101239- 53- 6, 116788- 85- 3, 12000- 59- 8, 12701- 76- 7, 12767- 65- 6, 12789- 63- 8, 1344- 29- 2, 185323- 71- 1, 185828- 91- 5, 188357- 76- 8, 188357- 79- 1, 195740- 11- 5, 221548- 98- 7, 224963- 00- 2, 246178- 32- 5, 252962- 41- 7, 37230- 92- 5, 37230- 94- 7, 37230- 95- 8, 37230- 96- 9, 39320- 58- 6, 39360- 64- 0, 39379- 02- 7, 416845- 43- 7, 494848- 07- 6, 494848- 23- 6, 494851- 77- 3, 494851- 98- 8, 55068- 84- 3, 55068- 85- 4, 552316- 51- 5, 62338- 64- 1, 767341- 00- 4, 97929- 50- 5, 98084- 96- 9
calcium carbonate	471- 34- 1, 13397- 26- 7, 15634- 14- 7, 1317- 65- 3

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

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MEGUIAR'S G11 - CLAY BAR FOR QUIK DETAILING SYSTEM

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Section 16 - OTHER INFORMATION

Print Date: 24-Jan-2011

This is the end of the MSDS.

BIOBOR JF®

Material Safety Data Sheet

Effective 1/1/2010

Emergency Telephone Number 1-800-424-9300

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Information: Biobor JF®
Generic Description: Substituted Dioxaborinanes
Product Use: Biocide

TSCA NO.: n/a

Pesticide-exempt from TSCA

Inventory under TSCA § (2) (B) (ii)

CAS NO: 8063-89-6

EPA REG. NO. 65217-1

For customer service/technical information, contact:

Hammonds Fuel Additives, Inc.
910 Rankin Road
Houston TX 77073-4604
(800)548-9166

ChemTrec Emergency
(800)424-9300

HAZARD RATINGS

	HMIS	NFPA
Health	1	1
Fire	2	2
Reactivity	0	0

*=Chronic

2. COMPOSITION/INFORMATION ON INGREDIENTS

Common Name	CAS#	Approximate % (w/w)
Substituted dioxaborinanes	See below*	95.0
Naphtha	8030-30-6	4.5
Non-hazardous and other ingredients below reportable levels		Balance

*2,2' - (1-methyltrimethylenedioxy) bis - (4-methyl-1, 3, 2-dioxaborinane);
2,2' - oxybis (4, 4, 6 - trimethyl-1, 3, 2-dioxaborinane) (CAS No.: 8063-89-6).

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: COMBUSTIBLE LIQUID AND VAPOR (FLAMMABLE IF SHIPPED BY AIR/VESSEL). INHALATION MAY CAUSE DIZZINESS, HEADACHE AND INCOORDINATION. INGESTION CAN CAUSE DIZZINESS, FAINTNESS, HEADACHE AND INCOORDINATION. MAY CAUSE RESPIRATORY TRACT IRRITATION. MAY CAUSE DIGESTIVE TRACT IRRITATION. INGESTION MAY CAUSE NAUSEA, VOMITING, PAIN, UPSET STOMACH, DIARRHEA. INHALATION MAY CAUSE NAUSEA, VOMITING, UPSET STOMACH. MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. See sections 3, 5, & 6.

PRIMARY ROUTE OF EXPOSURE: Eye. Skin. Inhalation (breathing).

EYE CONTACT: May cause slight to mild irritation. May cause corneal opacity (clouding of the eye surface). Can cause burning sensation, tearing, and redness.

SKIN CONTACT: May cause slight to mild irritation. Prolonged or repeated contact may dry the skin and lead to irritation (i.e. dermatitis).

INHALATION (Breathing): (Irritating to the eyes, nose and respiratory tract. Can cause dizziness, headaches, and incoordination. Nausea, vomiting and stomach upset can occur.

BIOBOR JF®

INGESTION (Swallowing): (Irritating to the mouth, throat and stomach. May cause nausea, vomiting, pain and stomach upset (e.g., diarrhea). Can cause dizziness, faintness, headache and incoordination.)

TARGET ORGANS/CHRONIC EFFECTS: Eyes. Skin.

CONDITIONS AGGRAVATED BY EXPOSURE: Skin.

CARCINOGENICITY:

	ACGIH	IARC	NTP	OSHA
Substituted dioxaborinanes	No	No	No	No
Naphtha	No	No	No	No

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists.

SKIN CONTACT: Immediately flush with water. Remove contaminated clothing and shoes. Get medical attention if irritation persists. Professionally wash clothing and shoes before re-use.

INHALATION (Breathing): Remove to fresh air. If symptoms develop, seek immediate medical attention. If not breathing, give artificial respiration.

INGESTION (Swallowing): Seek medical attention. Immediately induce vomiting, as directed by medical personnel. Never give anything by mouth to an unconscious person.

NOTES TO PHYSICIANS: Treatment should be directed at preventing absorption, administering to symptoms (if they occur), and providing supportive therapy.

5. FIRE FIGHTING METHODS

Flash Point.....102° F 38.8° C

Method.....: Tagliabue Closed Cup

Explosive limits: LEL (%) Not Determined UEL (%) Not Determined

Autoignition.....Not determined

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: Smoke, soot, and toxic/irritating fumes (i.e., carbon dioxide, carbon monoxide, etc.).

FIRE AND EXPLOSION HAZARDS: High temperatures can cause sealed containers to rupture due to a buildup of internal pressure. Cool with water. Vapors can travel to a source of ignition (flame, electric motor, hot surface, cigarette etc.) and flash back. During a fire, irritating and highly toxic gases may be generated during combustion or decomposition.

FIRE FIGHTING PROCEDURES/EQUIPMENT: Fire fighters and others who may be exposed to the products of combustion should be equipped with NIOSH-approved positive pressure self-contained breathing apparatus (SCBA) and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

EVACUATION: Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Eliminate all sources of ignition.

CONTAINMENT: Safely stop discharge. Contain material, as necessary, with a dike or barrier. Stop material from contaminating soil, or from entering sewers or bodies of water.

CLEAN-UP/PERSONAL PROTECTION EQUIPMENT: Appropriate safety measures and protective equipment should be used. Use supplied air respirator or self-contained breathing apparatus in enclosed spaces, or if airborne exposure limits can be exceeded. See Section 8.

COLLECTION AND DISPOSAL: Stop discharge, if safe to do so. Use proper protective equipment. Use non-sparking tools and/or explosion-proof equipment. Stop ignition sources. Cover spills with absorbent clay or sawdust and place in closed chemical waste containers. Dispose of according to applicable local, state and federal regulations.

REPORTING: Spills of this material in excess of a component's RQ must be reported to the National Response Center (800-424-8802) and to the appropriate state and local emergency response organizations.

7. HANDLING AND STORAGE

STORAGE CONDITIONS: Store in cool, dry, well ventilated area away from heat, ignition sources, and direct sunlight. Keep containers tightly closed. **WARNING:** Hot organic chemical vapors or mists can suddenly, and without warning, combust when mixed with air. Ignition can occur at typical elevated temperature process conditions. Any use in such processes should be evaluated thoroughly to assure safe operating conditions.

TRANSFER: Containers should be supported and grounded before opening, dispensing, mixing, pouring and emptying. Open with non-sparking tools. If container is warm, open bung slowly to release internal pressure.

PERSONAL HYGIENE: Wash thoroughly after handling, especially before eating, drinking, smoking and using restroom facilities. Wash contaminated goggles, faceshield and gloves. Professionally launder contaminated clothing before re-use.

EMPTY CONTAINER PRECAUTIONS: Attention! This container hazardous when empty. Follow label warnings even after container is emptied since empty containers may retain product residues. Do not use heat, sparks, open flames, torches, cigarettes on or near empty container. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption or where skin contact can occur.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES:

ACGIH - TLV - No regulated ingredients.

OSHA - PEL
Naphtha

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BIOBOR JF®

ENGINEERING CONTROLS/VENTILATION: Local exhaust ventilation is recommended when vapors, mists or dusts can be released in excess of established airborne exposure limits (TLVs or PELs).

EYE PROTECTION: Wear chemical splash goggles. An eye wash facility should be readily available.

SKIN PROTECTION: Wear protective clothing and appropriate impervious gloves. Because a variety of protective gloves exist, consult glove manufacturer to determine the proper type for a specific operation.

RESPIRATORY PROTECTION: Avoid breathing vapor and/or mists. Wear NIOSH/MSHA-approved equipment. Determine the appropriate type of consulting the respirator manufacturer. High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA)

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Yellow	Odor	:	Aromatic
Physical State	:	Liquid	Solubility	:	Moderately soluble
pH	:	Not Applicable	Boiling Point	:	529° F 276.1° C
Vapor Density	:	> 1 Air = 1	Evaporation Rt.	:	< 1 (n-Butyl alcohol)
VOC Material	:	Not Determined	Specific Gravity	:	1.05
%Non-Vol (w/w)	:	95			

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:	Stable under normal conditions of use.
HAZARDOUS POLYMERIZATION:	Will not occur.
CONDITIONS TO AVOID:	High temperatures.
INCOMPATIBILITY WITH OTHER MATERIALS:	Water. Oxidizers.

11. TOXICITY INFORMATION

COMPONENTS:

Substituted dioxaborinanes:

Eye, skin, and respiratory tract irritant.

Oral LD ₅₀	Rat	3.16 ml/Kg
Dermal LD ₅₀	Rabbit	9.1 ml/Kg

Naphtha:

Eye, skin, and respiratory tract irritant.

12. ECOLOGICAL INFORMATION

No data are available on this product.

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BIOBOR JF®

13 DISPOSAL CONSIDERATIONS

DISPOSAL: When a decision is made to discard this material as supplied, it meets RCRA's characteristic definition of ignitability.

GENERAL STATEMENTS: Federal regulations may apply to empty container. State and/or local regulations may be different.

GENERAL RECOMMENDATIONS: Of the methods of disposal currently available, it is recommended that an alternative be selected according to the following order of preference, based upon environmental acceptability: (1) recycle or rework, if feasible; (2) incinerate at an authorized facility; or (3) treat at an acceptable waste treatment facility.

SPECIAL INSTRUCTIONS: Be sure to contact the appropriate government environmental agencies if further guidance is required.

14. TRANSPORT INFORMATION

	49 CFR	IATA	IMO
Flammable liquids, n.o.s. (mixed dioxaborinanes, naphtha)	Y	Y	Y
DOT Label : Flammable Liquid	UN/NA Id Num:	UN 1993	
DOT Label No. : L152 (For Canadian Shipments F 154)			
Hazard Class : 3 (IATA/49 CFR) 3.3 (IMO)	WHMIS Label :	F 152	
Packing Group : III			

15. REGULATORY INFORMATION

FEDERAL:

This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

SARA Title III - Section 311/312 - Hazard Categories:

- Y- Fire Hazard
- N - Sudden Release of Pressure Hazard
- N - Reactivity Hazard
- Y - Immediate (acute) Health Hazard
- N - Delayed (chronic) Health Hazard

Ozone-Depleting Chemicals - No regulated ingredients.

SARA Section 302 Extremely Hazardous Mat - No regulated ingredients.

SARA Section 313 Toxic Chemicals - No regulated ingredients.

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BIOBOR JF®

STATE RIGHT-TO-KNOW:

Pennsylvania - New Jersey R-T-K

Substituted dioxaborinanes	8063-89-6	95.0
Naphtha	8030-30-6	4.5
Non-hazardous trade secret ingredient(s)	Proprietary Balance	

California - California Proposition 65

WARNING: This product contains a chemical(s) known to the State of California to cause cancer.
 Arsenic
 Cancer Hazard.

7440-38-2 Trace *

*Trace = present at less than 0.01 percent.

CONEG - No data available.

CANADA:

This is a "controlled product" under the Canadian Workplace Hazardous Materials Information System (WHMIS).

Class B Division 3

Class D Division 2 Sub-division B

CEPA - NPRI - No regulated ingredients.

16. OTHER INFORMATION

USER'S RESPONSIBILITY: A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if, or where, precautions - in addition to those described herein - are required. Any health hazard and safety information herein should be passed on to your customers or employees, as the case may be.

DISCLAIMER OF LIABILITY: The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Final determination of suitability of the chemical is the sole responsibility of the user. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to the information contained herein or the chemical to which the information refers. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND PREPARATION INFORMATION

Manufacturer: Dominion Sure Seal Group of Companies
 6175 Danville Road, Mississauga, Ontario
 Canada, L5T 2H7
 (905)670-5411
 U.S.A. 1-800-265-0790
 Emergency telephone numbers: Dominion Sure Seal (8 AM TO 4 PM EST)
 (905)670-5411
 CANUTEC (24 HR)
 (613) 996 – 6666
 Product Name: Gator Guard II, Part A (Black, low VOC)
 Product Stock: BGG2, Part A(1.7 L kit)–VOC Compliant
 Product Code: 100096
 Synonyms: Not Applicable
 Chemical Family: Epoxy
 Molecular Formula: Mixture
 Product Use: Bed Liner Coating
 Prepared by: Regulatory Department
 Preparation Date: April 27, 2012

2. HAZARDOUS INGREDIENTS

Hazardous Ingredients	CAS Number	Wt. %	TLV ppm	LD/50 Route, Species	LC/50 Route, Species
Epoxy Resin	25085-99-8	30-60	Not Available	5,000 mg/Kg (ORL-RAT) 20,000 mg/Kg (DRM-RBT)	Not Available
4-Nonyl Phenol	84852-15-3	1-5	Not Available	580 mg/kg (ORL-RAT)	Not Available
Benzyl Alcohol	100-51-6	7-13	Not Available	1,230 mg/Kg (ORL-RAT)	Not Available

2. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Black
Odour	Mild
Odour Threshold	Not Available
Boiling Point (Deg.C)	Not Available
Melting/Freezing Point (Deg. C)	Not Available
Vapour Density (Air = 1)	> 1
Specific Gravity (Estimate)	1.208
Vapour Pressure (mm Hg)	Not Available
Evaporation Rate, n-Butyl Acetate = 1	< 1
pH	Not Applicable
Solubility in Water	Partially

4. FIRE AND EXPLOSION HAZARD

Flammability:	Not.
If Yes, Under Which Conditions:	Not Applicable.
Flammability Limits in Air (%):	Not Available
Flash Point (TCC deg.C)	> 150
Autoignition Temperature (Deg. C):	Not Available
Hazardous Combustion Products:	Carbon monoxide, Chlorine oxide, Nitrogen oxides.
Sensitivity to Mechanical Impact:	Not available. Not expected to be sensitive to mechanical impact.
Rate of Burning:	Not available.
Explosive Power:	Not available.
Sensitivity to Static Discharge:	Not available. Not expected to be sensitive to static discharge.
Extinguishing Media:	Use any media that is appropriate for the surrounding fire.

5. REACTIVITY DATA

Chemical Stability:	Yes, under normal conditions.
Compatibility with Other Substances:	No, with strong acids, strong basis, strong oxidizing agents.
Hazardous Products of Decomposition:	Carbon monoxide, Chlorine oxides, Nitrogen oxides.
Hazardous Polymerisation:	Polymerization with heat built up when in contact with aliphatic amine.

6. TOXICOLOGICAL PROPERTIES

Route of Entry:	
Skin Contact:	Yes
Skin Absorption:	Yes
Eye Contact:	Yes
Inhalation:	Yes
Ingestion:	Yes
Effects of Exposure:	Vapors may be irritating to respiratory system and might cause headache. Eye contact may cause tearing, reddening, itching and swelling. Skin contact can cause irritation. Prolonged and repeated contact leads to dermatitis. Swallowing may cause burning of the mouth and stomach. Other possible effects are abdominal pain, nausea and diarrhea.
Carcinogenicity of material:	No information is available and no adverse Carcinogenic effects are anticipated.
Reproductive effects:	No information is available and no adverse Reproductive effects are anticipated..
Teratogenicity:	No information is available and no adverse Teratogenic effects are anticipated.
Mutagenicity:	No information is available and no adverse Mutagenic effects are anticipated.

7. PREVENTIVE MEASURES

Eye Protection:	Chemical safety goggles with side shields.
Skin Protection:	Impervious gloves.

Respiratory Protection:	If exposure exceeds occupational limits wear a NIOSH approved air-purifying respirator with organic vapour cartridges for mists and vapours.
Engineering Controls:	General ventilation. Exhaust ventilation is recommended if used indoors on continuous basis.
Leak/Spill Clean-Up Procedures:	Ventilate enclosed spaces. Collect product for disposal. Notify applicable government authority if release is reportable or could adversely affect the environment.
Storage Instructions:	Keep away from heat, sparks, and open flames.

8. FIRST AID MEASURES

In case of eye contact, immediately flush eyes with running water for a minimum of 15 minutes. Hold eyelids open during flushing. If irritation persists, repeat flushing. Obtain medical attention IMMEDIATELY. For skin, wash thoroughly with soap and water. If irritation develops, get medical attention. If affected by inhalation of vapour or spray mist, move to fresh air. If swallowed, do not induce vomiting. Rinse the mouth. Drink 1-2 glasses of milk to dilute product. Water may be used instead but not as effective. Obtain medical attention IMMEDIATELY.

9. TRANSPORT INFORMATION

Proper Shipping Name:	Not Regulated.
UN Number:	Not Applicable.
Class or Division:	Not Applicable.
Sub Risk:	Not Applicable.
Packing Group:	Not Applicable.

10. REGULATORY INFORMATION

U.S. Federal Regulations

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 Hazard Category:

Irritant – skin and eyes; Skin sensitizer; target organ effects reported

Toxic Substances Control Act (TSCA): All components of this product are included on the TSCA inventory.

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA) Hazardous Substances:

Chemical Name	CAS Number	Reportable Quantity (RQ)
None	NA	NA

CAA, Section 112 Hazardous Air Pollutants:

Chemical Name	CAS Number	Concentration
None	NA	NA

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

SARA (EPCRA) Section 311/312 (40 CFR 370) Hazard Categories:

Immediate Hazard: Yes
 Delayed Hazard: Yes
 Fire Hazard: No
 Pressure Hazard: No
 Reactivity Hazard: No

This product contains the following extremely hazardous substance(s) subject to the reporting requirements of SARA (EPCRA) Section 302:

Chemical Name	CAS Number	Concentration
None	NA	NA

This product contains the following toxic chemical(s) subject to reporting requirements of SARA (EPCRA) Section 313 (40 CFR 372)

Chemical Name	CAS Number	Concentration
None	NA	NA

State Regulations

California: This product contains the following chemicals(s) known to the State of California to cause cancer, birth defects or reproductive harm:

Component	CAS Number	Maximum %
None	NA	NA

International Regulations

Canadian Workplace Hazardous Materials Information System (WHMIS):

D2B

Canadian Environmental Protection Act (DSL): All of the components of this product are included on the Canadian Domestic Substances list (DSL).

European Inventory of Existing Chemicals (EINECS): All of the components of this product are included on EINECS.

11. OTHER INFORMATION

VOC Compliance Statement:

Part A VOC Content – Less Exempts: 114 g/l (0.95 lb/gal)
Part A VOC Content – Total Material: 114 g/l (0.95 lb/gal)
Part A Density: 1.208 g/ml
Part A Volatiles Content: 9.4 % by weight
Part A Exempt Content: 0 % by weight (0 % by volume)

Coating Category: Truck Bed Liner Coating

Mixed Kit VOC Content, as applied:

– **Less Exempts (TBAC Non-Exempt):** 303 g/l (2.53 lb/gal)
 – **Total Material (TBAC Non-Exempt):** 264 g/l (2.21 lb/gal)

Mixed kit VOC content meets the 310 g/l (2.6 lb/gal) limit for Truck Bed Liner Coatings. Canada and California compliant. Do not thin with solvents.

Coating Category: Truck Bed Liner Coating

Mixed Kit VOC Content, as applied:

– **Less Exempts (TBAC Exempt):** 197 g/l (1.64 lb/gal)
 – **Total Material (TBAC Exempt):** 144 g/l (1.20 lb/gal)

Mixed kit VOC content meets the 200 g/l (1.67 lb/gal) limit for Truck Bed Liner Coatings in Sacramento Metropolitan AQMD, California. California compliant. Do not thin with solvents.

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR. **This MSDS is valid for three years.**

The information contained herein is based on data considered accurate. No warranty is expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Dominion Sure Seal assumes no responsibility for personal injury or property damage to vendees or users or third parties, caused by the material. Such vendees or users assume all risks with the use of the material.

MATERIAL SAFETY DATA SHEET

Sales Order: {SalesOrd}

G3005 TINT BASE CLEAR BASE

MSDS Revision No: 1 -2
MSDS Revision Date: 08/13/2007

Akzo Nobel Coatings
Awlgrip North America
2270 Morris Avenue
P. O. Box 386
Union, NJ 07083

EMERGENCY NUMBERS:

(800) 424-9300 CHEMTREC (USA)
(703) 527-3887 CHEMTREC (Intl)
(800) 854-6813 Poison Control Center
CUSTOMER SERVICE: (Non-Emergency)
(888) 355-3090 AWLGRIP (Phone)
(908) 686-1752 AWLGRIP (Fax)

1. GENERAL INFORMATION

Product Identity: G3005 TINT BASE CLEAR BASE

Bulk Sales Reference No: OG3005

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000100-41-4	Ethyl benzene 0.10 - 1.0% by Weight	OSHA:	125 ppm STEL; 545 mg/m3 STEL
		ACGIH:	100 ppm TWA/125 ppm STEL
		NIOSH:	100 ppm TWA; 435 mg/m3 TWA/125 ppm STEL; 545 mg/m3 STEL/800 ppm IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV/125 ppm STEV; 540 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA/125 ppm STEL; 545 mg/m3 STEL
		Brazil:	78 ppm TWA; 340 mg/m3 TWA
		Source	Health Data
		NIOSH:	Eye skin
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: Yes; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000108-65-6	Propylene glycol monomethyl ether acetate 10 - 25% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	50 ppm TWAEV; 270 mg/m3 TWAEV
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		

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		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No
CAS No.	Ingredient Name & %	Source	Exposure Data
000108-83-8	Diisobutylketone 1.0 – 10% by Weight	OSHA:	No Established Limit
		ACGIH:	25 ppm TWA
		NIOSH:	25 ppm TWA; 150 mg/m3 TWA500 ppm IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	25 ppm TWAEV; 145 mg/m3 TWAEV
		Mexico:	48 ppm TWA; 290 mg/m3 TWA
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	Irritation; liver kidney
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No
		CAS No.	Ingredient Name & %
001330-20-7	Xylenes (o-, m-, p- isomers) 1.0 – 10% by Weight	OSHA:	150 ppm STEL; 655 mg/m3 STEL
		ACGIH:	100 ppm TWA150 ppm STEL
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV150 ppm STEV; 650 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
		Brazil:	78 ppm TWA; 340 mg/m3 TWA
		Source	Health Data
		NIOSH:	Central nervous system depressant; respiratory and eye irritation
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No
		CAS No.	Ingredient Name & %
019549-80-5	HEPTANONE, 4,6-DIMETHYL- 1.0 – 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No
		CAS No.	Ingredient Name & %
148462-57-1	2-Propanol, 1-methoxy-, propanoate	OSHA:	No Established Limit

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25 – 50% by Weight	ACGIH:	No Established Limit
	NIOSH:	No Established Limit
	Supplier:	No Established Limit
	OHSA, CAN:	No Established Limit
	Mexico:	No Established Limit
	Brazil:	No Established Limit
	Source	Health Data
	NIOSH:	No Established Limit
	Source	Carcinogen Data
	OSHA:	Select Carcinogen: No
	NTP:	Known Carcinogen: No; Suspected Carcinogen: No
	IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

3. HAZARD IDENTIFICATION

Overview:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.		
Inhalation:	Harmful if inhaled. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.		
Eyes:	Causes severe eye irritation. Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific condition of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.		
Skin:	Causes skin irritation. May cause allergic skin reaction. May be harmful if absorbed through the skin.		
Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.		
Chronic Effects:	Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient).		
HMIS Rating:	Health: Unknown	Flammability: Unknown	Reactivity: Unknown

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes:	Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific condition of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin/Hand:	

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Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.

Engineering Controls: Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.

Other Work Practices: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point: F: 80
C: 27

Lower Explosive Limit (LEL): 1 (%vol in air) at Normal Atmospheric Temp and Pressure

Fire and Explosion Hazards: Flammable liquid and vapor. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.

Fire Fighting Procedures: CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. SMALL FIRES: Use dry chemical, CO₂, water spray or alcohol-resistant foam. LARGE FIRES: Use water spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material.
Also Reference Emergency Response Guide Number: 127

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

pH: No Established Limit

Specific Gravity: 1.054192

Boiling Point (F): 257

Vapor Density: Heavier than air

VOC Content (lbs): Refer to the Technical Data Sheet for this product.

Evaporation Rate: Slower than ether

8. STABILITY AND REACTIVITY DATA

General: This product is stable and hazardous polymerization will not occur. Not sensitive to mechanical impact. Excessive heat and fumes generation can occur if improperly handled.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition: May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature: Store between 40–100F (4–38C).

Handling and Storage Precautions: Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the

contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.

11. ECOLOGICAL DATA

General: No additional information provided for this product. See Section 2 for chemical specific data.

12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures: ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material. CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).

Public Safety: Also, Reference Emergency Response Guide Number: 127

13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	PAINT	IMDG Proper Shipping Name:	PAINT
DOT Hazard Class:	3	IMDG Hazard Class:	3.3 – High flashpoint flammable liquids
UN / NA Number:	UN 1263	UN Number:	UN 1263
DOT Packing Group:	III	IMDG Packing Group:	III
CERCLA/DOT RQ:	292 gal. / 2561 lbs.	System Reference Code:	1

15. REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.
Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification: No Established Limit

Regulatory List: Product Ingredients on List

DOT Marine Pollutants (10%):
(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):
(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs (>.1%) :
(No Product Ingredients Listed)

EPCRA 302 Extremely

Hazardous (>.1%) :

(No Product Ingredients

Listed)

EPCRA 313 Toxic Chemicals

(>.1%) :

000100-41-4

Ethyl benzene

001330-20-7

Xylenes (o-, m-, p- isomers)

Mass RTK Substances (>1%) :

000108-83-8

Diisobutylketone

001330-20-7

Xylenes (o-, m-, p- isomers)

Mass Extraordinarily Haz Sub

(>.01%) :

(No Product Ingredients

Listed)

Penn RTK Substances (>1%) :

000108-83-8

Diisobutylketone

000108-65-6

Propylene glycol monomethyl ether acetate

001330-20-7

Xylenes (o-, m-, p- isomers)

Penn Special Hazardous

Substances (>.01%) :

(No Product Ingredients

Listed)

Rhode Island Hazardous

Substances (>.1%) :

(No Product Ingredients

Listed)

RCRA Status (>.01%) :

(No Product Ingredients

Listed)

N.J. RTK Substances (>1%) :

(No Product Ingredients

Listed)

N.J. Special Hazardous

Substances (>.01%) :

000100-41-4

Ethyl benzene

000123-86-4

n-Butyl acetate

001330-20-7

Xylenes (o-, m-, p- isomers)

N.J. Env. Hazardous Substances

(>.1%) :

000100-41-4

Ethyl benzene

001330-20-7

Xylenes (o-, m-, p- isomers)

Proposition 65 – Carcinogens

(>0%):

000100-41-4

Ethyl benzene

Proposition 65 – Female Repro

Toxins (>0%):

(No Product Ingredients

Listed)

Proposition 65 – Male Repro

Toxins (>0%):

(No Product Ingredients

Listed)

Proposition 65 – Developmental

Toxins (>0%):

(No Product Ingredients

Listed)

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

FOR PROFESSIONAL USE ONLY

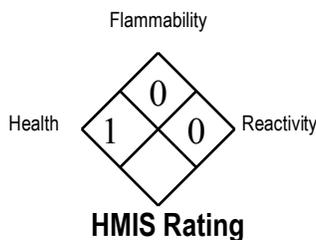
IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

Brand names mentioned in this data sheet are trademarks of or are licensed to Akzo Nobel.

Head Office

International Paint, LLC, 6001 Antoine Drive, Houston, Texas 77091. <http://www.international-pc.com> or <http://www.international-marine.com>

End Of Document



MATERIAL SAFETY DATA SHEET

GENERAL INFORMATION

PRODUCT NAME OR NUMBER (as it appears on label) Aqua-Gel® II Utility Cable Pulling Lubricant	CATALOG NUMBER All "31" Series
MANUFACTURER'S NAME IDEAL INDUSTRIES, INC.	EMERGENCY TELEPHONE NO. (815) 895-5181
ADDRESS (Number, Street, City, State, Zip Code) Becker Place, Sycamore, IL 60178	
HAZARDOUS MATERIAL DESCRIPTION, PROPER SHIPPING NAME, HAZARD CLASS, HAZARD CLASS, HAZARD ID NO. (49 CFR 172.101) None	
CHEMICAL DESCRIPTION Polymer-based Mixture	FORMULA Proprietary

SECTION I - INGREDIENTS

CAS REGISTRY NO.	%W	CHEMICAL NAME(S)*	Listed as a carcinogen in NTP, IARC or OSHA 1910(z) (specify)
7732-18-5	<90	Water	No
9038-95-3	<10	Oxirane, Methyl-, Polymer With Oxirane, Monobutyl Ether	No
9003-11-6	<5	Polyoxypropylene-polyoxyethylene Block Copolymer	No
102-71-6, 7732-18-5, 10246-68-1, 22919-56-8, 64665-57-2, 693-23-2	<1	Proprietary Mixture of Ethanol, 2,2',2" Nitriлотris; Water; Nonanoic acid; Triethanolamine salt, Caprylic acid; triethanolamine salt; 1H-Benzotriazole, 4-methyl-,sodium salt; Dodecanedioic acid	No
1310-58-3	<2	20% Potassium Hydroxide	No
52-51-7	<0.1	2-Bromo-2-Nitropropane 1,3 Diol	No
3844-45-9 7757-82-6 7647-14-5	<0.1	Blue Pigment	No

SECTION II - PHYSICAL DATA

BOILING POINT 212 °F 100 °C	SPECIFIC GRAVITY (H ₂ O=1) 0.98	PERCENT VOLATILE BY VOLUME (%) <90
SOLUBILITY IN WATER Infinite	pH = 7.0 - 8.0	PERCENT SOLID BY WEIGHT (%) ~10
APPEARANCE AND ODOR Clear blue gel, mild odor	IS MATERIAL: LIQUID SOLID (GEL) GAS PASTE	

SECTION III - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT None method used C.O.C	FLAMMABLE LIMITS	LEL	UEL
		None	None
EXTINGUISHING MEDIA Use extinguishing media suitable for surrounding materials.			
SPECIAL FIRE FIGHTING PROCEDURES None			
UNUSUAL FIRE AND EXPLOSION HAZARDS None			

* None of the chemical raw materials contained in this formulation are considered hazardous under the Federal Hazards Communication Standard 29 C. F. R 1910.1200

SECTION IV - HEALTH HAZARD INFORMATION

EFFECTS OF OVEREXPOSURE - Conditions to Avoid	
	None normally expected. Upon prolonged contact, may cause temporary eye discomfort.
THRESHOLD LIMIT VALUE	
N.E.	
PRIMARY ROUTES OF ENTRY Inhalation <input type="checkbox"/> Skin Contact <input checked="" type="checkbox"/> Other (specify)	
EMERGENCY FIRST AID PROCEDURES	
SKIN CONTACT:	Wash with soap and water.
EYE CONTACT:	Flush with water.
INGESTION:	Do not induce vomiting. Consult physician or local poison control center.

SECTION V - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	Avoid prolonged storage at temperatures exceeding 190 F.
INCOMPATIBILITY (materials to avoid)			
Avoid strong oxidizers and nitrites.			
HAZARDOUS DECOMPOSITION PRODUCTS:			
In the unlikely event of combustion of dried residue, oxides and nitrogen may be released.			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	None

SECTION VI - SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	
	Wipe up, shovel or vacuum spilled material. Clean up spills immediately as they can be dangerously slippery.
WASTE DISPOSAL METHOD	
Comply with Federal, state and local regulations for solid landfill.	
CERCLA (Superfund) REPORTABLE QUANTITY (in lbs)	
N/A	
RCRA HAZARDOUS WASTE NO. (40CFR 261.33)	
N/A	
VOLATILE ORGANIC COMPOUND (VOC) (as packaged, minus water)	
1.7 gms / ltr	
³ Theoretical ____ lb/gal	N/A
³ Analytical ____ lb/gal	N/A

SECTION VII - PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type)			
None normally required.			
VENTILATION	LOCAL EXHAUST (Specify Rate)	None	SPECIAL None
	MECHANICAL (General) (Specify Rate)	Recommended in closed areas.	OTHER None
PROTECTIVE GLOVES (specify type)		EYE PROTECTION (specify type)	
None normally needed -Neoprene if necessary		None normally required. Safely glasses or splash goggles recommended.	
OTHER PROTECTIVE EQUIPMENT			
Eye fountain in work area is recommended but not necessary.			

SECTION VIII - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
	Store at temperatures between 40 - 180 F. Avoid freezing.
OTHER PRECAUTIONS	
Keep away from children, infants and pets.	

SECTION IX - ADDITIONAL INFORMATION

Extreme temperatures of combustion or burning and contact with nitrites could result in the formation of nitrosamines which are potential carcinogens. This condition is unlikely to occur.	
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N/A = Not Applicable, N.E. = None Established

THIS MATERIAL SAFETY DATA SHEET PREPARED BY:

NAME	James R. MacMurdo	SIGNATURE
TITLE	Mgr., Construction Market Development	
DATE	01/11/2011	
		

MATERIAL SAFETY DATA SHEET

R7K130
03 00

DATE OF PREPARATION
Aug 30, 2011

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

R7K130

PRODUCT NAME

SEAGUARD™ Solvent #130

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300

*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
1	95-63-6	1,2,4-Trimethylbenzene		
		ACGIH TLV	25 PPM	2.03 mm
		OSHA PEL	25 PPM	
44	64742-94-5	Medium Aromatic Hydrocarbons		
		ACGIH TLV	Not Available	0.12 mm
		OSHA PEL	Not Available	
7	91-20-3	Naphthalene		
		ACGIH TLV	10 PPM	1 mm
		ACGIH TLV	15 PPM STEL	
		OSHA PEL	10 PPM	
48	71-36-3	1-Butanol		
		ACGIH TLV	20 PPM	5.5 mm
		OSHA PEL	50 ppm (Skin) CEILING	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

HMIS Codes

Health	3*
Flammability	3
Reactivity	0

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the reproductive system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and laundry before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT 95 °F PMCC	LEL 0.8	UEL 11.2	FLAMMABILITY CLASSIFICATION RED LABEL -- Flammable, Flash below 100 °F (38 °C)
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EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class IC

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are FLAMMABLE. Keep away from heat, sparks, and open flame.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally.

Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits.

Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	7.07 lb/gal	846 g/l
SPECIFIC GRAVITY	0.85	
BOILING POINT	243 - 425 °F	117 - 218 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	100%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
	7.06 lb/gal	846 g/l
	7.06 lb/gal	846 g/l
		Less Water and Federally Exempt Solvents
		Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Naphthalene is listed by IARC as a possible human carcinogen based upon "sufficient evidence" in animals and "insufficient evidence in humans. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

CAS No.	Ingredient Name			
95-63-6	1,2,4-Trimethylbenzene	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
64742-94-5	Medium Aromatic Hydrocarbons	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
91-20-3	Naphthalene	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
71-36-3	1-Butanol	LC50 RAT	4HR	8000 ppm
		LD50 RAT		790 mg/kg

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

5 Liters (1.3 Gallons) and Less may be Classed as CONSUMER COMMODITY, ORM-D

Larger Containers are Regulated as:

UN1263, PAINT RELATED MATERIAL, 3, PG III, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities

1-Butanol 5000 lb RQ

Naphthalene 100 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):

RQ, UN1263, PAINT RELATED MATERIAL, 3, PG III, (NAPHTHALENE), (ERG#128)

Canada (TDG)

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG III, LIMITED QUANTITY, (ERG#128)

IMO

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG III, (35 C c.c.), EmS

F-E, S-E, ADR (D/E)

IATA/ICAO

UN1263, PAINT RELATED MATERIAL, 3, PG III

SECTION 15 — REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
95-63-6	1,2,4-Trimethylbenzene	1	
91-20-3	Naphthalene	7	
71-36-3	1-Butanol	48	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

1101A
21 00

DATE OF PREPARATION
Feb 19, 2014

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

1101A

PRODUCT NAME

POWERHOUSE™ 1100A Siliconized Acrylic Latex Sealant - 60 Year, Antique White

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
<i>*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)</i>	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
1	107-21-1	Ethylene Glycol		
		ACGIH TLV	100 MG/M3 CEILING (aerosol)	0.12 mm
		OSHA PEL	50 PPM CEILING	
50	1317-65-3	Calcium Carbonate		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	
1	13463-67-7	Titanium Dioxide		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

HMIS Codes

Health	2*
Flammability	0
Reactivity	0

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and laundry before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Applicable	Applicable	EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally.

Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	12.91 lb/gal	1547 g/l
SPECIFIC GRAVITY	1.55	
BOILING POINT	212 - 388 °F	100 - 197 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	29%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	8.0	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
0.21 lb/gal	25 g/l	Less Water and Federally Exempt Solvents
0.15 lb/gal	18 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

Ethylene Glycol is considered an animal teratogen. It has been shown to cause birth defects in rats and mice at high doses when given in drinking water or by gavage. There is no evidence to indicate it causes birth defects in humans.

TOXICOLOGY DATA

CAS No.	Ingredient Name			
107-21-1	Ethylene Glycol	LC50 RAT	4HR	Not Available
		LD50 RAT		4700 mg/kg
1317-65-3	Calcium Carbonate	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
13463-67-7	Titanium Dioxide	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

Not Regulated for Transportation.

Canada (TDG)

Not Regulated for Transportation.

IMO

Not Regulated for Transportation.

IATA/ICAO

Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
107-21-1	Ethylene Glycol	1	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.



PETTIT PAINT

MATERIAL SAFETY DATA SHEET

Supplier:	Kop-Coat, Inc. Marine Group 36 Pine Street Rockaway, NJ 07866	EMERGENCIES: Health/spills:.....: Chemtrec Assistance.....: Chemtrec Outside USA.....:	800-548-0489 800-424-9300 703-527-3887
		Kop-Coat, Inc. Product Information.....: Outside USA.....:	800-221-4466 973-625-3100

1. Product Information

Product name	Ablative Thinner 185
Product code	11218500\1

Issuing date: 01/17/2011 **Contact person:** Environmental Health & Safety Mgr

2. Hazards identification

Emergency Overview

Appearance: Clear Liquid **Odor:** Hydrocarbon

Hazards: WARNING!

Flammable liquid and vapor. Harmful or fatal if swallowed. Causes eye and skin irritation. May cause eye and skin irritation. Vapor harmful.

Potential health effects

Primary Routes of Entry: Eye contact, ingestion, skin contact, inhalation, and absorption.

Eye contact:

May cause moderate to severe eye irritation. Symptoms may include stinging, tearing, redness and swelling of eyes. Not expected to cause permanent damage if promptly rinsed from eyes.

Ingestion:

May cause gastrointestinal distress. Symptoms may include irritation to the mouth, throat and stomach and gastrointestinal disturbances such as nausea, vomiting or diarrhea and effects similar to those described in the Inhalation section. Aspiration of this product into the lungs during ingestion, gagging or vomiting may cause lung damage, which can be fatal.

Skin contact:

May cause skin irritation. Symptoms may include dryness, itching, burning sensation, redness, cracking and swelling depending on the extent of exposure. May be harmful if absorbed through the skin in toxic amounts and cause systemic effects.

Inhalation:

May cause irritation to the nose, throat and respiratory tract. Inhalation of high concentrations of vapors may cause respiratory tract irritation and central nervous system depression. Symptoms may include headache, nausea, dizziness and drowsiness. Continued inhalation may result in unconsciousness or death.

Chronic effects:

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Prolonged or repeated dermal exposure to this product can cause skin dermatitis characterized by red, dry, scaly skin.

Target Organs: Not Determined

This product contains carcinogens or potential carcinogens as listed by IARC or NTP. See Section 3 NTP, IARC (Carc.) columns for chemical identification.

3. Composition/information on ingredients

Chemical Name	CAS-No.	Weight %	Carc
n-Butanol	71-36-3	70 - 100	
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	20 - 30	
Naphthalene	91-20-3	1 - 10	*

4. FIRST AID MEASURES

Eye contact:

Quickly and gently blot or brush chemical off the face. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Take care not to rinse contaminated water into unaffected eye or onto the face. Call poison control center, hospital emergency room, or physician immediately.

Ingestion:

NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 2 to 8 oz. (60 to 240 mL) of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water again. Immediately obtain medical advice.

Skin contact:

As quickly as possible, remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Quickly and gently blot or brush away excess chemical. Immediately wash with lukewarm, gently flowing water and non-abrasive soap for 15-20 minutes. Immediately obtain medical advice. Completely decontaminate clothing, shoes and leather goods before reuse or discard.

Inhalation:

This product is combustible/flammable. Take proper precautions (e.g. remove any sources of ignition). Remove source of contamination or move victim to fresh air. Keep victim quiet and warm until emergency help arrives.

Note to Physician :

There is no specific antidote for effects from overexposure to this material. Treatment should be directed at the control of symptoms and the clinical condition.

5. FIRE-FIGHTING MEASURES

Flash point

98 deg F / 37 deg C

Extinguishing media:

Use alcohol foam, dry chemical, carbon dioxide or any Class B fire extinguishing agent. Water may be unsuitable for extinguishing fires. Water may be used to cool and prevent the rupture of containers that are exposed to the heat from a fire.

Hazardous combustion products:

See Section 10 for potential decomposition products.

Protective equipment and precautions for firefighters:

Evacuate all persons from the fire area to a safe location. Move non-burning material, as feasible, to a safe location as soon as possible. Fire fighters should be protected from potential explosion hazards while extinguishing the fire. Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use. Containers of this material may build up pressure if exposed to heat (fire). Use water spray to cool fire-exposed containers. Use water spray to disperse vapors if a spill or leak has not ignited. DO NOT extinguish a fire resulting from the flow of flammable liquid until the flow of the liquid is effectively shut off. This precaution will help prevent the accumulation of an explosive vapor-air mixture after the initial fire is extinguished.

6. ACCIDENTAL RELEASE MEASURES

Personal & Environmental Precautions:

Remove sources of ignition immediately. Stop flow of material if safe to do so. Contain spill and keep out of water courses. Ventilate area. Absorb spill in sand, earth or other suitable material. Transfer to appropriate container for disposal using non-sparking tools. Follow personal protective equipment recommendations found in Section 8. Personal protection needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the training and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits.

Methods of Containment & Clean-up and Other Information:

This product, if released in large enough quantities, may need to be reported to the US Coast Guard National Response Center at 1-800-424-8802. Contain spills with dikes and absorbents (sand, earth, dry chemical absorbent) to prevent migration and entry into waterways.

7. HANDLING AND STORAGE

Handling:

Keep container closed and upright when not in use. To prevent generation of static discharges, use bonding/grounding connection when transferring material. Vapors may accumulate and travel to distant ignition sources and flashback. Extinguish all sources of ignition including pilot lights, non-explosion proof motors and electrical equipment until vapors dissipate. Since empty containers may retain product residue and flammable vapors, observe precautions even after container is emptied. Do not cut, puncture, or weld on or near empty containers. Do not smoke where product is used or stored. Avoid contact with eyes, skin or clothing. Avoid inhalation (vapor, mist, dust or fume, as applicable). Use only with adequate ventilation. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling.

Storage:

Store in areas/buildings designed to comply with OSHA 1910.106. Store away from sources of ignition and heat. Keep containers closed when not in use. Store in cool, well ventilated space away from incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	CAS-No.	Z-1 PEL	Z-2 PEL	ACGIH TLV
n-Butanol	71-36-3	300 MGM3 (100 PPM)		20 PPM
Solvent naphtha (petroleum), heavy aromatic	64742-94-5			
Naphthalene	91-20-3	50 MGM3 (10 PPM)		10 PPM

Engineering measures:

Use adequate ventilation to maintain airborne concentrations at levels below permissible or recommended occupational exposure limits. Supplementary local exhaust ventilation may be necessary in poorly ventilated spaces, during spraying, heating or other non-routine activities.

Eye/face protection:

Wear chemical-resistant glasses and/or goggles and a face shield when eye and face contact is possible due to splashing or spraying of material.

Skin protection:

Chemical-resistant, flexible-type gloves (Viton(R), neoprene, nitrile or equal) to prevent contact. Gloves should be rinsed and removed immediately after use. Wash hands after removing gloves. Wear chemical-resistant clothing (e.g. apron, pants, coveralls) and safety footwear as appropriate.

Respiratory protection:

Respiratory protection may be necessary under certain use conditions. Under such conditions, an appropriate, properly fitted NIOSH-approved respirator must be worn. If respirators are used, a program should be instituted to assure compliance with 29 CFR 1910.34 and 42 CFR 84.

General hygiene considerations:

Facilities utilizing this material should be equipped with an eyewash station and safety shower. Thoroughly clean shoes and wash contaminated clothes before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Appearance:	Clear Liquid
Odor	Hydrocarbon
pH	not determined
Boiling point	not determined
Flash point	98 deg F / 37 deg C
Solubility in water:	Negligible
Specific Gravity:	0.83
Weight per gallon (LB/GAL) :	6.92
Evaporation rate (n-Butyl acetate = 1):	<1
Volatile by Weight (including water and exempt compounds) (%):	100
Volatile Organic Content (VOC):	823 g/L

10. STABILITY AND REACTIVITY

Stability:

Stable under normal conditions.

Incompatibility:

Oxidizing and reducing agents. Keep away from heat, sparks and open flames.

Hazardous decomposition products:

Carbon monoxide, carbon dioxide, oxides of nitrogen and other toxic organic compounds.

11. TOXICOLOGICAL INFORMATION

Naphthalene: Laboratory animals exposed to high levels of naphthalene showed evidence of red blood cell destruction with anemia, fever, jaundice, and kidney and liver damage. Naphthalene caused an increased incidence of tumors in the nose in rats.

n-Butanol (CAS# 71-36-3): Prolonged or excessive exposure to n-butanol has been found to cause damage to the liver, kidneys, hearing and sense of balance.

12. ECOLOGICAL INFORMATION

Ecological evaluation of this material has not been performed; however do not allow the product to be released to the environment without governmental approval/permits.

13. DISPOSAL CONSIDERATIONS

Waste from this material may be a listed and/or characteristic hazardous waste. Dispose of material, contaminated absorbent, container and unused contents in accordance with local, state, and federal regulations.

14. TRANSPORT INFORMATION

Transportation:

This product may be reclassified as Consumer Commodity, ORM-D, when shipped by ground; packaging quantity limitations apply.

By Ground:

DOT Hazard Class:

DOT Proper Shipping Name:

ORM-D (containers less than or equal to 1.3 gal / 5.0 Liters)

DOT Packing Group:

DOT UN Number:

By Air:

IATA Hazard Class:

3

IATA Proper Shipping Name:

Paint related material

IATA Packing Group:

III

IATA UN Number:

UN1263

By Sea:

IMDG Hazard Class:

3

IMDG Proper Shipping Name:

Paint related material

IMDG Packing Group:

III

IMDG UN Number:

UN1263

15. REGULATORY INFORMATION

EPA registration number:

Not applicable.

Pest Registration Act number:

Not applicable.

Other:

Not applicable.

n-Butanol	71-36-3	*	*	*	*	*
Solvent naphtha (petroleum), heavy aromatic	64742-94-5		*	*	*	*
Naphthalene	91-20-3	*	*	*	*	*

16. OTHER INFORMATION

HMIS Health: 2* **HMIS Flammability: 3** **HMIS Physical Hazard: 0**

NFPA Health: 2 **NFPA Flammability: 3** **NFPA Instability/Reactivity: 0**

NOTICE: This document is generated for the purpose of distributing health, safety, and environmental data. The information on this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed, or implied, regarding correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. Kop-Coat makes no warranty with respect thereto and disclaims all liability from reliance thereon.

Key:

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service Registry Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLA RQ	CERCLA Reportable Quantity
CFR	Code of Federal Regulations
CPR	Cardiopulmonary resuscitation
DSL	Domestic Substances List of Canada
EINECS	European Inventory of Existing Chemical Substances
EPCRA	Emergency Planning and Community Right-to-know Act
EPCRA EHS	EPCRA Extremely Hazardous Substance
EPCRA TPQ	EPCRA Threshold Planning Quantity
oF	Fahrenheit degrees
g/l	Grams per liter
gal	Gallons
Group A3	Carcinogen Category - Confirmed Animal Carcinogen with Unknown Relevance to Humans
Group A4	Carcinogen Category - Not Classifiable as a Human Carcinogen
HMIS	Hazardous Materials Identification System - Chemical Rating
IARC	International Agency for Research on Cancer
lbs or LBS	Pounds
MGM3	Milligrams per cubic meter
MIR	Maximum Incremental Reactivity
MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PPM	Parts per million
Proposition 65	California's Safe Drinking Water and Toxic Enforcement Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act

USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
VOL	Volume
WT	Weight
WHMIS	Canadian Workplace Hazardous Materials Information System
UN	United Nations

ANSI KC 1.74



PETTIT PAINT

MATERIAL SAFETY DATA SHEET

Supplier:	Kop-Coat, Inc. Marine Group 36 Pine Street Rockaway, NJ 07866	EMERGENCIES: Health/spills:.....: Chemtrec Assistance.....: Chemtrec Outside USA.....:	800-548-0489 800-424-9300 703-527-3887
		Kop-Coat, Inc. Product Information.....: Outside USA.....:	800-221-4466 973-625-3100

1. Product Information

Product name	120 / T-10 Brushing Thinner
Product code	11212006\1

Issuing date: 05/16/2011 **Contact person:** Environmental Health & Safety Mgr

2. Hazards identification

Emergency Overview

Appearance: Clear Liquid **Odor:** Hydrocarbon

Hazards: DANGER!
Combustible liquid and vapor. Harmful or fatal if swallowed. May cause eye and skin irritation. Vapor harmful.

Potential health effects

Primary Routes of Entry: Eye contact, ingestion, skin contact, inhalation, and absorption.

Eye contact:

May cause eye irritation. Symptoms may include stinging, tearing, and redness of eyes.

Ingestion:

Aspiration of this product into the lungs during ingestion, gagging or vomiting may cause lung damage, which can be fatal. May cause gastrointestinal distress. Symptoms may include irritation to the mouth, throat and stomach and gastrointestinal disturbances such as nausea, vomiting or diarrhea.

Skin contact:

May cause skin irritation. Symptoms may include dryness, itching, burning sensation, redness, cracking and swelling depending on the extent of exposure. May be harmful if absorbed through the skin in toxic amounts and cause systemic effects.

Inhalation:

May cause irritation to the nose, throat and respiratory tract. Inhalation of high concentrations of vapors may cause respiratory tract irritation and central nervous system depression. Symptoms may include headache, nausea, dizziness and drowsiness. Continued inhalation may result in unconsciousness or death.

Chronic effects:

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Prolonged or repeated dermal exposure to this product can cause skin dermatitis characterized by red, dry, scaly skin.

Target Organs: Not Determined

This product contains carcinogens or potential carcinogens as listed by IARC or NTP. See Section 3 NTP, IARC (Carc.) columns for chemical identification.

3. Composition/information on ingredients

Chemical Name	CAS-No.	Weight %	Carc
Petroleum distillates, light aromatic	64742-95-6	30 - 50	
Aliphatic Hydrocarbon (Stoddard type)	8052-41-3	20 - 30	
1,2,4-Trimethylbenzene	95-63-6	20 - 30	
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	1 - 10	
1,3,5-Trimethylbenzene	108-67-8	1 - 10	
Xylene	1330-20-7	1 - 10	
Cumene	98-82-8	1 - 10	
Ethylbenzene	100-41-4	< 1	*

4. FIRST AID MEASURES

Eye contact:

Quickly and gently blot or brush chemical off the face. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Take care not to rinse contaminated water into unaffected eye or onto the face. Call poison control center, hospital emergency room, or physician immediately.

Ingestion:

NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 2 to 8 oz. (60 to 240 mL) of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water again. Immediately obtain medical advice.

Skin contact:

As quickly as possible, remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Quickly and gently blot or brush away excess chemical. Immediately wash with lukewarm, gently flowing water and non-abrasive soap for 15-20 minutes. Immediately obtain medical advice. Completely decontaminate clothing, shoes and leather goods before reuse or discard.

Inhalation:

This product is combustible/flammable. Take proper precautions (e.g. remove any sources of ignition). Remove source of contamination or move victim to fresh air. Keep victim quiet and warm until emergency help arrives.

Note to Physician :

There is no specific antidote for effects from overexposure to this material. Treatment should be directed at the control of symptoms and the clinical condition.

5. FIRE-FIGHTING MEASURES

Flash point 122 deg F / 50 deg C

Extinguishing media:

Use alcohol foam, dry chemical, carbon dioxide or any Class B fire extinguishing agent. Water may be unsuitable for extinguishing fires. Water may be used to cool and prevent the rupture of containers that are exposed to the heat from a fire.

Hazardous combustion products:

See Section 10 for potential decomposition products.

Protective equipment and precautions for firefighters:

Evacuate all persons from the fire area to a safe location. Move non-burning material, as feasible, to a safe location as soon as possible. Fire fighters should be protected from potential explosion hazards while extinguishing the fire. Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use. Containers of this material may build up pressure if exposed to heat (fire). Use water spray to cool fire-exposed containers. Use water spray to disperse vapors if a spill or leak has not ignited. DO NOT extinguish a fire resulting from the flow of flammable liquid until the flow of the liquid is effectively shut off. This precaution will help prevent the accumulation of an explosive vapor-air mixture after the initial fire is extinguished.

6. ACCIDENTAL RELEASE MEASURES

Personal & Environmental Precautions:

Remove sources of ignition immediately. Stop flow of material if safe to do so. Contain spill and keep out of water courses. Ventilate area. Absorb spill in sand, earth or other suitable material. Transfer to appropriate container for disposal using non-sparking tools. Follow personal protective equipment recommendations found in Section 8. Personal protection needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the training and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits.

Methods of Containment & Clean-up and Other Information:

This product, if released in large enough quantities, may need to be reported to the US Coast Guard National Response Center at 1-800-424-8802. Contain spills with dikes and absorbents (sand, earth, dry chemical absorbent) to prevent migration and entry into waterways.

7. HANDLING AND STORAGE

Handling:

Keep container closed and upright when not in use. To prevent generation of static discharges, use bonding/grounding connection when transferring material. Vapors may accumulate and travel to distant ignition sources and flashback. Extinguish all sources of ignition including pilot lights, non-explosion proof motors and electrical equipment until vapors dissipate. Since empty containers may retain product residue and flammable vapors, observe precautions even after container is emptied. Do not cut, puncture, or weld on or near empty containers. Do not smoke where product is used or stored. Avoid contact with eyes, skin or clothing. Avoid inhalation (vapor, mist, dust or fume, as applicable). Use only with adequate ventilation. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling.

Storage:

Store in areas/buildings designed to comply with OSHA 1910.106. Store away from sources of ignition and heat. Keep containers closed when not in use. Store in cool, well ventilated space away from incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	CAS-No.	Z-1 PEL	Z-2 PEL	ACGIH TLV
Petroleum distillates, light aromatic	64742-95-6			
Aliphatic Hydrocarbon (Stoddard type)	8052-41-3	2900 MGM3 (500 PPM)		100 PPM
1,2,4-Trimethylbenzene	95-63-6			25 PPM
Solvent naphtha (petroleum), heavy aromatic	64742-94-5			
1,3,5-Trimethylbenzene	108-67-8			25 PPM

Xylene	1330-20-7	435 MGM3 (100 PPM)	100 PPM
Cumene	98-82-8	245 MGM3 (50 PPM)	50 PPM
Ethylbenzene	100-41-4	435 MGM3 (100 PPM)	100 PPM

Engineering measures:

Use adequate ventilation to maintain airborne concentrations at levels below permissible or recommended occupational exposure limits. Supplementary local exhaust ventilation may be necessary in poorly ventilated spaces, during spraying, heating or other non-routine activities.

Eye/face protection:

Wear chemical-resistant glasses and/or goggles and a face shield when eye and face contact is possible due to splashing or spraying of material.

Skin protection:

Chemical-resistant, flexible-type gloves (Viton(R), neoprene, nitrile or equal) to prevent contact. Gloves should be rinsed and removed immediately after use. Wash hands after removing gloves. Wear chemical-resistant clothing (e.g. apron, pants, coveralls) and safety footwear as appropriate.

Respiratory protection:

Respiratory protection may be necessary under certain use conditions. Under such conditions, an appropriate, properly fitted NIOSH-approved respirator must be worn. If respirators are used, a program should be instituted to assure compliance with 29 CFR 1910.34 and 42 CFR 84.

General hygiene considerations:

Facilities utilizing this material should be equipped with an eyewash station and safety shower. Thoroughly clean shoes and wash contaminated clothes before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Appearance:	Clear Liquid
Odor	Hydrocarbon
pH	Not applicable.
Boiling point	not determined
Flash point	122 deg F / 50 deg C
Solubility in water:	Negligible
Specific Gravity:	0.85
Weight per gallon (LB/GAL) :	7.08
Evaporation rate (n-Butyl acetate = 1):	< 1
Volatile by Weight (including water and exempt compounds) (%):	100 %
Volatile Organic Content (VOC):	848 g/L

10. STABILITY AND REACTIVITY

Stability:

Stable under normal conditions.

Incompatibility:

Oxidizing and reducing agents. Keep away from heat, sparks and open flames.

Hazardous decomposition products:

Carbon monoxide, carbon dioxide, oxides of nitrogen and other toxic organic compounds.

11. TOXICOLOGICAL INFORMATION

Xylene: Laboratory animals exposed to high levels of xylene showed evidence of effects on the liver, kidneys, lungs, spleen, and caused hearing loss. Rats exposed during pregnancy to xylene showed fetotoxic effects.

Ethylbenzene: Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice.

12. ECOLOGICAL INFORMATION

Ecological evaluation of this material has not been performed; however do not allow the product to be released to the environment without governmental approval/permits.

13. DISPOSAL CONSIDERATIONS

Waste from this material may be a listed and/or characteristic hazardous waste. Dispose of material, contaminated absorbent, container and unused contents in accordance with local, state, and federal regulations.

14. TRANSPORT INFORMATION

Transportation: This product is not regulated by the U.S. DOT when shipped by ground in containers < 119 gallons.

By Ground:

DOT Hazard Class:

DOT Proper Shipping Name: Not regulated in containers < 119 gal.

DOT Packing Group:

DOT UN Number:

By Air:

IATA Hazard Class: 3

IATA Proper Shipping Name: Paint related material

IATA Packing Group: III

IATA UN Number: UN1263

By Sea:

IMDG Hazard Class: 3

IMDG Proper Shipping Name: Paint related material

IMDG Packing Group: III

IMDG UN Number: UN1263

15. REGULATORY INFORMATION

EPA registration number: Not applicable.

Pest Registration Act number: Not applicable.

Other:

Not determined.

Chemical Name	CAS-No.	TSCA 12B	SARA 313	TSCA	DSL	EINECS	Prop 65	Whmis
Petroleum distillates, light aromatic	64742-95-6			*	*	*		*
Aliphatic Hydrocarbon (Stoddard type)	8052-41-3			*	*	*		*
1,2,4-Trimethylbenzene	95-63-6		*	*	*	*		*
Solvent naphtha (petroleum), heavy aromatic	64742-94-5			*	*	*		*
1,3,5-Trimethylbenzene	108-67-8			*	*	*		*
Xylene	1330-20-7		*	*	*	*		*
Cumene	98-82-8		*	*	*	*	*	*
Ethylbenzene	100-41-4		*	*	*	*	*	*

16. OTHER INFORMATION

HMIS Health: 2* **HMIS Flammability: 2** **HMIS Physical Hazard: 0**

NFPA Health: 2 **NFPA Flammability: 2** **NFPA Instability/Reactivity: 0**

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Key:

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service Registry Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLA RQ	CERCLA Reportable Quantity
CFR	Code of Federal Regulations
CPR	Cardiopulmonary resuscitation
DSL	Domestic Substances List of Canada
EINECS	European Inventory of Existing Chemical Substances
EPCRA	Emergency Planning and Community Right-to-know Act
EPCRA EHS	EPCRA Extremely Hazardous Substance
EPCRA TPQ	EPCRA Threshold Planning Quantity
oF	Fahrenheit degrees
g/l	Grams per liter
gal	Gallons
Group A3	Carcinogen Category - Confirmed Animal Carcinogen with Unknown Relevance to Humans
Group A4	Carcinogen Category - Not Classifiable as a Human Carcinogen
HMIS	Hazardous Materials Identification System - Chemical Rating
IARC	International Agency for Research on Cancer

lbs or LBS	Pounds
MGM3	Milligrams per cubic meter
MIR	Maximum Incremental Reactivity
MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PPM	Parts per million
Proposition 65	California's Safe Drinking Water and Toxic Enforcement Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
VOL	Volume
WT	Weight
WHMIS	Canadian Workplace Hazardous Materials Information System
UN	United Nations

ANSI KC 1.74

KOP-COAT, INC
 MARINE GROUP EAST
 36 PINE STREET
 ROCKAWAY
 NJ 07866

EMERGENCIES
 HEALTH/SPILLS.....: 800-548-0489
 CHEMTREC ASSISTANCE: 800-424-9300
 CHEMTREC OUTSIDE US: 703-527-3887
 CANUTEC.....: 613-996-6666

KOP-COAT, INC
 PRODUCT INFORMATION: 800-221-4466
 OUTSIDE USA.....: 973-625-3100

 1 PRODUCT IDENTIFICATION

PRODUCT NAME: Z*SPAR Splash Zone Compound A & B
 PRODUCT USE.: 2 Component Epoxy putty
 APPEARANCE..: Greenish epoxy putt
 CAS NUMBER..: Mixture
 SYNONYMS....: None

REVISION...: 5
 DATE.....: 1/31/03
 MSDS NUMBER: 84788/8478916

 2 HAZARDOUS INGREDIENTS

<u>HAZARDOUS COMPONENT</u>	<u>REG AGENCY</u>	<u>PPM</u>	<u>NOTES</u>	<u>MG/M3</u>	<u>NOTES</u>
Triethylenetetramine CAS NUMBER:112-24-3 PERCENT BY WGT: 1 TO 5			(None established.)		
Carbon black CAS NUMBER:1333-86-4 PERCENT BY WGT: < 1	ACGIH-TWA NIOSH OSHA TWA	- - -	(+)	3.5 3.5 3.5	8 (+)
Talc (containing no asbestos) CAS NUMBER:14807-96-6 PERCENT BY WGT: 30 TO 35	ACGIH TWA NIOSH OSHA TWA	- - -		2 2 2	2 3
Crystalline silicon dioxide CAS NUMBER:14808-60-7 PERCENT BY WGT: 20 TO 25	ACGIH TWA NIOSH OSHA TWA	- - -	(+)	0.1 0.05 0.1	2 3 (+) 3
Epoxy Resin CAS NUMBER:25068-38-6 PERCENT BY WGT: 20 TO 25			(None established.)		
Tris-2,4,5-(Dimethyl			(None established.)		

2 HAZARDOUS INGREDIENTS

<u>HAZARDOUS COMPONENT</u>	<u>REG AGENCY</u>	<u>PPM</u>	<u>NOTES</u>	<u>MG/M3</u>	<u>NOTES</u>
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aminoethyl) Phenol CAS NUMBER:90-72-2 PERCENT BY WGT: 1 TO 5					
--	--	--	--	--	--

NOTES:

- 2) Respirable fraction
- 3) Respirable dust
- 8) 0.1 mg/m3 in presence of polycyclic aromatic hydrocarbons
- (+) NIOSH Occupational Carcinogen

3 HAZARDS IDENTIFICATION

EYE: Contact with the eye may cause irritation and corneal damage.

SKIN: Contact with the skin may cause irritation and/or dermatitis (rash). Sensitization may occur in some individuals. May be absorbed through the skin.

INHALATION: Inhalation of vapors may cause respiratory tract irritation. Prolonged inhalation of excessive quantities of this product may lead to respiratory effects, such as silicosis, talcosis, and other lung disorders. Symptoms (coughing, and shortness of breath) may or may not occur.

INGESTION: May cause gastrointestinal disturbances such as nausea, vomiting, and diarrhea.

OTHER: This is a two component system. Any mixtures of components A and B will have the hazards of both components.

Medical Conditions Aggravated by Exposure: Asthma, respiratory, skin and eye disorders.

4 FIRST AID MEASURES

EYE CONTACT: Immediately flush with plenty of water for at least 15 minutes. Get medical attention.

SKIN CONTACT: Remove contaminated clothing. Wash thoroughly with soap and water. If redness, itching, burning or other symptoms develop or persist, get medical attention. Wash contaminated clothing before reuse.

INHALATION: If you experience difficulty in breathing, leave the area to obtain fresh air. If breathing has stopped have a trained person administer artificial respiration preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

4 FIRST AID MEASURES

INGESTION: If swallowed do NOT induce vomiting. Get immediate medical attention. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

NOTE TO PHYSICIAN: There is no specific antidote for effects from overexposure to this material. Treatment should be directed at the control of symptoms and the clinical condition.

5 FIRE FIGHTING MEASURES

FLASH POINT: 300F/149C Component B; 400F/204C Component A

EXTINGUISHING MEDIA: Use dry chemical, carbon dioxide, water spray or foam.

FIRE FIGHTING PROCEDURES: As in any fire, wear complete fire service protective equipment, including full-face MSHA/NIOSH approved or equivalent self-contained breathing apparatus. Use water to cool fire-exposed container/structure/protect personnel.

FIRE AND EXPLOSION HAZARDS: Can release vapors that form explosive mixtures. Vapors can travel to a source of ignition and flash back. Closed containers may explode when exposed to extreme heat (fire). Toxic vapors may be given off in a fire.

6 SPILL AND LEAK PROCEDURES

Stop spill/leak if no risk involved. Avoid breathing vapors. Eliminate ALL sources of ignition. Use an inert absorbent to complete a clean-up. This material reacts with oxidizing materials. Absorb spilled material and place in closed container for disposal.

7 HANDLING AND STORAGE

HANDLING: Avoid prolonged or repeated contact with skin or eyes. Avoid prolonged or repeated breathing of vapors. Use with adequate ventilation. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling.

STORAGE: Keep in a closed, labeled container within a cool (well-shaded), dry, ventilated area. Protect from physical damage. Keep containers closed when material is not in use. Maintain good housekeeping.

OTHER: Keep away from heat and open flame. If post application/use processing of this product generates dust, exposure limits in Section 2 apply.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Ventilation is normally not required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Facilities storing or utilizing this product should be equipped with an eyewash facility.

RESPIRATORS: Not normally required. Close container after each use.

PERSONAL PROTECTIVE EQUIPMENT: Industrial safety glasses at a minimum. As necessary for work area conditions: use side shields, goggles, or faceshield. Use chemical resistant flexible-type gloves (heavy duty neoprene or equal). Wear industrial-type work clothing and safety footwear. Depending on working conditions, i.e., contact potential, wear resistant protective garments such as head/neck cover, aprons, jackets, pants, coveralls, boots, etc.

9 PHYSICAL AND CHEMICAL PROPERTIES

Weight Per Gallon (lbs):	29.000	% VOL by Weight.:	0.00 %
Vapor Density.:	(air=1)>1	Boiling Point...:	Not determined
Vapor Pressure:	Not determined	Evaporation Rate:	Not applicable
pH.....:	Not determined	Specific Gravity:	> 1
Solubility In Water:	Negligible	Viscosity.....:	Not determined
VOC Content.....:	0 g/l		

10 STABILITY AND REACTIVITY DATA

STABILITY: Stable
HAZARDOUS POLYMERIZATION: Will not occur.
INCOMPATIBILITY: Avoid oxidizing agents, heat, sparks and open flames.
HAZARDOUS DECOMPOSITION PRODUCT(S): Carbon monoxide, carbon dioxide upon thermal decomposition.

11 TOXICOLOGICAL INFORMATION

Contact Kop-Coat for applicable information.

12 ECOLOGICAL INFORMATION

Product has not been tested for ecotoxicity.

13 DISPOSAL CONSIDERATIONS

13 DISPOSAL CONSIDERATIONS

Dispose of unusable product in accordance with local, state and federal regulations.

14 TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: None
DOT HAZARD CLASS: None
LABEL: Non-Hazardous
DOT IDENTIFICATION NUMBER: None
DOT information for domestic ground transportation.

15 REGULATORY INFORMATION

WARNING: THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

No information available.

16 OTHER INFORMATION

IARC Monograph Vol. 65 reports carbon black is widely used in rubber tires, hoses, gaskets and coated fabrics; smaller amounts are used in printing inks, paints and plastics. Although one cohort study on carbon black production workers showed slight excesses of lung cancer, the totality of the epidemiological studies both in the carbon black production industry and in some user industries suggested that there is inadequate evidence for the carcinogenicity in humans of carbon black. Carbon black was thus evaluated as possibly carcinogenic to humans (Group 2B).

IARC lists silica as a Group 1 - Known Human Carcinogen. The National Tox. Program (NTP) lists silica as a Known Human Carcinogen. The ACGIH lists silica as an A2 - Suspected Human Carcinogen. OSHA lists silica as a Possible Select Carcinogen.

NOTICE: While the information and recommendations set forth herein are believed to be accurate as of the date hereof, Kop-Coat, Inc. makes no warranty with respect thereto and disclaims all liability from reliance thereon.

PREPARED BY: Manager Of Health Safety and Environmental Affairs

MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: GOO GONE PRO POWER SPRAY GEL
Product Code: 5011484
Supplier: THE HOMAX GROUP, INC
Address: 200 WESTERLY ROAD
BELLINGHAM, WA 98226
Telephone: 800-321-6330 M-F, 9-5 EST
Emergency: CHEMTREC 24 HR 800-424-9300
Date: May 25, 2011

SECTION 2 – COMPOSITION, INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>Percent</u>	<u>CAS #</u>
Distillates (petroleum), hydrotreated light	< 95	64742-47-8
Tripropylene glycol methyl ether	1 – 10	25498-49-1
Citrus extracts blend	1 – 10	94266-47-4/8028-48-6

*The ingredients in the balance of this product do not contribute significant hazards beyond those described in this document. All pertinent health, safety and environmental information has been presented, per the requirements of the US Federal OSHA Hazard Communication Standard (29CFR 1910.1200).

SECTION 3 – HAZARDS IDENTIFICATION

Potential Health Effects:

Eye: Causes eye irritation.

Skin: Contact may cause irritation. Prolonged or repeated contact may cause drying or cracking.

Ingestion: Symptoms may include headache, nausea, drowsiness, pneumonitis, pulmonary edema, central nervous system depression, convulsions and loss of consciousness. **ASPIRATION HAZARD.** Harmful or fatal if aspirated into lungs.

Inhalation: May cause headache, nausea, drowsiness, central nervous system depression, convulsions and loss of consciousness.

Chronic Effects:

Carcinogenicity: No components listed by IARC, NTP, or OSHA as carcinogens.

SECTION 4 - FIRST AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and seek medical attention.

Skin: Immediately flush with mild soap and water for 15 minutes. Seek medical attention if irritation develops. Remove contaminated clothing and launder before reuse.

Eye: Immediately flush with water for 15 minutes. Seek medical attention.

Ingestion: **Do not** induce vomiting. Get immediate medical care.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point: 186 F (86 C)

Autoignition Temperature : > 450 F

Extinguishing Media: Foam, carbon dioxide, and dry chemical.

Special Fire Fighting Procedures: Evacuate personnel to a safe area. Keep containers cool with water spray. Avoid breathing decomposition products. Wear self-contained breathing apparatus and full body protection.

Hazardous Decomposition Products: Thermal decomposition includes oxides of carbon and other asphyxiants.

MATERIAL SAFETY DATA SHEET

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SECTION 6 – ACCIDENTAL RELEASE MEASURES

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Leak and Spill Procedure: Evacuate area and turn off all sources of ignition. Ventilate area. Wear appropriate personal protective equipment, including appropriate respiratory protection. Contain spill if possible. Wipe up or absorb on suitable material and shovel up. Prevent entry into sewers and waterways. Avoid contact with skin, eyes or clothing. Dispose of collected material in accordance with federal, state and local requirements.

=====

SECTION 7 – HANDLING AND STORAGE

=====

Keep Out Of Reach Of Children. Store in original container. Keep container tightly closed when not in use and in an upright position. Do not store at elevated temperatures and away from incompatible materials.

=====

SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

=====

Engineering Controls: Not normally required. General dilution ventilation.
Respiratory protection: Not normally required. Avoid breathing vapor or spray mists.
Eye protection: use chemical goggles or glasses with side shields.
Skin protection: use chemical resistant gloves.
Other protective clothing or equipment: Eye wash, Safety Shower, Full Protective Clothing.
Work Hygienic Practices: The usual precaution for the handling of chemicals must be observed.

=====

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

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Appearance:	Orange/Yellow gel
Specific Gravity (H2O = 1):	0.8
Solubility In Water:	negligible
Boiling Point:	> 430 F
Odor:	citrus
VOC:	2% by CARB Definition for Consumer Products

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SECTION 10 – STABILITY AND REACTIVITY

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Stability: Stable.
Conditions to Avoid: Sources of ignition.
Incompatible Materials: Avoid contact with oxidizers.
Hazardous Decomposition Products: Thermal decomposition includes oxides of carbon and other asphyxiants.
Hazardous Polymerization: Will not occur.

=====

SECTION 11 - TOXICOLOGICAL INFORMATION

=====

THIS PRODUCT WAS NOT TESTED. THE FOLLOWING IS COMPONENT DATA:

Distillates (petroleum), hydrotreated light (64742-47-8): Acute Ingestion Toxicity: LD50 > 15000 mg/kg

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SECTION 12 – ECOLOGICAL INFORMATION

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Product was not tested.

=====

SECTION 13 – DISPOSAL CONSIDERATIONS

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Follow federal, provincial or state and local government requirements for disposal.

MATERIAL SAFETY DATA SHEET

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SECTION 14 - TRANSPORT INFORMATION

=====

U.S. DOT (Road or Rail): Not Regulated

Proper Shipping Name:

Hazard Class:

ID Number:

Packing Group:

AIR / WATER / INTERNATIONAL TRANSPORT: Not Regulated

Proper Shipping Name:

Hazard Class:

ID Number:

Packing Group:

=====

SECTION 15 - REGULATORY INFORMATION

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SARA 302 Chemicals: None of the ingredients are listed.

SARA 313 Chemicals: None of the ingredients are listed.

Toxic Substances Control Act (TSCA): All the ingredients are listed on the inventory

Canadian Domestic Substance List (DSL): All ingredients are listed.

California Prop. 65 Components: None

OSHA & WHMIS: MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) and Canadian WHMIS regulations (Controlled Products Regulations under the Hazardous Products Act).

=====

SECTION 16 - OTHER INFORMATION

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HMIS RATING: HEALTH: 1 FLAMMABILITY: 2 REACTIVITY: 0

THIS PRODUCT IS SOLD TO CONSUMERS FOR HOUSEHOLD USE IN CONTAINERS OF RELATIVELY SMALL VOLUME (I.E. 5 GALLON OR LESS IN SIZE). THIS MSDS HAS BEEN DEVELOPED TO ADDRESS SAFETY CONCERNS AFFECTING THOSE INDIVIDUALS WORKING IN WAREHOUSES AND OTHER PLACES WHERE LARGE NUMBERS OF THESE CONTAINERS ARE STORED, AS WELL AS THOSE AFFECTING POTENTIAL USERS OF THIS PRODUCT IN INDUSTRIAL /OCCUPATIONAL SETTINGS. ALL PERTINENT HEALTH, SAFETY AND ENVIRONMENTAL INFORMATION HAVE BEEN PRESENTED IN THIS DOCUMENT, PER THE REQUIREMENTS OF THE US FEDERAL OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200) AND CANADIAN WHMIS.

DISCLAIMER: THIS INFORMATION IS PROVIDED IN GOOD FAITH BUT WITHOUT EXPRESS OR IMPLIED WARRANTY. BUYER ASSUMES ALL RESPONSIBILITY FOR SAFETY AND USE NOT IN ACCORDANCE WITH LABEL INSTRUCTIONS. JUDGEMENTS AS TO THE SUITABILITY OF INFORMATION HEREIN FOR THE INDIVIDUAL'S OWN USE OR PURPOSES ARE NECESSARILY THE INDIVIDUAL'S OWN RESPONSIBILITY. ALTHOUGH REASONABLE CARE HAS BEEN TAKEN IN THE PREPARATION OF SUCH INFORMATION, AS MANUFACTURER OR DISTRIBUTOR, WE EXTEND NO WARRANTIES, MAKE NO REPRESENTATIONS, AND ASSUME NO RESPONSIBILITY AS TO THE ACCURACY OR SUITABILITY OF SUCH INFORMATION FOR APPLICATION TO THE INDIVIDUAL'S PURPOSES OR THE CONSEQUENCES OF ITS USE.

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PETTIT PAINT

MATERIAL SAFETY DATA SHEET

Supplier:	Kop-Coat, Inc. Marine Group 36 Pine Street Rockaway, NJ 07866	EMERGENCIES: Health/spills:.....: Chemtrec Assistance.....: Chemtrec Outside USA.....:	800-548-0489 800-424-9300 703-527-3887
		Kop-Coat, Inc. Product Information.....: Outside USA.....:	800-221-4466 973-625-3100

1. Product Information

Product name	6455 Metal Primer - Part A
Product code	1645500\1

Issuing date: 03/31/2011 **Contact person:** Environmental Health & Safety Mgr

2. Hazards identification

Emergency Overview

Appearance: Green Liquid **Odor:** Hydrocarbon

Hazards: WARNING!
Flammable liquid and vapor. Causes eye and skin irritation.
Harmful if swallowed. Vapor harmful.

Potential health effects

Primary Routes of Entry: Eye contact, ingestion, skin contact, inhalation, and absorption.

Eye contact:

May cause severe eye irritation and eye damage if not promptly rinsed from eyes. Symptoms may include discomfort or pain, stinging, tearing, redness and swelling of eyes.

Ingestion:

May be harmful if swallowed. May cause gastrointestinal distress. Symptoms may include irritation to the mouth, throat and stomach and gastrointestinal disturbances such as nausea, vomiting or diarrhea and effects similar to those described in the Inhalation section. Aspiration of this product into the lungs during ingestion, gagging or vomiting may cause lung damage, which can be fatal.

Skin contact:

May cause moderate skin irritation. Symptoms may include dryness, itching, burning sensation, redness, cracking and

swelling depending on the extent of exposure. May be harmful if absorbed through the skin in toxic amounts and cause systemic effects.

Inhalation:

May cause irritation to the nose, throat and respiratory tract. Inhalation of high concentrations of vapors may cause respiratory tract irritation and central nervous system depression. Symptoms may include headache, nausea, dizziness and drowsiness. Continued inhalation may result in unconsciousness or death.

Chronic effects:

Chronic inhalation of high concentrations of chromate mists may result in liver and/or kidney damage. NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Prolonged or repeated dermal exposure to this product can cause skin dermatitis characterized by red, dry, scaly skin.

Target Organs: Not Determined

This product contains carcinogens or potential carcinogens as listed by IARC or NTP. See Section 3 NTP, IARC (Carc.) columns for chemical identification.

3. Composition/information on ingredients

Chemical Name	CAS-No.	Weight %	Carc
Isopropyl alcohol	67-63-0	50 - 70	*
n-Butanol	71-36-3	20 - 30	
Zinc chromate pigment	13530-65-9	1 - 10	*
Polyvinyl butyral resin	63148-65-2	1 - 10	
Talc (nonasbestiform)	14807-96-6	< 1	*
Ethylbenzene	100-41-4	< 1	*

4. FIRST AID MEASURES

Eye contact:

Quickly and gently blot or brush chemical off the face. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Take care not to rinse contaminated water into unaffected eye or onto the face. Call poison control center, hospital emergency room, or physician immediately.

Ingestion:

NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 2 to 8 oz. (60 to 240 mL) of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water again. Immediately obtain medical advice.

Skin contact:

As quickly as possible, remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Quickly and gently blot or brush away excess chemical. Immediately wash with lukewarm, gently flowing water and non-abrasive soap for 15-20 minutes. Immediately obtain medical advice. Completely decontaminate clothing, shoes and leather goods before reuse or discard.

Inhalation:

Remove to fresh air. If not breathing, administer CPR until help arrives or the victim starts to breathe on his own. If breathing is difficult, give oxygen. Call poison control center, hospital emergency room, or physician immediately. Keep victim quiet and warm until emergency help arrives.

Note to Physician :

There is no specific antidote for effects from overexposure to this material. Treatment should be directed at the control of symptoms and the clinical condition.

5. FIRE-FIGHTING MEASURES

Flash point 65 deg F / 18 deg C

Extinguishing media:

Use alcohol foam, dry chemical, carbon dioxide or any Class B fire extinguishing agent. Water may be unsuitable for extinguishing fires. Water may be used to cool and prevent the rupture of containers that are exposed to the heat from a fire.

Hazardous combustion products:

See Section 10 for potential decomposition products.

Protective equipment and precautions for firefighters:

Evacuate all persons from the fire area to a safe location. Move non-burning material, as feasible, to a safe location as soon as possible. Fire fighters should be protected from potential explosion hazards while extinguishing the fire. Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use. Containers of this material may build up pressure if exposed to heat (fire). Use water spray to cool fire-exposed containers. Use water spray to disperse vapors if a spill or leak has not ignited. DO NOT extinguish a fire resulting from the flow of flammable liquid until the flow of the liquid is effectively shut off. This precaution will help prevent the accumulation of an explosive vapor-air mixture after the initial fire is extinguished.

6. ACCIDENTAL RELEASE MEASURES

Personal & Environmental Precautions:

Remove sources of ignition immediately. Stop flow of material if safe to do so. Contain spill and keep out of water courses. Ventilate area. Absorb spill in sand, earth or other suitable material. Transfer to appropriate container for disposal using non-sparking tools. Follow personal protective equipment recommendations found in Section 8. Personal protection needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the training and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits.

Methods of Containment & Clean-up and Other Information:

This product, if released in large enough quantities, may need to be reported to the US Coast Guard National Response Center at 1-800-424-8802. Contain spills with dikes and absorbents (sand, earth, dry chemical absorbent) to prevent migration and entry into waterways.

7. HANDLING AND STORAGE

Handling:

Keep container closed and upright when not in use. To prevent generation of static discharges, use bonding/grounding connection when transferring material. Vapors may accumulate and travel to distant ignition sources and flashback. Extinguish all sources of ignition including pilot lights, non-explosion proof motors and electrical equipment until vapors dissipate. Since empty containers may retain product residue and flammable vapors, observe precautions even after container is emptied. Do not cut, puncture, or weld on or near empty containers. Do not smoke where product is used or stored. Avoid contact with eyes, skin or clothing. Avoid inhalation (vapor, mist, dust or fume, as applicable). Use only with adequate ventilation. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling.

Storage:

Store in areas/buildings designed to comply with OSHA 1910.106. Store away from sources of ignition and heat. Keep containers closed when not in use. Store in cool, well ventilated space away from incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	CAS-No.	Z-1 PEL	Z-2 PEL	ACGIH TLV
Isopropyl alcohol	67-63-0	980 MGM3 (400 PPM)		200 PPM
n-Butanol	71-36-3	300 MGM3 (100 PPM)		20 PPM
Zinc chromate pigment	13530-65-9			0.01 MGM3

Polyvinyl butyral resin	63148-65-2		
Talc (nonasbestiform)	14807-96-6		2 MGM3
Ethylbenzene	100-41-4	435 MGM3 (100 PPM)	100 PPM

Engineering measures:

Use adequate ventilation to maintain airborne concentrations at levels below permissible or recommended occupational exposure limits. Supplementary local exhaust ventilation may be necessary in poorly ventilated spaces, during spraying, heating or other non-routine activities.

Eye/face protection:

Wear chemical-resistant glasses and/or goggles and a face shield when eye and face contact is possible due to splashing or spraying of material.

Skin protection:

Chemical-resistant, flexible-type gloves (Viton(R), neoprene, nitrile or equal) to prevent contact. Gloves should be rinsed and removed immediately after use. Wash hands after removing gloves. Wear chemical-resistant clothing (e.g. apron, pants, coveralls) and safety footwear as appropriate.

Respiratory protection:

Respiratory protection may be necessary under certain use conditions. Under such conditions, an appropriate, properly fitted NIOSH-approved respirator must be worn. If respirators are used, a program should be instituted to assure compliance with 29 CFR 1910.34 and 42 CFR 84.

General hygiene considerations:

Facilities utilizing this material should be equipped with an eyewash station and safety shower. Thoroughly clean shoes and wash contaminated clothes before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Appearance:	Green Liquid
Odor	Hydrocarbon
pH	Not applicable.
Boiling point	not determined
Flash point	65 deg F / 18 deg C
Solubility in water:	Moderate
Specific Gravity:	0.893
Weight per gallon (LB/GAL) :	7.44
Evaporation rate (n-Butyl acetate = 1):	< 1
Volatile by Weight (including water and exempt compounds) (%):	81 %
Volatile Organic Content (VOC):	711 (g/L)

10. STABILITY AND REACTIVITY

Stability:

Stable under normal conditions.

Incompatibility:

Oxidizing and reducing agents. Keep away from heat, sparks and open flames.

Hazardous decomposition products:

Carbon monoxide, carbon dioxide, oxides of nitrogen and other toxic organic compounds.

11. TOXICOLOGICAL INFORMATION

n-Butanol (CAS# 71-36-3): Prolonged or excessive exposure to n-butanol has been found to cause damage to the liver, kidneys, hearing and sense of balance.

Ethylbenzene: Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice.

Chromium hexavalent (VI) compounds (various CAS#s) are classified as known human carcinogens based on sufficient evidence of carcinogenicity in humans. Increased risk of lung cancer has been reported in the chromate production, chromate pigment production and chromium plating industries.

12. ECOLOGICAL INFORMATION

Ecological evaluation of this material has not been performed; however do not allow the product to be released to the environment without governmental approval/permits.

13. DISPOSAL CONSIDERATIONS

Waste from this material may be a listed and/or characteristic hazardous waste. Dispose of material, contaminated absorbent, container and unused contents in accordance with local, state, and federal regulations.

14. TRANSPORT INFORMATION

Transportation:

This product may be reclassified as Consumer Commodity, ORM-D, when shipped by ground; packaging quantity limitations apply.

By Ground:

DOT Hazard Class: 3
DOT Proper Shipping Name: Paint
DOT Packing Group: II
DOT UN Number: UN1263

By Air:

IATA Hazard Class: 3
IATA Proper Shipping Name: Paint
IATA Packing Group: II
IATA UN Number: UN1263

By Sea:

IMDG Hazard Class: 3
IMDG Proper Shipping Name: Paint
IMDG Packing Group: II
IMDG UN Number: UN1263

15. REGULATORY INFORMATION

EPA registration number: Not applicable.

Pest Registration Act number: Not applicable.

Other:

Not determined.

Chemical Name	CAS-No.	TSCA 12B	SARA 313	TSCA	DSL	EINECS	Prop 65	Whmis
Isopropyl alcohol	67-63-0		*	*	*	*		*
n-Butanol	71-36-3		*	*	*	*		*
Zinc chromate pigment	13530-65-9	*	*	*	*	*		*
Polyvinyl butyral resin	63148-65-2			*	*			*
Ethylbenzene	100-41-4		*	*	*	*	*	*

16. OTHER INFORMATION

HMIS Health: 2* **HMIS Flammability: 3** **HMIS Physical Hazard: 0**

NFPA Health: 2 **NFPA Flammability: 3** **NFPA Instability/Reactivity: 0**

NOTICE: This document is generated for the purpose of distributing health, safety, and environmental data. The information on this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed, or implied, regarding correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. Kop-Coat makes no warranty with respect thereto and disclaims all liability from reliance thereon.

Key:

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service Registry Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLA RQ	CERCLA Reportable Quantity
CFR	Code of Federal Regulations
CPR	Cardiopulmonary resuscitation
DSL	Domestic Substances List of Canada
EINECS	European Inventory of Existing Chemical Substances
EPCRA	Emergency Planning and Community Right-to-know Act
EPCRA EHS	EPCRA Extremely Hazardous Substance
EPCRA TPQ	EPCRA Threshold Planning Quantity
oF	Fahrenheit degrees
g/l	Grams per liter
gal	Gallons
Group A3	Carcinogen Category - Confirmed Animal Carcinogen with Unknown Relevance to Humans
Group A4	Carcinogen Category - Not Classifiable as a Human Carcinogen
HMIS	Hazardous Materials Identification System - Chemical Rating
IARC	International Agency for Research on Cancer
lbs or LBS	Pounds
MGM3	Milligrams per cubic meter
MIR	Maximum Incremental Reactivity

MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PPM	Parts per million
Proposition 65	California's Safe Drinking Water and Toxic Enforcement Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
VOL	Volume
WT	Weight
WHMIS	Canadian Workplace Hazardous Materials Information System
UN	United Nations

ANSI KC 1.74



PETTIT PAINT

MATERIAL SAFETY DATA SHEET

Supplier:	Kop-Coat, Inc. Marine Group 36 Pine Street Rockaway, NJ 07866	EMERGENCIES: Health/spills:.....: Chemtrec Assistance.....: Chemtrec Outside USA.....:	800-548-0489 800-424-9300 703-527-3887
		Kop-Coat, Inc. Product Information.....: Outside USA.....:	800-221-4466 973-625-3100

1. Product Information

Product name	Metal Primer Activator 044
Product code	1044001

Issuing date: 04/19/2011 **Contact person:** Environmental Health & Safety Mgr

2. Hazards identification

Emergency Overview

Appearance: Clear liquid **Odor:** Hydrocarbon

Hazards: DANGER!
Flammable liquid and vapor. Causes eye burns and skin irritation.
Harmful if swallowed or inhaled.

Potential health effects

Primary Routes of Entry: Eye contact, ingestion, skin contact, inhalation, and absorption.

Eye contact:

Corrosive to eyes! May cause severe eye damage including blindness. Extent of permanent damage depends upon the length of exposure, solution concentration and first aid measures.

Ingestion:

May cause severe irritation and burns to the mouth, throat and stomach. May cause vomiting, diarrhea and depressed respiration. Aspiration of this product into the lungs during ingestion, gagging or vomiting may cause lung damage, which can be fatal. May cause gastrointestinal distress. Symptoms may include irritation to the mouth, throat and stomach and gastrointestinal disturbances such as nausea, vomiting or diarrhea and effects similar to those described in the Inhalation section.

Skin contact:

May cause severe skin irritation and/or skin damage depending upon extent of exposure; signs and symptoms may include blistering, burns and/or possible scarring.

Inhalation:

Irritating to the respiratory tract. Inhalation of mist may cause severe irritation to the nose, throat and respiratory tract. Symptoms may include burning sensation, coughing, and wheezing. Prolonged inhalation of mists may be harmful. Inhalation of high concentrations of vapors may cause respiratory tract irritation and central nervous system depression. Symptoms may include headache, nausea, dizziness and drowsiness. Continued inhalation may result in unconsciousness or death.

Chronic effects:

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Prolonged or repeated dermal exposure to this product can cause skin dermatitis characterized by red, dry, scaly skin.

Target Organs: Not Determined

This product does not contain carcinogens or potential carcinogens as listed by IARC or NTP.

3. Composition/information on ingredients

Chemical Name	CAS-No.	Weight %	Carc
Isopropyl alcohol	67-63-0	70 - 100	
Phosphoric acid	7664-38-2	10 - 20	

4. FIRST AID MEASURES

Eye contact:

Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Neutral saline solution may be used as soon as it is available. DO NOT INTERRUPT FLUSHING. If necessary, continue flushing during transport to emergency care facility. Take care not to rinse contaminated water into the unaffected eye or onto the face. Quickly transport victim to an emergency care facility.

Ingestion:

NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 2 to 8 oz. (60 to 240 mL) of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water again. Quickly transport victim to an emergency care facility.

Skin contact:

As quickly as possible, remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Quickly and gently blot or brush away excess chemical. Immediately wash with lukewarm, gently flowing water and non-abrasive soap for 15-20 minutes. Immediately obtain medical advice. Completely decontaminate clothing, shoes and leather goods before reuse or discard.

Inhalation:

Remove source of contamination or move victim to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary edema can be delayed up to 48 hours after exposure. Quickly transport victim to an emergency care facility. This product is combustible/flammable. Take proper precautions (e.g. remove any sources of ignition). Remove source of contamination or move victim to fresh air. Keep victim quiet and warm until emergency help arrives.

Note to Physician :

There is no specific antidote for effects from overexposure to this material. Treatment should be directed at the control of symptoms and the clinical condition.

5. FIRE-FIGHTING MEASURES

Flash point 65 deg F \ 18 deg C

Extinguishing media:

Use alcohol foam, dry chemical, carbon dioxide or any Class B fire extinguishing agent. Water may be unsuitable for extinguishing fires. Water may be used to cool and prevent the rupture of containers that are exposed to the heat from a fire.

Hazardous combustion products:

See Section 10 for potential decomposition products. Combustion may produce carbon monoxide, carbon dioxide, and irritating or toxic vapors and gases.

Protective equipment and precautions for firefighters:

Evacuate all persons from the fire area to a safe location. Move non-burning material, as feasible, to a safe location as soon as possible. Fire fighters should be protected from potential explosion hazards while extinguishing the fire. Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use. Containers of this material may build up pressure if exposed to heat (fire). Use water spray to cool fire-exposed containers. Use water spray to disperse vapors if a spill or leak has not ignited. DO NOT extinguish a fire resulting from the flow of flammable liquid until the flow of the liquid is effectively shut off. This precaution will help prevent the accumulation of an explosive vapor-air mixture after the initial fire is extinguished.

6. ACCIDENTAL RELEASE MEASURES

Personal & Environmental Precautions:

Follow personal protective equipment recommendations found in Section 8. Personal protection needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the training and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits. Remove sources of ignition immediately. Stop flow of material if safe to do so. Contain spill and keep out of water courses. Ventilate area. Absorb spill in sand, earth or other suitable material. Transfer to appropriate container for disposal using non-sparking tools.

Methods of Containment & Clean-up and Other Information:

Contain spills with dikes and absorbents (sand, earth, dry chemical absorbent) to prevent migration and entry into waterways. This product, if released in large enough quantities, may need to be reported to the US Coast Guard National Response Center at 1-800-424-8802.

7. HANDLING AND STORAGE

Handling:

Avoid contact with eyes, skin or clothing. Avoid inhalation (vapor, mist, dust or fume, as applicable). Use only with adequate ventilation. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Keep container closed and upright when not in use. To prevent generation of static discharges, use bonding/grounding connection when transferring material. Vapors may accumulate and travel to distant ignition sources and flashback. Extinguish all sources of ignition including pilot lights, non-explosion proof motors and electrical equipment until vapors dissipate. Since empty containers may retain product residue and flammable vapors, observe precautions even after container is emptied. Do not cut, puncture, or weld on or near empty containers. Do not smoke where product is used or stored.

Storage:

Keep containers closed when not in use. Store in cool, well ventilated space away from incompatible materials. Store in areas/buildings designed to comply with OSHA 1910.106. Store away from sources of ignition and heat.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	CAS-No.	Z-1 PEL	Z-2 PEL	ACGIH TLV
Isopropyl alcohol	67-63-0	980 MGM3 (400 PPM)		200 PPM
Phosphoric acid	7664-38-2	1 MGM3		1 MGM3

Engineering measures:

Use adequate ventilation to maintain airborne concentrations at levels below permissible or recommended occupational exposure limits. Supplementary local exhaust ventilation may be necessary in poorly ventilated spaces, during spraying, heating or other non-routine activities.

Eye/face protection:

Wear industrial safety goggles, and faceshield, as necessary, when working with the concentrate.

Skin protection:

Chemical-resistant, flexible-type gloves (Viton(R), neoprene, nitrile or equal) to prevent contact. Gloves should be rinsed and removed immediately after use. Wash hands after removing gloves. Applicators and other handlers working with the concentrate must wear coveralls over long-sleeved shirt and long pants, chemical-resistant apron, footwear and socks.

Respiratory protection:

Respiratory protection may be necessary under certain use conditions. Under such conditions, an appropriate, properly fitted NIOSH-approved respirator must be worn. If respirators are used, a program should be instituted to assure compliance with 29 CFR 1910.34 and 42 CFR 84.

General hygiene considerations:

Remove contaminated clothing immediately, wash skin with soap and water, and launder or discard contaminated clothing. Items which cannot be decontaminated such as shoes, belts and watchbands, should be removed and destroyed.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Appearance:	Clear liquid
Odor	Hydrocarbon
pH	1.7
Boiling point	not determined
Flash point	65 deg F \ 18 deg C
Solubility in water:	Negligible
Specific Gravity:	0.872
Weight per gallon (LB/GAL) :	7.27
Evaporation rate (n-Butyl acetate = 1):	< 1
Volatile by Weight (including water and exempt compounds) (%):	86 %
Volatile Organic Content (VOC):	712 g/l (Parts A & B)

10. STABILITY AND REACTIVITY

Stability:

Stable under normal conditions.

Incompatibility:

Oxidizing and reducing agents. Keep away from heat, sparks and open flames.

Hazardous decomposition products:

Carbon monoxide, carbon dioxide, oxides of nitrogen and other toxic organic compounds.

11. TOXICOLOGICAL INFORMATION

Toxicological evaluation of this product as a whole has not been performed.

12. ECOLOGICAL INFORMATION

Ecological evaluation of this material has not been performed; however do not allow the product to be released to the environment without governmental approval/permits.

13. DISPOSAL CONSIDERATIONS

Waste from this material may be a listed and/or characteristic hazardous waste. Dispose of material, contaminated absorbent, container and unused contents in accordance with local, state, and federal regulations.

14. TRANSPORT INFORMATION

Transportation:

This product may be reclassified as Consumer Commodity, ORM-D, when shipped by ground; packaging quantity limitations apply.

By Ground:

DOT Hazard Class: 3, (8)
DOT Proper Shipping Name: Flammable liquid, corrosive, n.o.s.
(isopropanol, phosphoric acid)
DOT Packing Group: II
DOT UN Number: UN2924

By Air:

IATA Hazard Class: 3, (8)
IATA Proper Shipping Name: Flammable liquid, corrosive, n.o.s.
(isopropanol, phosphoric acid)
IATA Packing Group: II
IATA UN Number: UN2924

By Sea:

IMDG Hazard Class: 3, (8)
IMDG Proper Shipping Name: Flammable liquid, corrosive, n.o.s.
(isopropanol, phosphoric acid)
IMDG Packing Group: II
IMDG UN Number: UN2924

15. REGULATORY INFORMATION

EPA registration number: Not applicable.

Pest Registration Act number: Not applicable.

Other:

Not determined.

Chemical Name	CAS-No.	TSCA 12B	SARA 313	TSCA	DSL	EINECS	Prop 65	Whmis
Isopropyl alcohol	67-63-0		*	*	*	*		*
Phosphoric acid	7664-38-2			*	*	*		

16. OTHER INFORMATION

HMIS Health: 3* HMIS Flammability: 3 HMIS Physical Hazard: 0

NFPA Health: 3* NFPA Flammability: 3 NFPA Instability/Reactivity: 0

IMPORTANT: WHILE THE DESCRIPTIONS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU PERFORM AN ASSESSMENT TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED, DATA OR INFORMATION SET FORTH. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, OR DATA PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, THE DESCRIPTIONS, DATA AND INFORMATION FURNISHED HEREUNDER ARE GIVEN GRATIS. NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DATA AND INFORMATION GIVEN ARE ASSUMED. ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.

Key:

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service Registry Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLA RQ	CERCLA Reportable Quantity
CFR	Code of Federal Regulations
CPR	Cardiopulmonary resuscitation
DSL	Domestic Substances List of Canada
EINECS	European Inventory of Existing Chemical Substances
EPCRA	Emergency Planning and Community Right-to-know Act
EPCRA EHS	EPCRA Extremely Hazardous Substance
EPCRA TPQ	EPCRA Threshold Planning Quantity
oF	Fahrenheit degrees
g/l	Grams per liter
gal	Gallons
Group A3	Carcinogen Category - Confirmed Animal Carcinogen with Unknown Relevance to Humans
Group A4	Carcinogen Category - Not Classifiable as a Human Carcinogen
HMIS	Hazardous Materials Identification System - Chemical Rating
IARC	International Agency for Research on Cancer
lbs or LBS	Pounds
MGM3	Milligrams per cubic meter
MIR	Maximum Incremental Reactivity
MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PPM	Parts per million

Proposition 65	California's Safe Drinking Water and Toxic Enforcement Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
VOL	Volume
WT	Weight
WHMIS	Canadian Workplace Hazardous Materials Information System
UN	United Nations

ANSI KC 1.74



PETTIT PAINT

MATERIAL SAFETY DATA SHEET

Supplier:	Kop-Coat, Inc. Marine Group 36 Pine Street Rockaway, NJ 07866	EMERGENCIES: Health/spills:.....: Chemtrec Assistance.....: Chemtrec Outside USA.....:	800-548-0489 800-424-9300 703-527-3887
		Kop-Coat, Inc. Product Information.....: Outside USA.....:	800-221-4466 973-625-3100

1. Product Information

Product name	2018 Clear Sealer
Product code	1201800\1

Issuing date: 06/06/2011 **Contact person:** Environmental Health & Safety Mgr

2. Hazards identification

Emergency Overview

Appearance: Amber Liquid **Odor:** Hydrocarbon

Hazards: DANGER!
Flammable liquid and vapor. May be harmful if swallowed. May cause eye and skin irritation. Vapor harmful.

Potential health effects

Primary Routes of Entry: Eye contact, ingestion, skin contact, inhalation, and absorption.

Eye contact:

May cause eye irritation. Symptoms may include stinging, tearing, and redness of eyes.

Ingestion:

Aspiration of this product into the lungs during ingestion, gagging or vomiting may cause lung damage, which can be fatal. May cause gastrointestinal distress. Symptoms may include irritation to the mouth, throat and stomach and gastrointestinal disturbances such as nausea, vomiting or diarrhea.

Skin contact:

May cause skin irritation. Symptoms may include dryness, itching, burning sensation, redness, cracking and swelling depending on the extent of exposure. May be harmful if absorbed through the skin in toxic amounts and cause systemic effects.

Inhalation:

May cause irritation to the nose, throat and respiratory tract. Inhalation of high concentrations of vapors may cause respiratory tract irritation and central nervous system depression. Symptoms may include headache, nausea, dizziness and drowsiness. Continued inhalation may result in unconsciousness or death.

Chronic effects:

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Prolonged or repeated dermal exposure to this product can cause skin dermatitis characterized by red, dry, scaly skin.

Target Organs: Not Determined

This product does not contain carcinogens or potential carcinogens as listed by IARC or NTP.

3. Composition/information on ingredients

Chemical Name	CAS-No.	Weight %	Carc
VM&P Naphtha	64742-89-8	30 - 50	
Aliphatic Hydrocarbon (Stoddard type)	8052-41-3	10 - 20	
Petroleum distillates, light aromatic	64742-95-6	1 - 10	
1,2,4-Trimethylbenzene	95-63-6	1 - 10	

4. FIRST AID MEASURES

Eye contact:

Quickly and gently blot or brush chemical off the face. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Take care not to rinse contaminated water into unaffected eye or onto the face. Call poison control center, hospital emergency room, or physician immediately.

Ingestion:

NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 2 to 8 oz. (60 to 240 mL) of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water again. Immediately obtain medical advice.

Skin contact:

As quickly as possible, remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Quickly and gently blot or brush away excess chemical. Immediately wash with lukewarm, gently flowing water and non-abrasive soap for 15-20 minutes. Immediately obtain medical advice. Completely decontaminate clothing, shoes and leather goods before reuse or discard.

Inhalation:

This product is combustible/flammable. Take proper precautions (e.g. remove any sources of ignition). Remove source of contamination or move victim to fresh air. Keep victim quiet and warm until emergency help arrives.

Note to Physician :

There is no specific antidote for effects from overexposure to this material. Treatment should be directed at the control of symptoms and the clinical condition.

5. FIRE-FIGHTING MEASURES

Flash point 64 deg F/ 18 deg C

Extinguishing media:

Use alcohol foam, dry chemical, carbon dioxide or any Class B fire extinguishing agent. Water may be unsuitable for extinguishing fires. Water may be used to cool and prevent the rupture of containers that are exposed to the heat from a fire.

Hazardous combustion products:

See Section 10 for potential decomposition products.

Protective equipment and precautions for firefighters:

Evacuate all persons from the fire area to a safe location. Move non-burning material, as feasible, to a safe location as soon as possible. Fire fighters should be protected from potential explosion hazards while extinguishing the fire. Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use. Containers of this material may build up pressure if exposed to heat (fire). Use water spray to cool fire-exposed containers. Use water spray to disperse vapors if a spill or leak has not ignited. DO NOT extinguish a fire resulting from the flow of flammable liquid until the flow of the liquid is effectively shut off. This precaution will help prevent the accumulation of an explosive vapor-air mixture after the initial fire is extinguished.

6. ACCIDENTAL RELEASE MEASURES

Personal & Environmental Precautions:

Remove sources of ignition immediately. Stop flow of material if safe to do so. Contain spill and keep out of water courses. Ventilate area. Absorb spill in sand, earth or other suitable material. Transfer to appropriate container for disposal using non-sparking tools. Follow personal protective equipment recommendations found in Section 8. Personal protection needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the training and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits.

Methods of Containment & Clean-up and Other Information:

This product, if released in large enough quantities, may need to be reported to the US Coast Guard National Response Center at 1-800-424-8802. Contain spills with dikes and absorbents (sand, earth, dry chemical absorbent) to prevent migration and entry into waterways.

7. HANDLING AND STORAGE

Handling:

Keep container closed and upright when not in use. To prevent generation of static discharges, use bonding/grounding connection when transferring material. Vapors may accumulate and travel to distant ignition sources and flashback. Extinguish all sources of ignition including pilot lights, non-explosion proof motors and electrical equipment until vapors dissipate. Since empty containers may retain product residue and flammable vapors, observe precautions even after container is emptied. Do not cut, puncture, or weld on or near empty containers. Do not smoke where product is used or stored. Avoid contact with eyes, skin or clothing. Avoid inhalation (vapor, mist, dust or fume, as applicable). Use only with adequate ventilation. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling.

Storage:

Store in areas/buildings designed to comply with OSHA 1910.106. Store away from sources of ignition and heat. Keep containers closed when not in use. Store in cool, well ventilated space away from incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Z-1 PEL</u>	<u>Z-2 PEL</u>	<u>ACGIH TLV</u>
VM&P Naphtha	64742-89-8			
Aliphatic Hydrocarbon (Stoddard type)	8052-41-3	2900 MGM3 (500 PPM)		100 PPM
Petroleum distillates, light aromatic	64742-95-6			
1,2,4-Trimethylbenzene	95-63-6			25 PPM

Engineering measures:

Use adequate ventilation to maintain airborne concentrations at levels below permissible or recommended occupational exposure limits. Supplementary local exhaust ventilation may be necessary in poorly ventilated spaces, during spraying, heating or other non-routine activities.

Eye/face protection:

Wear chemical-resistant glasses and/or goggles and a face shield when eye and face contact is possible due to splashing or spraying of material.

Skin protection:

Chemical-resistant, flexible-type gloves (Viton(R), neoprene, nitrile or equal) to prevent contact. Gloves should be rinsed and removed immediately after use. Wash hands after removing gloves. Wear chemical-resistant clothing (e.g. apron, pants, coveralls) and safety footwear as appropriate.

Respiratory protection:

Respiratory protection may be necessary under certain use conditions. Under such conditions, an appropriate, properly fitted NIOSH-approved respirator must be worn. If respirators are used, a program should be instituted to assure compliance with 29 CFR 1910.34 and 42 CFR 84.

General hygiene considerations:

Facilities utilizing this material should be equipped with an eyewash station and safety shower. Thoroughly clean shoes and wash contaminated clothes before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Appearance:	Amber Liquid
Odor	Hydrocarbon
pH	Not applicable.
Boiling point	not determined
Flash point	64 deg F/ 18 deg C
Solubility in water:	Negligible
Specific Gravity:	0.866
Weight per gallon (LB/GAL) :	7.21
Evaporation rate (n-Butyl acetate = 1):	<1
Volatile by Weight (including water and exempt compounds) (%):	63
Volatile Organic Content (VOC):	541 g/L

10. STABILITY AND REACTIVITY

Stability:

Stable under normal conditions.

Incompatibility:

Oxidizing and reducing agents. Keep away from heat, sparks and open flames.

Hazardous decomposition products:

Carbon monoxide, carbon dioxide, oxides of nitrogen and other toxic organic compounds.

11. TOXICOLOGICAL INFORMATION

Toxicological evaluation of this product as a whole has not been performed.

12. ECOLOGICAL INFORMATION

Ecological evaluation of this material has not been performed; however do not allow the product to be released to the environment without governmental approval/permits.

13. DISPOSAL CONSIDERATIONS

Waste from this material may be a listed and/or characteristic hazardous waste. Dispose of material, contaminated absorbent, container and unused contents in accordance with local, state, and federal regulations.

14. TRANSPORT INFORMATION

Transportation: This product may be reclassified as Consumer Commodity, ORM-D, when shipped by ground; packaging quantity limitations apply.

By Ground:

DOT Hazard Class: 3
DOT Proper Shipping Name: Paint related material (ORM-D for quart containers only)
DOT Packing Group: II
DOT UN Number: UN1263

By Air:

IATA Hazard Class: 3
IATA Proper Shipping Name: Paint related material
IATA Packing Group: II
IATA UN Number: UN1263

By Sea:

IMDG Hazard Class: 3
IMDG Proper Shipping Name: Paint related material
IMDG Packing Group: II
IMDG UN Number: UN1263

15. REGULATORY INFORMATION

EPA registration number: Not applicable.

Pest Registration Act number: Not applicable.

Other:

Not applicable.

Chemical Name	CAS-No.	TSCA 12B	SARA 313	TSCA	DSL	EINECS	Prop 65	Whmis
VM&P Naphtha	64742-89-8			*	*	*		*
Aliphatic Hydrocarbon (Stoddard type)	8052-41-3			*	*	*		*

Petroleum distillates, light aromatic
1,2,4-Trimethylbenzene

64742-95-6
95-63-6

* * * * *
* * * * *

16. OTHER INFORMATION

HMIS Health: 2* HMIS Flammability: 3 HMIS Physical Hazard: 0

NFPA Health: 2 NFPA Flammability: 3 NFPA Instability/Reactivity: 0

NOTICE: This document is generated for the purpose of distributing health, safety, and environmental data. The information on this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed, or implied, regarding correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. Kop-Coat makes no warranty with respect thereto and disclaims all liability from reliance thereon.

Key:

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service Registry Number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLA RQ	CERCLA Reportable Quantity
CFR	Code of Federal Regulations
CPR	Cardiopulmonary resuscitation
DSL	Domestic Substances List of Canada
EINECS	European Inventory of Existing Chemical Substances
EPCRA	Emergency Planning and Community Right-to-know Act
EPCRA EHS	EPCRA Extremely Hazardous Substance
EPCRA TPQ	EPCRA Threshold Planning Quantity
oF	Fahrenheit degrees
g/l	Grams per liter
gal	Gallons
Group A3	Carcinogen Category - Confirmed Animal Carcinogen with Unknown Relevance to Humans
Group A4	Carcinogen Category - Not Classifiable as a Human Carcinogen
HMIS	Hazardous Materials Identification System - Chemical Rating
IARC	International Agency for Research on Cancer
lbs or LBS	Pounds
MGM3	Milligrams per cubic meter
MIR	Maximum Incremental Reactivity
MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PPM	Parts per million
Proposition 65	California's Safe Drinking Water and Toxic Enforcement Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
USEPA	United States Environmental Protection Agency

VOC	Volatile Organic Compound
VOL	Volume
WT	Weight
WHMIS	Canadian Workplace Hazardous Materials Information System
UN	United Nations

ANSI KC 1.74

KOP-COAT, INC
 MARINE GROUP EAST
 36 PINE STREET
 ROCKAWAY
 NJ 07866

EMERGENCIES
 HEALTH/SPILLS.....: 800-548-0489
 CHEMTREC ASSISTANCE: 800-424-9300
 CHEMTREC OUTSIDE US: 703-527-3887
 CANUTEC.....: 613-996-6666

KOP-COAT, INC
 PRODUCT INFORMATION: 800-221-4466
 OUTSIDE USA.....: 973-625-3100

 1 PRODUCT IDENTIFICATION

PRODUCT NAME: 1875 Trinidad Black
 PRODUCT USE.: Antifouling bottom paint
 APPEARANCE..: Black liquid with hydrocarbon odor
 CAS NUMBER..: Mixture
 SYNONYMS....: None

REVISION...: 7
 DATE.....: 7/23/08
 MSDS NUMBER: 1187500

 2 HAZARDOUS INGREDIENTS

<u>HAZARDOUS COMPONENT</u>	<u>REG AGENCY</u>	<u>PPM</u>	<u>NOTES</u>	<u>MG/M3</u>	<u>NOTES</u>
Epoxy Ester CAS NUMBER:REICH-TR SECRET PERCENT BY WGT: 1 TO 5			(None established.)		
Ethylbenzene CAS NUMBER:100-41-4 PERCENT BY WGT: < 1	ACGIH STEL ACGIH-TWA NIOSH NIOSH STEL OSHA STEL OSHA TWA	125 100 100 125 125 100		543 434 435 545 545 435	
Cupric oxide CAS NUMBER:1317-38-0 PERCENT BY WGT: 1 TO 5			(None established.)		
Cuprous oxide (as Cu dust and mists) CAS NUMBER:1317-39-1 PERCENT BY WGT: 60 TO 65	ACGIH-TLV OSHA-TWA			1.0 1.0	
Carbon black CAS NUMBER:1333-86-4	ACGIH-TWA NIOSH	- -	(+)	3.5 3.5	8 (+)

 2 HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENT	REG AGENCY	PPM	NOTES	MG/M3	NOTES
PERCENT BY WGT: 1 TO 5	OSHA TWA	-		3.5	
Petroleum distillates CAS NUMBER:64742-94-5	ACGIH TLV OSHA PEL	100 500	STS STS		
PERCENT BY WGT: 10 TO 15					
Petroleum distillates CAS NUMBER:64742-95-6	ACGIH TLV OSHA-PEL	100 500	STS STS		
PERCENT BY WGT: 1 TO 5					
Copper (as Cu dusts & mists) CAS NUMBER:7440-50-8	ACGIH TWA NIOSH OSHA TWA	- - -		1 1 1	
PERCENT BY WGT: 1 TO 5					
Dibutyl Phthalate CAS NUMBER:84-74-2	ACGIH TWA NIOSH	- -		5 5	
PERCENT BY WGT: 1 TO 5	OSHA-TWA	-		5	
Naphthalene CAS NUMBER:91-20-3	ACGIH STEL ACGIH TWA	15 10		79 52	
PERCENT BY WGT: < 1	OSHA STEL OSHA TWA	15 10		75 50	

1,2,4 Trimethylbenzene (None established.)
 CAS NUMBER:95-63-6
 PERCENT BY WGT: 1 TO 5

NOTES:

8) 0.1 mg/m3 in presence of polycyclic aromatic hydrocarbons
 (+) NIOSH Occupational Carcinogen
 STS) Recommend that exposure limits for stoddard solvent be used as a guideline.

 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: WARNING! Combustible liquid and vapor. Harmful or fatal if swallowed or inhaled. May cause eye, skin and respiratory tract irritation.

EYES: May cause eye irritation. Not expected to cause permanent damage if promptly rinsed from eyes.

SKIN: May cause skin irritation. Prolonged and/or repeated skin contact may cause irritation characterized by redness, cracking and blistering. May be absorbed in toxic amounts through the skin and cause systemic effects.

INHALATION: May cause respiratory tract irritation. Exposure to high

3 HAZARDS IDENTIFICATION

concentrations may cause central nervous system effects, including headache, drowsiness, nausea, and dizziness.

INGESTION: May cause gastrointestinal disturbances such as nausea, vomiting, diarrhea, and effects similar to those described in INHALATION. Aspiration of this product into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury, possibly progressing to death.

CHRONIC: Reports have associated repeated or prolonged occupational exposure to solvents with permanent brain or nervous system damage, liver and kidney damage or may cause cardiac arrhythmia. Ethylbenzene, carbon black and naphthalene are classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in laboratory animals.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing disease in or a history of ailments involving the nervous system, liver, kidney, respiratory system or eyes are at a greater risk of developing adverse effects when exposed to this material.

4 FIRST AID MEASURES

EYE CONTACT: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing the eye. Contact a poison control center for treatment advice.

SKIN CONTACT: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash contaminated clothing before reuse.

INHALATION: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth. Call a poison control center or doctor for further treatment advice.

INGESTION: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

NOTE TO PHYSICIAN: There is no specific antidote for effects from overexposure to this material. Treatment should be directed at the control of symptoms and the clinical condition.

5 FIRE FIGHTING MEASURES

FLASH POINT: 115 F/46 C

5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use dry chemical, carbon dioxide, water spray or foam.

FIRE FIGHTING PROCEDURES: As in any fire, wear complete fire service protective equipment, including full-face MSHA/NIOSH approved or equivalent self-contained breathing apparatus. Use water to cool fire-exposed container/structure/protect personnel.

FIRE AND EXPLOSION HAZARDS: Can release vapors that form explosive mixtures. Vapors can travel to a source of ignition and flash back. Closed containers may explode when exposed to extreme heat (fire). Toxic vapors may be given off in a fire.

6 SPILL AND LEAK PROCEDURES

Stop spill/leak if no risk involved. Avoid breathing vapors. Eliminate ALL sources of ignition such as flares, flames (including pilot lights), and electrical sparks. Ventilate area. Take up carefully to avoid heat and sparks. Use an inert absorbent to complete a clean-up. This material reacts with oxidizing materials. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

7 HANDLING AND STORAGE

HANDLING: Avoid breathing of vapors, mists or fumes. Do not get on skin, in eyes or on clothing. Spray paint in accordance with OSHA 29 CFR 1910.107. Use with adequate ventilation. Wash thoroughly after handling.

STORAGE: Store in areas/buildings designed to comply with OSHA 1910.106. Keep in a closed, labeled container within a cool (well-shaded), dry, ventilated area. Protect from physical damage. Keep containers closed when material is not in use. Maintain good housekeeping.

OTHER: Keep away from heat and open flame. If post application/use processing of this product generates dust or if spray application is made, " Exposure Limits " in Section 2 apply. Do not use until manufacturer's precautions have been read/understood. Containers of this material may be hazardous when empty. Since emptied containers retain product residues (vapor, liquid), all hazard precautions given in the data sheet must be observed. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY CAN EXPLODE AND CAUSE INJURY OR DEATH. All five gallon pails and larger containers, should be grounded and/or bonded when material is transferred.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Ventilation (general and/or local exhaust) is required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Ventilation rates should be matched to use conditions. Supplementary local exhaust ventilation may be needed in poorly ventilated spaces or during spraying.

RESPIRATORY PROTECTION: If engineering controls do not maintain airborne exposure concentrations to an acceptable level, wear an appropriate, properly fitted respirator (NIOSH/MSHA-approved or equivalent) during and after sanding and application. Respirator selection, use and maintenance should be in accordance with the requirements in 29 CFR 1910.134 and NIOSH 42 CFR 84, whenever workplace conditions warrant a respirator's use.

EYE PROTECTION: Industrial safety glasses minimum, goggles, faceshield, as necessary.

HAND PROTECTION: Chemical-resistant, flexible-type gloves (heavy duty neoprene or equal) to prevent contact. Gloves should be rinsed and removed immediately after use. Wash hands after removing gloves.

SKIN PROTECTION: Wear industrial-type work clothing, which may include long-sleeved shirt and long pants, chemical-resistant apron, footwear and socks. OTHER: Facilities utilizing this material should be equipped with an eyewash station and safety shower. Thoroughly clean shoes and wash contaminated clothes before reuse.

9 PHYSICAL AND CHEMICAL PROPERTIES

Weight Per Gallon (lbs): 19.100 % VOL by Weight.: 17.3
Vapor Density.: (air=1)>1 Boiling Point...: Not determined
Vapor Pressure: Not determined Evaporation Rate: (ether=1)<1
pH.....: Not determined Specific Gravity: 2.293
Solubility In Water: Negligible Viscosity.....: Not determined
VOC Content.....: 396 g/L

10 STABILITY AND REACTIVITY DATA

STABILITY: This material is stable.
HAZARDOUS POLYMERIZATION: None
INCOMPATIBILITY: Avoid acids, reducing agents, oxidizing agents, chlorates, bromates, potassium nitrate, hydrogen peroxide, heat, sparks and open flame.
HAZARDOUS DECOMPOSITION PRODUCT(S): Carbon monoxide, carbon dioxide, noxious copper compounds, and irritating vapors of acetic acid and other toxic organic compounds during fires.

11 TOXICOLOGICAL INFORMATION

 11 TOXICOLOGICAL INFORMATION

No additional information. See Section 3 for health hazards.

 12 ECOLOGICAL INFORMATION

This material is toxic to fish. Do not apply directly to water by cleaning of equipment or disposal of wastes. Do not allow chips and dust generated during paint removal to enter water. Dispose of paint debris in an approved landfill. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans and other waters unless in accordance with the requirements of a National Pollution Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent to sewer system without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

 13 DISPOSAL CONSIDERATIONS

Dispose of unusable product in accordance with local, state and federal regulations.

 14 TRANSPORTATION INFORMATION

DEPARTMENT OF TRANSPORTATION REPORTABLE QUANTITIES

REPORTABLE QTY (LBS)	HAZARDOUS SUBSTANCE
100	Xylene
10	Dibutyl Phthalate
100	Naphthalene

Shipment by Ground-Domestic:

Combustible liquid - Exempt from DOT Regulations in non-bulk (< 119 gallons) containers.

Shipment by Air:

PROPER SHIPPING NAME: UN1263, Paint, Class 3, PG III
 LABEL: Flammable liquid

Shipment by Sea:

PROPER SHIPPING NAME: UN1263, Paint, Class 3, PG III, MARINE POLLUTANT (cuprous oxide)

 15 REGULATORY INFORMATION

15 REGULATORY INFORMATION

SARA TITLE III SECTION 313 CHEMICALS

Ethylbenzene
Cupric oxide
Cuprous oxide (as Cu dust and mists)
Copper (as Cu dusts & mists)
Dibutyl Phthalate
Naphthalene
1,2,4 Trimethylbenzene

WARNING: THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

EPA Registration Number 60061-49.

16 OTHER INFORMATION

Ethylbenzene is considered a Group 2B carcinogen (possibly carcinogenic to humans). This category generally includes agents for which there is limited evidence in humans in the absence of sufficient evidence in experimental animals.

IARC Monograph Vol. 65 reports carbon black is widely used in rubber tires, hoses, gaskets and coated fabrics; smaller amounts are used in printing inks, paints and plastics. Although one cohort study on carbon black production workers showed slight excesses of lung cancer, the totality of the epidemiological studies both in the carbon black production industry and in some user industries suggested that there is inadequate evidence for the carcinogenicity in humans of carbon black. Carbon black was thus evaluated as possibly carcinogenic to humans (Group 2B).

NOTICE: This document is generated for the purpose of distributing health, safety and environmental data. The information on this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. Kop-Coat makes no warranty with respect thereto and disclaims all liability from reliance thereon.

PREPARED BY: Manager of Health, Safety and Environmental Affairs

----- END OF MSDS -----

KOP-COAT, INC
 MARINE GROUP EAST
 36 PINE STREET
 ROCKAWAY
 NJ 07866

EMERGENCIES
 HEALTH/SPILLS.....: 800-548-0489
 CHEMTREC ASSISTANCE: 800-424-9300
 CHEMTREC OUTSIDE US: 703-527-3887
 CANUTEC.....: 613-996-6666

KOP-COAT, INC
 PRODUCT INFORMATION: 800-221-4466
 OUTSIDE USA.....: 973-625-3100

 1 PRODUCT IDENTIFICATION

PRODUCT NAME: Pettit Marine Vivid Antifouling Paint 1161 White
 PRODUCT USE.: Antifouling bottom paint
 APPEARANCE..: White liquid with typical hydrocarbon odor
 CAS NUMBER..: Mixture
 SYNONYMS....: None

REVISION...: 2
 DATE.....: 4/13/04
 MSDS NUMBER: 1116100

 2 HAZARDOUS INGREDIENTS

<u>HAZARDOUS COMPONENT</u>	<u>REG AGENCY</u>	<u>PPM</u>	<u>NOTES</u>	<u>MG/M3</u>	<u>NOTES</u>
Epoxy Ester CAS NUMBER:REICH-TR SECRET PERCENT BY WGT: 1 TO 5			(None established.)		
Ethyl Benzene CAS NUMBER:100-41-4 PERCENT BY WGT: < 1	ACGIH STEL ACGIH-TWA NIOSH NIOSH STEL OSHA STEL OSHA TWA	125 100 100 125 125 100		543 434 435 545 545 435	
Cuprous Thiocyanate CAS NUMBER:1111-67-7 PERCENT BY WGT: 25 TO 30	ACGIH TLV-TWA ACGIH-TWA OSHA PEL-TWA			1.0 0.2 1.0	19 FUM 19
Zinc oxide (as dust) CAS NUMBER:1314-13-2 PERCENT BY WGT: 20 TO 25	ACGIH-TWA OSHA TWA OSHA-TWA	- - -		2.0 15 5	 1 2
Xylene CAS NUMBER:1330-20-7 PERCENT BY WGT: 1 TO 5	ACGIH STEL ACGIH-TWA NIOSH	150 100 100		651 100 435	

 2 HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENT	REG AGENCY	PPM	NOTES	MG/M3	NOTES
	NIOSH STEL	150		655	
	OSHA STEL	150		655	
	OSHA TWA	100		435	
Zinc pyrithione CAS NUMBER:13463-41-7 PERCENT BY WGT: 1 TO 5	MANF REC			0.35	22
Titanium dioxide CAS NUMBER:13463-67-7 PERCENT BY WGT: 10 TO 15	ACGIH-TWA	-		10	
	NIOSH	-	(+)	-	(+)
	OSHA TWA	-		10	1
Trimethyl benzene CAS NUMBER:25551-13-7 PERCENT BY WGT: 1 TO 5	ACGIH TLV	25		123	
	OSHA TWA	25		125	
Petroleum distillates CAS NUMBER:64742-94-5 PERCENT BY WGT: 10 TO 15	OSHA PEL	100		-	
Amorphous, Silicon Dioxide CAS NUMBER:7631-86-9 PERCENT BY WGT: 1 TO 5	ACGIH-TLV	-		10	
	OSHA-TWA			6	
Dibutyl Phthalate CAS NUMBER:84-74-2 PERCENT BY WGT: 1 TO 5	ACGIH TWA	-		5	
	NIOSH	-		5	
	OSHA-TWA	-		5	

NOTES:

- 1) Total dust
- 2) Respirable fraction
- 19) Exposure limits reported as Cu dusts and mists
- 22) Manufacturer's recommended exposure limits
- (+)) NIOSH Occupational Carcinogen (FUM) as a fume.

 3 HAZARDS IDENTIFICATION

EYES: Direct contact with liquid or vapor may cause moderate eye irritation, characterized by stinging, redness, and tearing of eyes.

SKIN: CORROSIVE: Prolonged or repeated contact causes burns. Prolonged or repeated contact can result in defatting and drying of the skin characterized by redness, cracking, blistering, irritation and dermatitis. May be absorbed through the skin resulting in systemic effects.

3 HAZARDS IDENTIFICATION

INHALATION: Exposure to vapors or mist can cause irritation to the respiratory tract (nose, throat, and lungs). Prolonged or repeated exposure may cause headaches, dizziness, drowsiness, or other central nervous system effects. Exposure to high concentrations could result in severe respiratory irritation, liver and kidney damage, and even death. Prolonged or repeated inhalation of fumes of this product may lead to a temporary, reversible, flu-like condition known as metal fume fever. Metal fume fever may cause fever, chills, nausea, and shortness of breath that occur 4-24 hours post-exposure and last 24-48 hours and resolve without further complications.

INGESTION: May cause gastrointestinal disturbances such as nausea, vomiting, diarrhea, and effects similar to those described under INHALATION. Aspiration of this product into the lung may cause chemical pneumonitis, which can be fatal.

CHRONIC EXPOSURE: Reports have associated repeated or prolonged occupational exposure to solvents with permanent brain or nervous system damage.

Medical Conditions Aggravated by Exposure: Individuals with pre-existing disease in or a history of ailments involving the muscular or nervous system, skin, respiratory tract, liver, or kidney are at a greater risk of developing adverse effects when exposed to this material.

4 FIRST AID MEASURES

EYE CONTACT: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing the eye.

SKIN CONTACT: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash contaminated clothing before reuse.

INHALATION: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth. Call a poison control center or doctor for further treatment advice.

INGESTION: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

NOTE TO PHYSICIAN: There is no specific antidote for effects from overexposure to this material. Treatment should be directed at the control of symptoms and the clinical condition.

5 FIRE FIGHTING MEASURES

5 FIRE FIGHTING MEASURES

FLASH POINT: 110 F/45C

EXTINGUISHING MEDIA: Use dry chemical, carbon dioxide, water spray or foam.

FIRE FIGHTING PROCEDURES: As in any fire, wear complete fire service protective equipment, including full-face MSHA/NIOSH approved or equivalent self-contained breathing apparatus. Use water to cool fire-exposed container/structure/protect personnel.

FIRE AND EXPLOSION HAZARDS: Can release vapors that form explosive mixtures. Vapors can travel to a source of ignition and flash back. Closed containers may explode when exposed to extreme heat (fire). Irritating vapors of acetic acid may be given off in a fire.

6 SPILL AND LEAK PROCEDURES

Stop spill/leak if no risk involved. Avoid breathing vapors. Eliminate ALL sources of ignition such as flares, flames (including pilot lights), and electrical sparks. Ventilate area. Take up carefully to avoid heat and sparks. Use an inert absorbent to complete a clean-up. This material reacts with oxidizing materials. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

7 HANDLING AND STORAGE

HANDLING: Avoid breathing of vapors, mists or fumes. Do not get on skin, in eyes or on clothing. Spray paint in accordance with OSHA 29 CFR 1910.107. Use with adequate ventilation. Wash thoroughly after handling.

STORAGE: Store in areas/buildings designed to comply with OSHA 1910.106. Keep in a closed, labeled container within a cool (well-shaded), dry, ventilated area. Protect from physical damage. Keep containers closed when material is not in use. Maintain good housekeeping.

OTHER: Keep away from heat and open flame. If post application/use processing of this product generates dust or if spray application is made, " Exposure Limits " in Section 2 apply. Do not use until manufacturer's precautions have been read/understood. Containers of this material may be hazardous when empty. Since emptied containers retain product residues (vapor, liquid), all hazard precautions given in the data sheet must be observed. All five gallon pails and larger containers, should be grounded and/or bonded when material is transferred.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Ventilation is normally required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Facilities storing or utilizing this product should be equipped with an eyewash facility.

RESPIRATORS: Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved or equivalent) during and after application. Follow respirator manufacturer's directions for respirator use. Close container after each use. A respiratory protection program that meets OSHA 1910.134 and NIOSH 42 CFR 84 requirements must be followed whenever workplace conditions warrant a respirator's use.

PERSONAL PROTECTIVE EQUIPMENT: Industrial safety glasses at a minimum. As necessary for work area conditions: use side shields, goggles, or faceshield. Chemical resistant flexible-type gloves (heavy duty neoprene or equal). Wear industrial-type work clothing and safety footwear. Depending on working conditions, i.e., contact potential, wear resistant protective garments such as head/neck cover, aprons, jackets, pants, coveralls, boots, etc.

9 PHYSICAL AND CHEMICAL PROPERTIES

Weight Per Gallon (lbs): 16.370 % VOL by Weight.: Not determined
Vapor Density.: (air=1)<1 Boiling Point...: Not determined
Vapor Pressure: Not determined Evaporation Rate: (ether=1)>1
pH.....: Not determined Specific Gravity: > 1
Solubility In Water: Negligible Viscosity.....: Not determined
VOC Content.....: 330 g/L Max

10 STABILITY AND REACTIVITY DATA

STABILITY: This material is stable.
HAZARDOUS POLYMERIZATION: None
INCOMPATIBILITY: Avoid acids, reducing agents, oxidizing agents, heat, sparks and open flame.
HAZARDOUS DECOMPOSITION PRODUCT(S): Carbon monoxide, carbon dioxide upon thermal decomposition, and irritating vapors of acetic acid during fires.

11 TOXICOLOGICAL INFORMATION

Certain components of this product have been shown to cause fetotoxic effects in laboratory animal studies. Relevance to humans is uncertain.

11 TOXICOLOGICAL INFORMATION

Xylene: Laboratory animals exposed to high levels of xylene showed evidence of effects on the liver, kidneys, spleen and hearing loss.

Zinc Pyrithione: Animal studies have found skeletal muscle atrophy and peripheral nerve damage characterized by general muscle weakness. These effects have not been observed in primates, which suggests the effects would not occur in humans.

Cuprous Thiocyanate: Chronic copper poisoning causes hepatic cirrhosis, brain damage and demylenation, kidney defects, and copper deposition in the cornea. It may lead to hemolytic anemia and it accelerates arteriosclerosis.

12 ECOLOGICAL INFORMATION

Contact Kop-Coat for data.

13 DISPOSAL CONSIDERATIONS

This product as supplied is a USEPA defined ignitable hazardous waste. Dispose of unusable product as a hazardous waste (D001) in accordance with local, state and federal regulations.

14 TRANSPORTATION INFORMATION

DEPARTMENT OF TRANSPORTATION REPORTABLE QUANTITIES

REPORTABLE QTY (LBS)	HAZARDOUS SUBSTANCE
100	Xylene
10	Dibutyl Phthalate
100	Naphthalene

DOT PROPER SHIPPING NAME: Consumer commodity
DOT HAZARD CLASS: ORM-D
LABEL: None
DOT IDENTIFICATION NUMBER: None
DOT information for domestic ground transportation.

15 REGULATORY INFORMATION

SARA TITLE III SECTION 313 CHEMICALS
Ethyl Benzene

15 REGULATORY INFORMATION

Zinc oxide (as dust)
Xylene
Dibutyl Phthalate

WARNING: THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

EPA Registration Number 60061-116.

16 OTHER INFORMATION

Ethylbenzene is considered a Group 2B carcinogen (possibly carcinogenic to humans). This category generally includes agents for which there is limited evidence in humans in the absence of sufficient evidence in experimental animals.

NOTICE: While the information and recommendations set forth herein are believed to be accurate as of the date hereof, Kop-Coat, Inc. makes no warranty with respect thereto and disclaims all liability from reliance thereon.

PREPARED BY: Manager of Health, Safety and Environmental Affairs

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----- END OF MSDS -----
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Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Marine High Gloss Gelcoat Compound, P.N. 06025, 06026
MANUFACTURER: 3M
DIVISION: Marine & Specialty Vehicle
ADDRESS: 3M Center, St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 05/06/11
Supersedes Date: 07/07/05

Document Group: 20-3304-1

Product Use:

Intended Use: Automotive
 Specific Use: Marine Finishing Material

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
ALUMINUM OXIDE	1344-28-1	30 - 60
WATER	7732-18-5	10 - 30
HYDROTREATED LIGHT PETROLEUM DISTILLATES	64742-47-8	10 - 15
DISTILLATES (PETROLEUM), ACID TREATED, LIGHT	64742-14-9	5 - 10
KEROSENE	8008-20-6	5 - 10
HYDRODESULFURIZED KEROSENE (PETROLEUM)	64742-81-0	5 - 10
STODDARD SOLVENT	8052-41-3	1 - 5
MEDIUM ALIPHATIC SOLVENT NAPHTHA	64742-88-7	1 - 5
HYDROTREATED HEAVY NAPHTHA (PETROLEUM)	64742-48-9	1 - 5
POLY(OXYETHYLENE)SORBITAN MONOSTEARATE	9005-67-8	1 - 5
SORBITAN OLEATE	1338-43-8	1 - 5
OLEIC ACID	112-80-1	1 - 5
GLYCERIN	56-81-5	1 - 5
WHITE MINERAL OIL (PETROLEUM)	8042-47-5	1 - 5
TRIETHANOLAMINE	102-71-6	1 - 5
ISOPROPYL ALCOHOL	67-63-0	< 5
ETHYLBENZENE	100-41-4	< 0.02

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: white, solvent odor

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Combustible liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Contains a chemical or chemicals which can cause cancer. May cause target organ effects.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Mild Eye Irritation: Signs/symptoms may include redness, pain, and tearing.

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, and itching.

May be absorbed through skin and cause target organ effects.

Inhalation:

Intentional concentration and inhalation may be harmful or fatal.

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Prolonged or repeated exposure may cause:

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure may cause:

Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Ingredient

ETHYLBENZENE

C.A.S. No.

100-41-4

Class Description

Grp. 2B: Possible human carc.

Regulation

International Agency for Research on Cancer

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Wash affected area with soap and water. If signs/symptoms develop, get medical attention.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	<i>No Data Available</i>
Flash Point	103 °F [<i>Test Method:</i> Pinsky-Martens Closed Cup] [<i>Details:</i> ASTM D93]
Flammable Limits(LEL)	1.00 %
Flammable Limits(UEL)	7.00 %
OSHA Flammability Classification:	Class II Combustible Liquid

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Combustible liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard.

6.2. Environmental precautions

For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Clean-up methods

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with detergent and water. Seal the container.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Ground containers securely when transferring contents. Wear low static or properly grounded shoes. Avoid breathing of vapors, mists or spray. Avoid eye contact with vapors, mists, or spray. Avoid contact with oxidizing agents. Avoid skin contact. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment. Do not ingest. Avoid static discharge.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Store away from oxidizing agents. Keep container in well-ventilated area.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment. Provide local exhaust ventilation at transfer points. Provide appropriate local exhaust ventilation on open containers.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Safety Glasses with side shields

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Fluoroelastomer

Nitrile Rubber

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P100 particulate prefilters

Select and use respiratory protection to prevent an inhalation exposure based on the results of an exposure assessment. Consult with your respirator manufacturer for selection of appropriate types of respirators.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
ALUMINUM OXIDE	CMRG	TWA	1 fiber/cc	
ALUMINUM OXIDE	OSHA	TWA, respirable fraction	5 mg/m3	
ALUMINUM OXIDE	OSHA	TWA, as total dust	15 mg/m3	
ETHYLBENZENE	ACGIH	TWA	100 ppm	
ETHYLBENZENE	ACGIH	STEL	125 ppm	
ETHYLBENZENE	CMRG	TWA	25 ppm	
ETHYLBENZENE	CMRG	STEL	75 ppm	
ETHYLBENZENE	OSHA	TWA	435 mg/m3	
GLYCERIN	ACGIH	TWA, as mist	10 mg/m3	
GLYCERIN	OSHA	TWA, respirable fraction	5 mg/m3	
GLYCERIN	OSHA	TWA, as total dust	15 mg/m3	
HYDRODESULFURIZED KEROSENE (PETROLEUM)	ACGIH	TWA, as total hydrocarbon vapor, non-aerosol	200 mg/m3	Skin Notation*
HYDROTREATED HEAVY NAPHTHA (PETROLEUM)	3M	TWA	100 ppm	
HYDROTREATED HEAVY NAPHTHA (PETROLEUM)	CMRG	TWA	300 ppm	
HYDROTREATED LIGHT PETROLEUM DISTILLATES	CMRG	TWA	300 ppm	
ISOPROPYL ALCOHOL	ACGIH	TWA	200 ppm	
ISOPROPYL ALCOHOL	ACGIH	STEL	400 ppm	
ISOPROPYL ALCOHOL	OSHA	TWA	980 mg/m3	
KEROSENE	ACGIH	TWA, as total hydrocarbon vapor, non-aerosol	200 mg/m3	Skin Notation*
KEROSENE	CMRG	TWA	500 ppm	
MEDIUM ALIPHATIC SOLVENT NAPHTHA	CMRG	TWA	100 ppm	
PETROLEUM DISTILLATES	OSHA	TWA	2000 mg/m3	
STODDARD SOLVENT	ACGIH	TWA	100 ppm	
STODDARD SOLVENT	OSHA	TWA	2900 mg/m3	
TRIETHANOLAMINE	ACGIH	TWA	5 mg/m3	
WHITE MINERAL OIL (PETROLEUM)	CMRG	TWA	5 mg/m3	
WHITE MINERAL OIL (PETROLEUM)	CMRG	STEL	10 mg/m3	

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color, Grade:	white, solvent odor
General Physical Form:	Liquid
Autoignition temperature	<i>No Data Available</i>
Flash Point	103 °F [<i>Test Method:</i> Pensky-Martens Closed Cup] [<i>Details:</i> ASTM D93]
Flammable Limits(LEL)	1.00 %
Flammable Limits(UEL)	7.00 %
Boiling Point	Approximately 212 °F
Density	1.15 g/ml
Vapor Density	<=1.00 [<i>Ref Std:</i> AIR=1]
Vapor Pressure	<=1.0000 mmHg
Specific Gravity	1.150 [<i>Ref Std:</i> WATER=1]
pH	7.80 - 8.10
Melting point	<i>No Data Available</i>
Solubility in Water	Complete
Evaporation rate	<i>No Data Available</i>
Hazardous Air Pollutants	0.236 % weight [<i>Test Method:</i> Calculated]
Volatile Organic Compounds	331 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Volatile Organic Compounds	2.76 lb/gal [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Volatile Organic Compounds	28.8 % weight [<i>Test Method:</i> calculated per CARB title 2]
Kow - Oct/Water partition coef	<i>No Data Available</i>
Percent volatile	Approximately 56 %
VOC Less H2O & Exempt Solvents	471 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Viscosity	150000 - 210000 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

None known

10.2 Materials to avoid

Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

Substance

Carbon monoxide
Carbon dioxide

Condition

Not Specified
Not Specified

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

60-4300-5055-3, 60-4300-5056-1, LB-T100-0190-4

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
ALUMINUM OXIDE	1344-28-1	30 - 60

STATE REGULATIONS

Contact 3M for more information.

CALIFORNIA PROPOSITION 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
ETHYLBENZENE	100-41-4	**Carcinogen

** WARNING: contains a chemical which can cause cancer.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 1 Flammability: 2 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Reason for Reissue: The MSDS has been revised because 3M has adopted the 16-section ANSI/ISO format. The potential hazards of the product have not changed. We encourage you to reread the MSDS and review the information.

Revision Changes:

Section 1: Product use information was modified.
Section 16: Disclaimer (second paragraph) was modified.
Section 5: Fire fighting procedures information was modified.
Section 7: Handling information was modified.
Section 7: Storage information was modified.
Section 8: Eye/face protection information was modified.
Section 8: Skin protection - recommended gloves information was modified.
Section 8: Respiratory protection - recommended respirators information was modified.
Section 14: Transportation legal text was modified.
Section 15: Inventories information was modified.
Section 9: Boiling point information was modified.
Section 5: Flammable limits (UE) information was modified.
Section 5: Flammable limits (LEL) information was modified.
Section 9: Property description for optional properties was modified.
Section 1: Initial issue message was modified.
Section 8: Respiratory protection - recommended respirators guide was modified.
Section 9: Flammable limits (LEL) information was modified.
Section 9: Flammable limits (UEL) information was modified.
Section 9: Density information was added.
Section 14: ID Number Heading Template 1 was added.
Section 14: ID Number(s) Template 1 was added.
Section 2: Ingredient table was added.
Section 15: EPCRA 313 information was added.
Section 15: EPCRA 313 text was added.
Section 8: Exposure guidelines ingredient information was added.
Section 8: Exposure guideline note was added.
Section 8: Exposure guidelines data source legend was added.

Section 3: Carcinogenicity table was added.
Section 3: Carcinogenicity heading was added.
Section 15: California proposition 65 ingredient information was added.
Section 15: California proposition 65 heading was added.
Section 15: California proposition 65 cancer warning was added.
Section 6: 6.2. Environmental precautions heading was added.
Section 6: 6.1. Personal precautions, protective equipment and emergency procedures heading was added.
Section 10.1 Conditions to avoid heading was added.
Section 10.2 Materials to avoid heading was added.
Section 16: Web address was added.
Section 6: Personal precautions information was added.
Section 6: Environmental procedures information was added.
Section 6: Methods for cleaning up information was added.
Section 10: Materials to avoid physical property was added.
Section 10: Conditions to avoid physical property was added.
Section 1: Address was added.
Copyright was added.
Company logo was added.
Section 6: Clean-up methods heading was added.
Telephone header was added.
Company Telephone was added.
Section 1: Emergency phone information was added.
Section 1: Emergency phone information was deleted.
Company Logo was deleted.
Copyright was deleted.
Section 16: Web address heading was deleted.
Section 6: Release measures information was deleted.
Section 6: Release measures heading was deleted.
Section 10: Materials and conditions to avoid physical property was deleted.
Section 1: Address line 1 was deleted.
Section 1: Address line 2 was deleted.

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the MSDS available directly from 3M

3M USA MSDSs are available at www.3M.com

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name: POLYOB 1-GL 4PK GLOSS LOW VOC Revision Date: 07/27/2010
 Identification Number: 330513V
 Product Use/Class: Wood Coating/Urethane
 Supplier: Rust-Oleum Corporation
 11 Hawthorn Parkway
 Vernon Hills, IL 60061
 USA
 Manufacturer: Rust-Oleum Corporation
 11 Hawthorn Parkway
 Vernon Hills, IL 60061
 USA
 Preparer: Regulatory Department

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than			OSHA PEL-TWA	OSHA PEL CEILING
		ACGIH TLV-TWA	ACGIH TLV-STEL			
Hydrotreated Light Distillate	64742-47-8	25.0	200 mg/m3	N.E.	N.E.	N.E.
Octamethylcyclotetrasiloxane	556-67-2	10.0	N.E.	N.E.	N.E.	N.E.
1-Chloro-4-(Trifluoromethyl)Benzene	98-56-6	10.0	N.E.	N.E.	N.E.	N.E.
Stoddard Solvents	8052-41-3	5.0				

Section 3 - Hazards Identification

*** Emergency Overview ***: Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Harmful if swallowed. Causes eye irritation. Vapors irritating to eyes and respiratory tract. Combustible liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: May cause skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. May cause headaches and dizziness. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: 106 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire And Explosion Hazards: Keep containers tightly closed.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash hands before eating. Wash thoroughly after handling. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist. Avoid contact with eyes.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Keep away from heat, sparks, flame and sources of ignition. Keep container closed when not in use.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Liquid	Evaporation Rate:	Slower than Ether
Solubility in H ₂ O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.947	PH:	N.D.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Hydrotreated Light Distillate	>3160 mg/kg (Skin)	N.E.
Octamethylcyclotetrasiloxane	1540 mg/kg (Rat, Oral)	N.E.
1-Chloro-4(Trifluoromethyl)Benzene	4479 ppm (Rat, Inhalation)	6800 mg/kg (Rat, Oral)
Stoddard Solvents	N.E.	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Paint, Not Regulated	Paint	Paint
Hazard Class:	N.A.	3	3
UN Number:	N.A.	UN1263	UN1263
Packing Group:	N.A.	III	III
Limited Quantity:	No	IMDG 34-08, 3.4.7	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

<u>Chemical Name</u>	<u>CAS Number</u>
1-Chloro-4(Trifluoromethyl)Benzene	98-56-6

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

<u>Chemical Name</u>	<u>CAS Number</u>
Oil Modified Urethane	PROPRIETARY
Oil Modified Urethane	MIXTURE

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

<u>Chemical Name</u>	<u>CAS Number</u>
Oil Modified Urethane	PROPRIETARY
Oil Modified Urethane	MIXTURE

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: B3 D2B

Section 16 - Other Information

NFPA Ratings:

Health: 2 Flammability: 2 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/l: 349

REASON FOR REVISION:

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name: PTOUCH 2X +SSPR 6PK WHITE PRIMER Revision Date: 05/06/2011

Identification Number: 249058

Product Use/Class: Primer/Aerosol

Supplier: Rust-Oleum Corporation Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway 11 Hawthorn Parkway
Vernon Hills, IL 60061 Vernon Hills, IL 60061
USA USA

Preparer: Regulatory Department

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less			OSHA PEL-TWA	OSHA PEL CEILING
		Than	ACGIH TLV-TWA	ACGIH TLV-STEL		
Acetone	67-64-1	30.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	30.0	N.E.	N.E.	N.E.	N.E.
Titanium Dioxide	13463-67-7	15.0	10 mg/m3	N.E.	15 mg/m3 (Total Dust)	N.E.
Mineral Spirits	64742-88-7	10.0	100 ppm	N.E.	100 ppm	N.E.
Aliphatic Hydrocarbon	64742-89-8	10.0	100 ppm	N.E.	100 ppm	N.E.
Xylene	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Naphtha	8032-32-4	5.0	N.E.	N.E.	N.E.	N.E.
Magnesium Silicate	14807-96-6	5.0	2 mg/m3	N.E.	0.1 mg/m3 (Respirable)	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group

2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.

May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Keep containers tightly closed. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Use only in a well-ventilated area. Avoid breathing vapor or mist. Wash thoroughly after handling. Wash hands before eating.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H ₂ O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.809	pH:	N.E.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Mineral Spirits	>5000 mg/kg (Rat, Oral)	>1400 ppm (Rat, Inhalation, 4Hr)
Aliphatic Hydrocarbon	>5000 mg/kg (Rat, Oral)	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Naphtha	>5000 mg/kg (Rat, Oral)	N.E.
Magnesium Silicate	N.E.	TCLo: 11 mg/m3 (Inhalation)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -**New Jersey Right-to-Know:**

The following materials are non-hazardous, but are among the top five components in this product.

<u>Chemical Name</u>	<u>CAS Number</u>
Modified Alkyd	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

<u>Chemical Name</u>	<u>CAS Number</u>
Modified Alkyd	PROPRIETARY

International Regulations: As follows -**CANADIAN WHMIS:**

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Reactivity: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 531

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is

the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

MATERIAL SAFETY DATA SHEET

Date Revised: 10-07-2013

Page: 7

Glaze Coat

MSDS Number: 120012

Component	RQ (lbs.)
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Styrene	1000
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SARA Title III: Section 302- Extremely Hazardous Substances

None

SARA Title III: Section 313- Toxic Chemical List

Component	CAS Number	Percentage
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Styrene	100-42-5	24 %
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EPA Hazardous Air Pollutants (HAPS) 40 CFR 63

Component	CAS Number	Percentage
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Styrene	100-42-5	24 %
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International Regulations

EINECS (Europe) The intentional ingredients of this product are listed.

DSL (Canada) The intentional ingredients of this product are listed.

WHMIS Classification

Health Hazard: D2A, D2B (Other Toxic Effects)

Physical Hazard: B2 (Flammable)

State and Local Regulations

California Proposition 65:

This product contains the following chemical(s) known to the state of California to cause cancer. STYRENE OXIDE, 1, 3-BUTADIENE, TITANIUM DIOXIDE, CRYSTALLINE SILICA.

Styrene, in the presence of air and high temperature or prolonged exposure of styrene/air mixture to sunlight, can react to form styrene oxide.

This product contains the following chemical(s) known to the state of California to cause birth defects or reproductive harm.

1,3-BUTADIENE

SECTION 16. OTHER INFORMATION

HMIS Rating: Health – 2*, Flammability - 3, Reactivity - 2
Key- 0=Least, 1=Slight, 2=Moderate, 3=Serious, 4=Extreme, *=Chronic Effects

Other Precautions for Use: This product must be mixed with Cream Hardener prior to use. Please refer to the Material Safety Data Sheet (#100340) for catalyst before using. If product is to be sanded, the OSHA PEL/TLV of 10 mg/m³ for nuisance dust should be observed.

Additional Information may be obtained by calling the Evercoat MSDS Hotline at 1-800-729-7600.

NOTICE: The information accumulated herein is believed to be correct as of the date issued from sources, which are believed to be accurate and reliable. Since it is not possible to anticipate all circumstances of use, recipients are advised to confirm, in advance of need, that the information is current, applicable and suitable to their circumstances.

MATERIAL SAFETY DATA SHEET

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SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: Light Weight
Product Numbers: 100156, 100157, 100158, 100159, 100164,
100166, 100167, 800156, 800157
Product Use: Light weight bodyfiller

Company

ITW -Evercoat
a Division of Illinois Tool Works Inc.
6600 Cornell Road
Cincinnati, Ohio USA
Phone: 513-489-7600

Emergency Telephone Numbers:

CHEMTREC: 1-800-424-9300
CANUTEC: 1-613-996-6666

Prepared By: Safety Department

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	EINECS Number	% (by weight)
Talc	14807-96-6	238-877-9	30 – 35
Polyester Resin (Non-Hazardous)	Proprietary	Proprietary	30 – 35
Styrene	100-42-5	202-851-5	15 – 20
Magnesite	546-93-0	208-915-9	5 – 10
Calcium Carbonate	1317-65-3	215-279-6	5 – 10
Inert Filler	Proprietary	Proprietary	1 – 5
Titanium Dioxide	13463-67-7	236-675-5	0 - 1

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING! FLAMMABLE LIQUID AND VAPOR.
CAUSES EYE, SKIN, NOSE AND THROAT IRRITATION.

Potential Health Effects

Acute Effects (Short Term):

Eye: Contact with liquid or vapor may result in irritation, redness, tearing, and blurred vision.

Skin: May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns.

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Swallowing: Ingestion of this material may cause gastrointestinal irritation, nausea, diarrhea, and vomiting. Aspiration of this material into the lungs due to vomiting may produce chemical pneumonitis which can be fatal.

Inhalation: Excessive inhalation of vapors may cause nasal and respiratory irritation, acute nervous system depression, fatigue, weakness, nausea, headache, and dizziness. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

Chronic Effects of Overexposure (Long Term):

Styrene: Excessive overexposure to styrene has been found to cause the following effects in humans and may aggravate pre-existing disorders of these organs; central nervous system effects, effects on hearing, mild effects on color vision and respiratory tract damage.

Cancer Information: Styrene is listed as “reasonably anticipated to be a human carcinogen” in the U.S. Dept. of Health and Human Services National Toxicology Program’s 12th report on carcinogens. The International Agency for Research on Cancer (IARC) has classified styrene as a group 2B carcinogen (possibly carcinogenic to humans). This classification is not based on evidence that styrene may be carcinogenic, but rather on a revised definition for Group 2B, and consideration of new data on styrene oxide(Group 2A). This material may contain trace amounts of chemicals considered to be carcinogenic by OSHA, (1,3- Butadiene- IARC Group 2A and Crystalline Silica- IARC Group 1). Titanium Dioxide is listed by IARC as possibly carcinogenic to humans (Group 2B). This listing is based on inadequate evidence of carcinogenicity in humans and sufficient evidence in experimental animals.

Other Health Effects: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Primary Route(s) of Entry: Inhalation, Skin contact, Eye contact, Ingestion, Skin absorption.

SECTION 4. FIRST AID MEASURES

Eyes: Flush eyes gently with water for at least 15 minutes. Seek immediate medical attention.

Skin: Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

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Swallowing: Consult a physician or poison control center immediately. DO NOT INDUCE VOMITING. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. If possible, do not leave individual unattended.

Inhalation: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, oxygen may be beneficial if administered by trained personnel.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point: >95 °F (35 °C)

Explosive Limit: Lower: 1.1% Upper: 6.1%

Autoignition Temperature: 914.0 °F (490.0 °C)

OSHA Flammability Class: Flammable Liquid – Class IC

Hazardous Products of Combustion: May form: carbon dioxide, carbon monoxide, styrene oxide, and various hydrocarbons.

Fire and Explosion Hazards: Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point.

Extinguishing Media: Regular foam, carbon dioxide, dry chemical.

Fire Fighting Instructions: Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breathing apparatus NIOSH approved with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment.

NFPA Rating: Health - 2, Flammability - 3, Reactivity - 2

SECTION 6. ACCIDENTAL RELEASE MEASURES

In Case of Spill: Eliminate all sources of ignition such as flares, flames (including pilot lights), and electrical sparks. Ventilate the area. Wear proper protective equipment (Section 8). Avoid breathing vapors. Collect with an inert absorbant and dispose of properly.

SECTION 7. HANDLING AND STORAGE

MATERIAL SAFETY DATA SHEET

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Handling: All hazard precautions given in the data sheet must be observed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Use only with adequate ventilation. Do not breathe sanding dust, vapors or spray mist. Do not take internally. Close container after each use. **Keep out of reach of children.**

Storage: Store material in a cool, well-ventilated area. For maximum product quality, avoid prolonged storage at temperatures above 75°F (25°C). Do not use or store near heat, sparks, or open flame. Keep container tightly closed. Avoid contact with incompatible materials.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: Chemical splash goggles in compliance with OSHA regulations are recommended.

Skin Protection: Protective gloves and proper clothing should be worn to prevent skin contact. Gloves should be made of neoprene or natural rubber. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protection: Use a NIOSH approved respirator designed to remove particulate matter and organic solvent vapors.

Engineering Controls: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below acceptable limits. Explosion-proof ventilation system is acceptable.

Exposure Guidelines:

<u>Hazardous Ingredients</u>	<u>CAS Number</u>	<u>OSHA PEL/TWA</u>	<u>ACGIH TLV</u>
Talc	14807-96-6	20 mppcf	2 mg/m ³
Styrene	100-42-5	100 ppm	20 ppm
Magnesite	546-93-0	15 mg/m ³	10 mg/m ³
Inert Filler	Proprietary	5 mg/m ³	10 mg/m ³
Calcium Carbonate	1317-65-3	15 mg/m ³	10 mg/m ³
Titanium Dioxide	13463-67-7	15 mg/m ³	10 mg/m ³

Mppcf- millions of particles per cubic foot of air

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	293 °F/ 145 °C (Styrene)	Vapor Density:	Heavier than air.
Specific Gravity / Density:	1.25 / 10.4 lbs/gal	Percent Volatiles by weight:	15 – 20 %
Evaporation Rate:	Slower than ethyl ether.	Physical State:	Paste
Melting Point:	-23.1 °F / -30.6 °C (Styrene)	pH:	Neutral

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Odor:	Sharp, aromatic odor.	Solubility:	Insoluble in water.
Vapor Pressure:	5.0 mmHg @ 68 °F / 20 °C	Appearance:	Gray Paste
Octanol/Water Partition Coefficient:	Unknown		
VOC (as packaged-less exempts and water):	1.46 lbs/gal or 175g/L	VOC (as applied*- 2%by wt hardener- less exempts and water):	0.40 lbs/gal or 48 g/L
Percent Solids by weight – as packaged:	85.0%	Percent Solids by weight – as applied* - 2 % by wt hardener:	96.0 %
VHAP Content by weight – as packaged:	15.0 %	VHAP Content by weight – as applied* - 2 % by weight hardener:	4.0 %

*NOTE: The applied VOC and VHAP Content is lower than the packaged VOC and VHAP Content due to a reactive diluent (styrene) that reacts and becomes non-volatile (bonded in the solid material) when the hardener is added.

SECTION 10. STABILITY AND REACTIVITY

Hazardous Polymerization: Product may undergo hazardous polymerization if exposed to extreme heat.

Hazardous Decomposition: May form: carbon dioxide, carbon monoxide, styrene oxide and various hydrocarbons.

Chemical Stability: Stable under normal handling conditions.

Incompatibility: Avoid contact in uncontrolled conditions with: peroxides, strong acids, strong oxidizing agents and polymerization catalysts.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity Data:

Ingredient	CAS #	LD ₅₀ Oral-Rat	LC ₅₀ Inhalation-Rat
Styrene	100-42-5	5,000 mg/kg	24 g/m ³ /4H
Calcium Carbonate	1317-65-3	6,450 mg/kg	N/E

N/E-Not Established

Carcinogenicity: See Cancer Information, Section 3.

Mutagenicity: No significant evidence found.

Teratogenicity: No significant risk of birth defects or reproductive toxicity of styrene to humans.

SECTION 12. ECOLOGICAL INFORMATION

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Ecotoxicity: Styrene is toxic to aquatic organisms and should not be released to sewage, draining systems or any body of water exceeding concentrations of approved limits under applicable regulations and permits.

SECTION 13. DISPOSAL CONSIDERATION

RCRA Hazardous Waste: This material as supplied, if discarded, would be regulated as a hazardous waste under RCRA (40 CFR 261). Dispose of in accordance with applicable federal, state, and local regulations.

RCRA Hazard Class: This material would be regulated as EPA Hazardous Waste Number D001 based on the characteristic of ignitability.

SECTION 14. TRANSPORT INFORMATION

DOT Description: The DOT Classification for shipping is dependent on quantity, type of packaging (a kit may include other components), or method of shipment.

SECTION 15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status

TSCA (USA) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4(a)

<u>Component</u>	<u>RQ (lbs.)</u>
Styrene	1000

SARA Title III: Section 302- Extremely Hazardous Substances

None

SARA Title III: Section 313- Toxic Chemical List

<u>Component</u>	<u>CAS Number</u>	<u>Percentage</u>
Styrene	100-42-5	15 %

EPA Hazardous Air Pollutants (HAPS) 40 CFR 63

<u>Component</u>	<u>CAS Number</u>	<u>Percentage</u>
Styrene	100-42-5	15 %

International Regulations

EINECS (Europe) The intentional ingredients of this product are listed.

DSL (Canada) The intentional ingredients of this product are listed.

WHMIS Classification

Health Hazard: D2A, D2B (Other Toxic Effects)

Physical Hazard: B2 (Flammable)

State and Local Regulations

California Proposition 65:

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This product contains the following chemical(s) known to the state of California to cause cancer. STYRENE OXIDE, 1,3-BUTADIENE, ANILINE, CRYSTALLINE SILICA

Styrene, in the presence of air and high temperature or prolonged exposure of styrene/air mixture to sunlight, can react to form styrene oxide.

This product contains the following chemical(s) known to the state of California to cause birth defects or reproductive harm. 1,3-BUTADIENE,

SECTION 16. OTHER INFORMATION

HMIS Rating: Health – 1*, Flammability - 3, Reactivity - 2
Key- 0=Least, 1=Slight, 2=Moderate, 3=Serious, 4=Extreme, *=Chronic Effects

Other Precautions for Use: This product must be mixed with Cream Hardener prior to use. Please refer to the Material Safety Data Sheet (#100340) for catalyst before using. If product is to be sanded, the OSHA PEL/TLV of 10 mg/m³ for nuisance dust should be observed.

Additional Information may be obtained by calling the Evercoat MSDS Hotline at 1-800-729-7600.

NOTICE: The information accumulated herein is believed to be correct as of the date issued from sources, which are believed to be accurate and reliable. Since it is not possible to anticipate all circumstances of use, recipients are advised to confirm, in advance of need, that the information is current, applicable and suitable to their circumstances.



Material Safety Data Sheet

An **RPM** Company

24 Hour Emergency Phone Numbers:

Medical/Poison Control:

In U.S.: Call 1-800-222-1222

Outside U.S.: Call your local poison control center

Transportation/National Response Center:

1-800-535-5053

1-352-323-3500

.....
 • NOTE: The National Response Center emergency numbers to be used
 • only in the event of chemical emergencies involving a spill, leak, fire,
 • exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in American Spanish upon request.
 Los Datos de Seguridad del Producto pueden obtenerse en Espanol si lo requiere.

Product Name: Weldwood Original Contact Cement Bottle
Product UPC Number: 070798001022, 070798001053
Product Use/Class: Contact Cement
Manufacturer: **DAP Products Inc.**
2400 Boston Street Suite 200
Baltimore, MD 21224-4723
888-327-8477 (non-emergency matters)

Revision Date: 07/18/2013
Supersedes: 08/13/2001
MSDS Number: 00030202001

Section 2 - Hazards Identification

Emergency Overview: A(n) tan liquid product with a strong solvent odor. DANGER! Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Vapors can form an ignitable mixture with air. Vapors can flow along surfaces to a distant ignition source and flash back. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Store away from caustics and oxidizers. Keep container closed and away from heat, sparks, and open flame. Vapors may be harmful if inhaled. Harmful or fatal if swallowed. Aspiration hazard if swallowed - can enter lungs and cause damage. Aspiration may cause pulmonary edema and pneumonitis. Irritating to eyes, respiratory system and skin. May affect the brain or nervous system causing dizziness, headache or nausea. Avoid breathing vapors. Prolonged or repeated inhalation of solvent vapors may cause irregular heartbeat. Use only with adequate ventilation. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: May cause eye irritation. Signs and symptoms may include: pain, tears, swelling, redness and blurred vision.

Effects Of Overexposure - Skin Contact: May cause skin irritation. Prolonged and repeated skin contact may cause dermatitis, drying and defatting due to the solvent properties.

Effects Of Overexposure - Inhalation: Vapors may be harmful if inhaled. Inhalation of vapors may cause irritation of the nose, throat, lungs and respiratory tract. Inhalation of vapors in high concentration may cause shortness of breath. Prolonged, repeated or high exposures may cause central nervous system depression leading to headaches, nausea, drowsiness, dizziness, and possibly narcosis. In extreme cases, may cause loss of consciousness. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Effects Of Overexposure - Ingestion: Harmful or fatal if swallowed. May cause gastrointestinal disturbances with dizziness and central nervous system depression. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. If ingested, may cause depressed respiration. Aspiration hazard if swallowed. Aspiration of material into the lungs due to vomiting can cause chemical pneumonitis, which can be fatal.

Effects Of Overexposure - Chronic Hazards: Repeated or prolonged exposure may cause skin, respiratory, kidney and liver damage. NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Symptoms include: loss of memory, loss of intellectual ability and loss of coordination. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Overexposure or misuse of toluene can cause liver, kidney, and brain damage as well as cardiac abnormalities.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Eye Contact

Medical Conditions which May be Aggravated by Exposure: Pre-existing eye, skin and pulmonary disorders may be aggravated by exposure to this product.

Carcinogenicity:

None

Section 3 - Composition / Information On Ingredients		
Chemical Name	CASRN	Wt%
Toluene	108-88-3	15-40
Acetone	67-64-1	15-40
Light aliphatic solvent naphtha	64742-89-8	7-13
n-Heptane	142-82-5	5-10
Methylcyclohexane	108-87-2	0.5-1.5

Section 4 - First Aid Measures

First Aid - Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

First Aid - Skin Contact: Wash skin with soap and water for 15 minutes. Get medical aid if symptoms persist. Remove and wash contaminated clothing. To remove from skin, remove completely with a dry cloth or paper towel, before washing with detergent and water. DO NOT try to peel the solidified material from the skin or use solvents or thinners to dissolve it. The use of vegetable oil or mineral oil is recommended for removal of this material from the skin. Flush exposed area with water while removing contaminated clothing. Get medical attention if irritation persists.

First Aid - Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

NOTE: Only trained personnel should administer artificial respiration or give oxygen.

First Aid - Ingestion: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

Note to Physician: Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This material is an aspiration hazard if swallowed. Potential danger from aspiration must be weighed against possible oral toxicity when deciding whether to induce vomiting. Preexisting disorders of the following organs (may be aggravated by exposure to this material: skin, lungs (for example, asthma-like conditions). Individuals with preexisting heart disorders may be more susceptible to arrhythmias (irregular heartbeat) if exposed to high concentrations of this material.

COMMENTS: If over-exposure occurs, call your poison control center at 1-800-222-1222.

Section 5 - Fire Fighting Measures

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam

Unusual Fire And Explosion Hazards: Flammable liquid. Vapors can form an ignitable mixture with air. Vapors can flow along surfaces to a distant ignition source and flash back. Vapors may form explosive mixtures with air. Eliminate sources of ignition: heat, electrical equipment, sparks and flames. Containers may explode if exposed to extreme heat. Empty containers retain product residue (liquid and/or vapor). Vapor can ignite potentially causing an explosion.

Special Firefighting Procedures: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Immediately eliminate sources of ignition. Dike to prevent entering any sewer or waterway. Transfer liquid to a holding container. Contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Scrape up dried material and place into containers.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN! DO NOT TAKE INTERNALLY. Flammable liquid. Avoid heat, sparks and open flames. Keep away from open flames, hot surfaces and sources of ignition. Use in well ventilated area. Open all windows and doors or use other means to ensure cross-ventilation and fresh air entry during application and drying. Avoid breathing vapor and contact with eyes, skin and clothing. Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal. Construction and repair activities can adversely affect indoor air quality. Consult with occupants or a representative (i.e. maintenance, building manager, industrial hygienist, or safety officer) to determine ways to minimize impact.

Storage: Store away from sources of ignition and heat. Keep containers tightly closed. Do not store at temperatures above 120 degrees F. Store containers away from excessive heat and freezing. Store away from caustics and oxidizers.

Section 8 - Exposure Controls / Personal Protection

Chemical Name	CASRN	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Toluene	108-88-3	20 PPM	N.E.	N.E.	200 PPM	N.E.	300 PPM	Yes
Acetone	67-64-1	500 PPM	750 PPM	N.E.	1000 PPM	N.E.	N.E.	No
Light aliphatic solvent naphtha	64742-89-8	300 PPM	N.E.	N.E.	300 PPM	400 PPM	N.E.	No
n-Heptane	142-82-5	400 PPM	500 PPM	N.E.	500 PPM	N.E.	N.E.	No
Methylcyclohexane	108-87-2	400 PPM	500 PPM	N.E.	500 PPM	N.E.	N.E.	No

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices.

Exposure Notes:

None

Precautionary Measures: Please refer to other sections and subsections of this MSDS.

Engineering Controls: Use only in well-ventilated areas. Vapors are heavier than air and may spread along floors. Check all low areas for presence of vapor. Provide sufficient general and/or local exhaust ventilation to maintain exposure below recommended exposure limit. The following exposure control techniques may be used to effectively minimize employee exposure: local exhaust ventilation, enclosed system design, process isolation and remote control in combination with appropriate use of personal protective equipment and prudent work practices. These techniques may not necessarily address all issues pertaining to your operations. We, therefore, recommend that you consult with experts of your choice to determine whether or not your programs are adequate.

If airborne contaminants are generated when the material is heated or handled, sufficient ventilation in volume and air flow patterns should be provided to keep air contaminant concentration levels below acceptable criteria.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. If concentrations exceed the exposure limits specified, use of a NIOSH-approved supplied air respirator is recommended. Where the protection factor is exceeded, use of a Self Contained Breathing Apparatus (SCBA) may be necessary. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Solvent-resistant gloves.

Eye Protection: Goggles or safety glasses with side shields.

Other protective equipment: Provide eyewash and solvent impervious apron if body contact may occur.

Hygienic Practices: Remove and wash contaminated clothing before re-use.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	Vapor Density:	Heavier Than Air
Odor:	Strong Solvent	Odor Threshold:	Not Established
Color:	Tan	Evaporation Rate:	Faster Than n-Butyl Acetate
Solubility in H2O:	Not Established	Specific Gravity:	0.85
Freeze Point:	Not Established	pH:	Not Applicable
Vapor Pressure:	Not Established	Viscosity:	Not Established
Physical State:	Liquid	Flammability:	Extremely Flammable
Flash Point, F:	-50 F	Method:	(Seta Closed Cup)
Lower Explosive Limit, %:	Not Determined	Upper Explosive Limit, %:	Not Determined

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing. Avoid contact with skin, eyes and clothing. Keep away from open flames, hot surfaces and sources of ignition. Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Incompatibility: Incompatible with strong bases and oxidizing agents. Avoid contact with strong acids and oxidizable organic materials in the presence of heat. Incompatible with open flames, hot surfaces and sources of ignition.

Hazardous Decomposition Products: Normal decomposition products, i.e., COx, NOx.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established

Product LC50: Not Established

CASRN	Chemical Name	LD50	LC50
108-88-3	Toluene	-----	Rat:49 gm/m3/4H
67-64-1	Acetone	-----	Rat:50100 mg/m3/8H
142-82-5	n-Heptane	-----	Rat:103 gm/m3/4H
108-87-2	Methylcyclohexane	Mice:2250 mg/kg	MIC:41500 mg/m3/2H

Significant Data with Possible Relevance to Humans: None.

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste. Liquids cannot be disposed of in a landfill. Discarded material should be incinerated at a permitted facility. Do not re-use empty containers.

EPA Waste Code if Discarded (40 CFR Section 261): D001.

Section 14 - Transportation Information

DOT Proper Shipping Name: Adhesives, containing a flammable liquid	Packing Group:	III
DOT Technical Name: N.A.	Hazard Subclass:	N.A.
DOT Hazard Class: 3 Flammable liquid	DOT UN/NA Number:	UN1133

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard, Fire Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Toluene	108-88-3

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

Chemical Name	CAS Number
n-Heptane	142-82-5

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number
Polychlorinated Rubber	Proprietary
Phenolic resin	Proprietary

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number
Polychlorinated Rubber	Proprietary
Phenolic resin	Proprietary

California Proposition 65:

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Section 16 - Other Information

HMIS Ratings:

Health: 2 Flammability: 3 Reactivity: 0 Personal Protection: X

Volatile Organic Compounds (VOC), less water less exempts: g/L: 646.5 lb/gal: 5.40 wt:wt%: 53.8

Volatile Organic Compounds (VOC), less water less exempts, less LVP-VOCs: wt:wt%: 65.7

REASON FOR REVISION: Periodic Update

Legend:	N.A. – Not Applicable	ACGIH – American Conference of Governmental Industrial Hygienists
	N.E. – Not Established	SARA – Superfund Amendments and Reauthorization Act of 1986
	N.D. – Not Determined	NJRTK – New Jersey Right-to-Know Law
	VOC – Volatile Organic Compound	OSHA – Occupational Safety and Health Administration
	PEL – Permissible Exposure Limit	HMIS – Hazardous Materials Identification System
	TLV – Threshold Limit Value	NTP – National Toxicology Program
	CEIL – Ceiling Exposure Limit	STEL – Short Term Exposure Limit
	LD50 – Lethal Dose 50	LC50 – Lethal Concentration 50
	F – Degree Fahrenheit	MSDS – Material Safety Data Sheet
	C – Degree Celsius	CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and

not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>



SAFETY DATA SHEET

1. Identification

Product identifier	LPS® ChainMate
Other means of identification	
Part Number	02416
Recommended use	A spray lubricant designed to penetrate chains and wire ropes, displace moisture and provide long lasting lubrication under high loads and humid conditions.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer	
Manufacturer	
Company name	LPS Laboratories, a division of Illinois Tool Works, Inc.
Address	4647 Hugh Howell Rd. Tucker, GA 30084 (U.S.A.)
Country	Tel: +1 770-243-8800
In Case of Emergency	1-800-424-9300 (inside U.S.) +001 703-527-3887 (outside U.S.)
Website	www.lpslabs.com
E-mail	sds@lpslabs.com

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Danger
Hazard statement	Extremely flammable aerosol. Causes skin irritation. May cause drowsiness or dizziness. Causes serious eye irritation.
Precautionary statement	
Prevention	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Do not breathe gas. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves. Wear eye/face protection.
Response	If on skin: Wash with plenty of water. Specific treatment (see this label). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Storage	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	65.99% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Heptane		142-82-5	10 - < 20
Petroleum Gases, Liquified, Sweetened		68476-86-8	10 - < 20
Acetone		67-64-1	3 - < 5
Other components below reportable levels			70 - < 80

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation develops and persists.
Eye contact	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Irritant effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Defatting of the skin. Rash. Symptoms of overexposure can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim under observation. Symptoms may be delayed.
General information	In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Powder. Water. Foam. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Extremely flammable aerosol.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid breathing gas. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.
Methods and materials for containment and cleaning up	Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not re-use empty containers. Do not breathe gas. Avoid contact with skin. Avoid contact with eyes. Avoid prolonged exposure. Avoid contact with clothing. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Level 3 Aerosol.

Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Acetone (CAS 67-64-1)	PEL	2400 mg/m ³ 1000 ppm
Heptane (CAS 142-82-5)	PEL	2000 mg/m ³ 500 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	750 ppm
	TWA	500 ppm
Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m ³ 250 ppm
Heptane (CAS 142-82-5)	Ceiling	1800 mg/m ³ 440 ppm
	TWA	350 mg/m ³ 85 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles). Eye wash fountain is recommended.

Skin protection

Hand protection

Chemical resistant gloves are recommended.

Other

Avoid contact with clothing. Wear suitable protective clothing. Chemical resistant gloves.

Respiratory protection

No personal respiratory protective equipment normally required. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

Thermal hazards

Not applicable.

General hygiene considerations

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state	Gas.
Form	Aerosol.
Color	Dark grey. Black.
Odor	Slight petroleum odor
Odor threshold	Not established
pH	Not applicable
Melting point/freezing point	Not established
Initial boiling point and boiling range	Not established
Flash point	< -0.4 °F (< -18.0 °C) Tag Closed Cup
Evaporation rate	Not established
Flammability (solid, gas)	Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not established
Flammability limit - upper (%)	Not established
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.

Vapor pressure	Not established
Vapor density	> 1
Relative density	Not available.

Solubility(ies)

Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not established
Auto-ignition temperature	Not established
Decomposition temperature	Not established
Viscosity	31 cP

Other information

Density	7.09
Heat of combustion	> 30 kJ/g
Percent volatile	32.5 %
Specific gravity	0.85 @ 20°C
VOC (Weight %)	24.5 % per US State and Federal Consumer Product Regulations

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Strong acids.
Hazardous decomposition products	Upon decomposition this product emits acrid dense smoke with carbon dioxide, carbon monoxide, water and other products of combustion.

11. Toxicological information

Information on likely routes of exposure

Ingestion	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.
Inhalation	Narcotic effects. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Eye contact	Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Skin irritation. Causes serious eye irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea.

Information on toxicological effects

Acute toxicity

Based on available data, the classification criteria are not met.

Components

Species

Test Results

Acetone (CAS 67-64-1)

Acute

Dermal

LD50

Rabbit

20000 mg/kg

20 ml/kg

Inhalation

LC50

Rat

76 mg/l, 4 Hours

50.1 mg/l, 8 Hours

Oral

LD50

Mouse

3000 mg/kg

Rabbit

5340 mg/kg

Rat

5800 mg/kg

Other

LD50

Mouse

1297 mg/kg

Rat

5500 mg/kg

Heptane (CAS 142-82-5)

Acute

Dermal

LD50

Rabbit

> 2000 mg/kg

Inhalation

LC50

Rat

> 29.29 mg/l

103 mg/l, 4 Hours

LD50

Mouse

75 mg/l, 2 Hours

Oral

LD50

Rat

> 5000 mg/kg

Other

LD50

Mouse

222 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization

Based on available data, the classification criteria are not met.

Skin sensitization

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

Based on available data, the classification criteria are not met.

ACGIH Carcinogens

Acetone (CAS 67-64-1)

Not classifiable as a human carcinogen. A4

Reproductive toxicity

Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure

Narcotic effects.

Specific target organ toxicity - repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Chronic effects

Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Components	Species		Test Results
Acetone (CAS 67-64-1)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	10294 - 17704 mg/l, 48 hours
Fish	LC50	Rainbow trout, donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours
Heptane (CAS 142-82-5)			
Aquatic			
Fish	LC50	Mozambique tilapia (Tilapia mossambica)	375 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability Not inherently biodegradable.

Bioaccumulative potential Not available.

Partition coefficient n-octanol / water (log Kow)

LPS® ChainMate	> 1
Acetone	-0.24
Heptane	4.66

Mobility in soil Readily absorbed into soil.

Other adverse effects None known.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code D001: Waste Flammable material with a flash point <140 F
D003: Waste Reactive material

US RCRA Hazardous Waste U List: Reference

Acetone (CAS 67-64-1) U002

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	N82
Packaging exceptions	306
Packaging bulk	None

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No.
ERG Code	10L

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft Allowed.

Cargo aircraft only Allowed.

IMDG

UN number UN1950

UN proper shipping name AEROSOLS, flammable (Heptane), MARINE POLLUTANT

Transport hazard class(es)

Class 2.1

Subsidiary risk -

Packing group Not applicable.

Environmental hazards

Marine pollutant Yes

EmS F-D, S-U

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

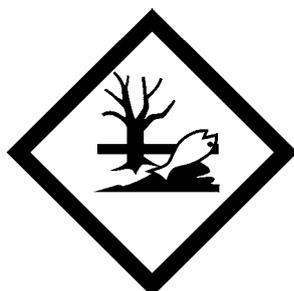
DOT



IATA; IMDG



Marine pollutant



15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1)

LISTED

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

SARA 304 Emergency release notification

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance Yes

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Acetone (CAS 67-64-1) 6532

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1) 35 % weight/volumn

DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1) 6532

US state regulations

US. Massachusetts RTK - Substance List

Acetone (CAS 67-64-1)
Heptane (CAS 142-82-5)

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Acetone (CAS 67-64-1)
Heptane (CAS 142-82-5)

US. Rhode Island RTK

Acetone (CAS 67-64-1)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 09-19-2013

Material name: LPS® ChainMate

739 Version #: 02 Revision date: 11-05-2013 Issue date: 09-19-2013

SDS US

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Revision date 11-05-2013
Version # 02
HMIS® ratings Health: 1
Flammability: 4
Physical hazard: 0
NFPA ratings Health: 1
Flammability: 4
Instability: 0

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision Information Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
Transport Information: Material Transportation Information
Regulatory Information: United States
HazReg Data: International Inventories
GHS: Classification

Franklin International

Material Safety Data Sheet

Titebond III Ultimate Wood Glue

1. Product and company identification

CAS #	: mixture
Synonym	: None known.
Address	: Franklin International 2020 Bruck Street Columbus OH 43207
Contact person	: Franklin Technical Services
Telephone	: (800) 877-4583
<u>In case of emergency</u>	: Franklin Security (614) 445-1300
Reference number	: 6192
Product code	: 1416
Date of revision	: 5/20/2013.
Print date	: 5/20/2013.
Chemtrec (24 Hour)	: (800) 424 - 9300
Chemtrec International	: (703) 527 - 3887
Chemical family	: Adhesive.
Product use	: Waterproof wood glue
Product type	: Crosslink Polyvinyl Acetate

2. Hazards identification

Emergency overview

Physical state	: Liquid.
Color	: Brown. [Light]
Odor	: Characteristic. [Slight]
Hazard statements	: NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.
OSHA/HCS status	: While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Potential acute health effects

Inhalation	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.
Skin	: No known significant effects or critical hazards.
Eyes	: No known significant effects or critical hazards.

Potential chronic health effects

Chronic effects	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

2. Hazards identification

Target organs : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation : No specific data.

Ingestion : No specific data.

Skin : No specific data.

Eyes : No specific data.

Medical conditions aggravated by over-exposure : None known.

See toxicological information (Section 11)

3. Composition/information on ingredients

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6. Accidental release measures

- Small spill** : Stop leak if without risk. Move containers from spill area. Dispose of via a licensed waste disposal contractor. Absorb with an inert material.
- Large spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking.
- Storage** : Store between the following temperatures: -15.309 to 23.889°C (4.4 to 75°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Canada

Occupational exposure limits

No exposure limit value known.

Mexico

Occupational exposure limits

No exposure limit value known.

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection**
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

8. Exposure controls/personal protection

- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

9. Physical and chemical properties

- Physical state** : Liquid.
- Flash point** : Closed cup: >93.333°C (>200°F) [Setaflash.]
- Color** : Brown. [Light]
- Odor** : Characteristic. [Slight]
- pH** : 2.5 to 3.5
- Boiling/condensation point** : 98.889°C (210°F)
- Relative density** : 1.11
- Volatility** : 48% (w/w)
- Evaporation rate** : <1 (butyl acetate = 1)
- VOC (less water, less exempt solvents)** : 5.6 g/l
- Solubility** : Soluble in the following materials: cold water and hot water.
- Physical/chemical properties comments** : Calculated VOC = 5.6 g/L

10. Stability and reactivity

- Chemical stability** : The product is stable.
- Conditions to avoid** : No specific data.
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.
- Incompatibility** : Reactive or incompatible with the following materials: acids and alkalis.

11. Toxicological information

United States

Acute toxicity

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

No known significant effects or critical hazards.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

11. Toxicological information

Canada

Acute toxicity

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

No known significant effects or critical hazards.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Mexico

Acute toxicity

Chronic toxicity

No known significant effects or critical hazards.

Irritation/Corrosion

No known significant effects or critical hazards.

Sensitizer

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Persistence/degradability

No known significant effects or critical hazards.

Canada

Aquatic ecotoxicity

Persistence/degradability

No known significant effects or critical hazards.

Mexico

Aquatic ecotoxicity

Persistence/degradability

12. Ecological information

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Not regulated.
U.S. Federal regulations : TSCA 4(a) final test rules: sodium hydroxymethanesulphinate
TSCA 8(a) PAIR: methyl acetate; mequinol
TSCA 8(a) IUR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: No products were found.

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.

15. Regulatory information

- Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)** : Not listed
- Clean Air Act Section 602 Class I Substances** : Not listed
- Clean Air Act Section 602 Class II Substances** : Not listed
- DEA List I Chemicals (Precursor Chemicals)** : Not listed
- DEA List II Chemicals (Essential Chemicals)** : Not listed

State regulations

- Massachusetts** : None of the components are listed.
- New York** : None of the components are listed.
- New Jersey** : None of the components are listed.
- Pennsylvania** : None of the components are listed.

Canada

- WHMIS (Canada)** : Not controlled under WHMIS (Canada).

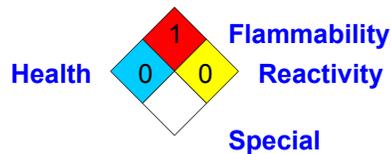
Canadian lists

- Canadian NPRI** : None of the components are listed.
- CEPA Toxic substances** : None of the components are listed.
- Canada inventory** : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

- Classification** :



International regulations

- International lists** :
- Australia inventory (AICS)**: Not determined.
 - China inventory (IECSC)**: Not determined.
 - Japan inventory**: Not determined.
 - Korea inventory**: Not determined.
 - New Zealand Inventory of Chemicals (NZIoC)**: Not determined.
 - Philippines inventory (PICCS)**: Not determined.

- Chemical Weapons Convention List Schedule I Chemicals** : Not listed
- Chemical Weapons Convention List Schedule II Chemicals** : Not listed
- Chemical Weapons Convention List Schedule III Chemicals** : Not listed

16. Other information

Label requirements : NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Hazardous Material Information System (U.S.A.) :

Health	0
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

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Date of previous issue : 5/16/2013.

Version : 2.5

☑ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Material Safety Data Sheet
INTERLINE 925 BASE



Bulk Sales Reference No.:
MSDS Revision Date:
MSDS Revision Number:

Sales
Order: {SalesOrd}
925A
05/16/2011
B0-7

1. Identification of the preparation and company

Product Identity INTERLINE 925 BASE
Bulk Sales Reference No. 925A
Company Name International Paint LLC
6001 Antoine Drive
Houston Texas 77091

Emergency
CHEMTREC (USA) (800) 424-9300
International Paint (713) 682-1711
Poison Control Center (800) 854-6813
Customer Service
International Paint (800) 589-1267
Fax No. (800) 631-7481

2. Hazard identification of the product



Warning

GHS Classification:

Item	Category	Hazard
Flammability	Not classified	Not applicable
Acute Toxicity (mouth)	5	May be harmful if swallowed
Acute Toxicity (skin)	Not classified	Not applicable
Acute Toxicity (inhalation)	Not classified	Not applicable
Acute Toxicity (ingestion)	Not classified	Not applicable
Skin corrosion/irritation	Not classified	Not applicable
Eye damage/irritation	Not classified	Not applicable
Sensitization (respiratory)	Not classified	Not applicable
Sensitization (skin)	1	May cause allergic reaction.
Germ toxicity	Not classified	Not applicable
Specific target organ systemic toxicity (single exposure)	1	central nerve system, liver, respiratory system, spleen
	2	Not applicable
	3	respiratory tract irritation
Specific target organ systemic Toxicity (repeated exposure)	1	central nerve system, kidneys, liver, lung, respiratory system
	2	Not applicable
Aspiration hazard	Not classified	Not applicable
Harmfulness to aquatic Environment (acute)	Not classified	Not applicable
Harmfulness to aquatic Environment (long term effect)	Not classified	Not applicable

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Carcinogenicity	Not classified	Not applicable
Reproductive Toxicity	Not classified	Not applicable
Organic Peroxide	Not classified	Not applicable

Safety Phrases:

S20: When using do not eat or drink.

S23: Do not breathe vapor/spray.

S24: Avoid contact with skin.

S28: After contact with skin, wash immediately with plenty of soap and water.

S37: Wear suitable gloves.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S51: Use only in well-ventilated areas.

Overview	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.
Inhalation	Harmful if inhaled. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.
Eyes	Causes severe eye irritation. Avoid contact with eyes.
Skin	Causes skin irritation. May cause allergic skin reaction. May be harmful if absorbed through the skin.
Ingestion	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.
Chronic effects	Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.
HMIS Rating	Health: 3* Flammability: 1 Reactivity: 0 PPE: X

3. Composition/information on ingredients

Ingredient	CAS No.	Percent
Benzyl alcohol	0000100-51-6	1.0 – 10
Cyclohexanone	0000108-94-1	1.0 – 10
Barium sulfate	0007727-43-7	10 – 25
Titanium dioxide	0013463-67-7	10 – 25
Quartz	0014808-60-7	10 – 25
Reaction product of epichlorohydrin & bisphenol A	0025085-99-8	25 – 50
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	0068609-97-2	10 – 25

This product contains 14.53 percent Quartz.

4. First aid measures

General	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. Fire-fighting measures

Flash Point	F: 214 C: 101
Lower Explosive Limit (LEL)	1 (%vol in air) at Normal Atmospheric Temp and Pressure
ERG Guide No.	159

6. Accidental release measures

Spill Response Procedures	ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. LARGE SPILLS: Dike far ahead of liquid spill to contain released material and runoff from fire control.
Public Safety	CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering.
ERG Guide No.	159

7. Handling and storage

Storage Temperature	Store between 40-100F (4-38C).
Handling and Storage Precautions	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Avoid contact with eyes, skin and clothing. Close container after each use. Wash thoroughly after handling.

8. Exposure controls and personal protection

CAS No.	Ingredient	Exposure	
		Source	Value
0000100-51-6	Benzyl alcohol	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
		OHSA, CAN	No Established Limit
		Mexico	No Established Limit
		Brazil	No Established Limit
0000108-94-1	Cyclohexanone	OSHA	50 ppm TWA; 200 mg/m ³ TWA
		ACGIH	20 ppm TWA50 ppm STEL
		NIOSH	25 ppm TWA; 100 mg/m ³ TWA700 ppm IDLH
		Supplier	No Established Limit
		OHSA, CAN	20 ppm TWA50 ppm STEL
		Mexico	50 ppm TWA; 200 mg/m ³ TWA100 ppm STEL; 400 mg/m ³ STEL
		Brazil	No Established Limit
0007727-43-7	Barium sulfate	OSHA	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)
		ACGIH	10 mg/m ³ TWA
		NIOSH	10 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable dust)
		Supplier	No Established Limit
			10 mg/m ³ TWA (total dust)

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		OHSA, CAN	
		Mexico	No Established Limit
		Brazil	No Established Limit
0013463-67-7	Titanium dioxide	OSHA	15 mg/m3 TWA (total dust)
		ACGIH	10 mg/m3 TWA
		NIOSH	5000 mg/m3 IDLH
		Supplier	No Established Limit
		OHSA, CAN	10 mg/m3 TWA (total dust)
		Mexico	10 mg/m3 TWA (as Ti)20 mg/m3 STEL (as Ti)
		Brazil	No Established Limit
0014808-60-7	Quartz	OSHA	No Established Limit
		ACGIH	0.025 mg/m3 TWA (respirable fraction)
		NIOSH	0.05 mg/m3 TWA (respirable dust)50 mg/m3 IDLH (respirable dust)
		Supplier	No Established Limit
		OHSA, CAN	0.10 mg/m3 TWA (designated substance regulation, respirable)0.10 mg/m3 TWA (respirable fraction)
		Mexico	0.1 mg/m3 TWA (respirable fraction)
		Brazil	No Established Limit
0025085-99-8	Reaction product of epichlorohydrin & bisphenol A	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
		OHSA, CAN	No Established Limit
		Mexico	No Established Limit
		Brazil	No Established Limit
0068609-97-2	Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
		OHSA, CAN	No Established Limit
		Mexico	No Established Limit
		Brazil	No Established Limit

Health Data

CAS No.	Ingredient	Source	Value
0000100-51-6	Benzyl alcohol	NIOSH	No Established Limit
0000108-94-1	Cyclohexanone	NIOSH	Irritation; liver kidney
0007727-43-7	Barium sulfate	NIOSH	Eye nose
0013463-67-7	Titanium dioxide	NIOSH	Lung tumors in animals
0014808-60-7	Quartz	NIOSH	Chronic lung disease (silicosis)
0025085-99-8	Reaction product of epichlorohydrin & bisphenol A	NIOSH	No Established Limit
0068609-97-2	Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	NIOSH	No Established Limit

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000100-51-6	Benzyl alcohol	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0000108-94-1	Cyclohexanone	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No

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		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No;
0007727-43-7	Barium sulfate	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0013463-67-7	Titanium dioxide	OSHA	Select Carcinogen: Yes
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: Yes; Group 3: No; Group 4: No;
0014808-60-7	Quartz	OSHA	Select Carcinogen: Yes
		NTP	Known: Yes; Suspected: No
		IARC	Group 1: Yes; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0025085-99-8	Reaction product of epichlorohydrin & bisphenol A	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0068609-97-2	Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

- Respiratory** Select equipment to provide protection from the ingredients listed in Section 3 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
- Eyes** Avoid contact with eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 3 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
- Skin** Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 3 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
- Engineering Controls** Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
- Other Work Practices** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

9. Physical and chemical properties

Physical State	Liquid Coloured
pH	No Established Limit
Specific Gravity	1.48
Boiling Point F	310
Vapor Density	Heavier than air
VOC %	Refer to the Technical Data Sheet or label where information is available.
Evaporation Rate	Slower than ether

10. Stability and reactivity

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General This product is stable and hazardous polymerization will not occur. Not sensitive to mechanical impact. Excessive heat and fumes generation can occur if improperly handled.

Incompatible Materials Strong oxidizing agents.

Hazardous May produce hazardous fumes when heated to decomposition as in welding. Fumes Decomposition may produce Carbon Dioxide and Carbon Monoxide.

11. Toxicological information

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr
Benzyl alcohol – (0000100–51–6)	1,230.00, Rat – Category: 4	2,000.00, Rabbit – Category: 4	8.80, Rat – Category: 3
Cyclohexanone – (0000108–94–1)	800.00, Rat – Category: 4	948.00, Rabbit – Category: 3	10.70, Rat – Category: 4
Barium sulfate – (0007727–43–7)	-----	-----	-----
Titanium dioxide – (0013463–67–7)	10,000.00, Rat – Category: NA	10,000.00, Rabbit – Category: NA	6,082.00, Rat – Category: NA
Quartz – (0014808–60–7)	500.00, Rat – Category: 4	-----	-----
Reaction product of epichlorohydrin & bisphenol A – (0025085–99–8)	-----	-----	-----
Oxirane, mono[(C12–14–alkyloxy)methyl] derivs. – (0068609–97–2)	17,100.00, Rat – Category: NA	-----	-----

General NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Sections 8 and 11 for chemical specific data.

12. Ecological information

No additional information provided for this product. See Sections 8 and 11 for chemical specific data.

13. Disposal considerations

Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. Transport information

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name	PAINT OR PAINT RELATED MATERIAL, NMFC 149980	IMDG Proper Shipping Name	PAINT OR PAINT RELATED MATERIAL, NMFC 149980
DOT Hazard Class	NR	IMDG Hazard Class	Not Regulated
UN / NA Number	Not Regulated	UN / NA Number	Not Regulated
DOT Packing Group	Not Regulated	IMDG Packing Group	Not Regulated
CERCLA/DOT RQ	37062 gal. / 457750 lbs.	System Reference Code	9

15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

WHMIS Classification No Established Limit

DOT Marine Pollutants (10%):
(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):
(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs (>.1%) :
Cyclohexanone (5000 lb final RQ; 2270 kg final RQ)

EPCRA 302 Extremely Hazardous (>.1%) :
(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals (>.1%) :
(No Product Ingredients Listed)

Mass RTK Substances (>1%) :
Barium sulfate
Benzyl alcohol
Cyclohexanone
Quartz
Titanium dioxide

Mass Extraordinarily Haz Sub (>.01%) :
Quartz

Penn RTK Substances (>1%) :
Barium sulfate
Benzyl alcohol
Cyclohexanone
Quartz
Titanium dioxide

Penn Special Hazardous Substances (>.01%) :
(No Product Ingredients Listed)

Rhode Island Hazardous Substances (>.1%) :
Cyclohexanone
Quartz
Titanium dioxide

RCRA Status:
(No Product Ingredients Listed)

N.J. RTK Substances (>1%) :
Barium sulfate
Cyclohexanone
Quartz
Titanium dioxide

N.J. Special Hazardous Substances (>.01%) :
Quartz

N.J. Env. Hazardous Substances (>.1%) :
(No Product Ingredients Listed)

Proposition 65 – Carcinogens (>0%):
Benzene, ethyl–
Naphthalene
Quartz

Proposition 65 – Female Repro Toxins (>0%):
(No Product Ingredients Listed)

Proposition 65 – Male Repro Toxins (>0%):
(No Product Ingredients Listed)

Proposition 65 – Developmental Toxins (>0%):
(No Product Ingredients Listed)

Risk Phrases:

R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R43: May cause sensitisation by skin contact.

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

BUILDNG 532 (SAFEBOATS INTERNATIONAL)

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

Date 06/19/13 Time: 9:50

Address: 401 Alexander Ave. Building 532 Tacoma, WA 98421

Building Owner: Port of Tacoma

Occupant Name: Safe Boats

Contact Name: Steve Holmdahl Telephone (home): Telephone (work): Cell: 360-633-6093

How long has owner/tenant/occupant/resident occupied building? 11 Months

Occupation: Ship Builder

Number of Occupants Adults: 64 Ages: 18-60 Children: Ages:

BUILDING CONSTRUCTION CHARACTERISTICS:

Building Use: Residential Commercial/Industrial X School/Institutional

Building Type: One story X Two story Apartment (# of units) Condominium (# of units) Other

General Description of Building Construction Materials: Brick, Siding, Wood, Stone, Stucco, Metal, Other Metal Siding

Year Constructed: 1911

GARAGE: Do you have an attached garage? Yes No

Has the building been weatherized with any of the following? Insulation, Storm Windows, Energy-Efficient Windows, Other (specify) NA

What type of basement does the building have?

Table with 5 columns: None, Finished, Unfinished, Depth below reference point (meters), and a row for Partial, Full, and Crawl space.

Number of floors at or above grade: 0

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

Depth of basement below grade: NA ft. Basement Size: _____ ft²

Foundation construction: Poured concrete Cinder block Stone

Any visual evidence of leakage through basement walls or floor

Floor Construction: Poured concrete Wood Earth Brick Other: Asphalt

Floor condition (cracks, drains): Cracks/poor condition

Condition at floor/wall joint (if visible): poor condition

Any exterior openings from the basement: NA

Vents

Fans

Windows

Wall openings

Utility pipe penetrations

Other: _____

Type of ground cover outside of building: grass / concrete / asphalt / other (specify): _____

Sub-slab vapor/moisture barrier in place? Yes /

Type of barrier: _____

Do you have a sump?: Yes No

Where: _____

If yes, sealed open NA

If yes, is there water in the sump?: Yes No

Is building serviced with municipal water? Yes No

Do you have a water well?: Yes No Don't know

Well location: NA

Do you drink the water obtained from the well? NA _____

What do you use the well for?: NA _____

Do you have a cistern?: Yes No

If yes, describe its location: NA _____

Do you have a septic system?: Yes No If Yes is it still active Yes No

If yes, describe its location: _____

If yes, describe how septic system is cleaned: _____

Have there ever been a fire in the building?: Yes No

If yes, describe its location and extent: Fire in past year

Is there a laundry room located inside the house?: Yes No

If yes, describe its location: _____

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

Is there a Radon System in the building: Yes No

HEATING AND VENTILATION SYSTEM(S) PRESENT:

What type of heating system(s) is/are used in the building?

Hot Air Circulation Heat Pump Steam Radiation Wood Stove
Hot Air Radiation Unvented Kerosene heater Electric Baseboard Other (specific) Gas tubes/Wall heaters

Where are they located? Walls

Is there outside air vent for heating system? Yes/gas tubes

What type(s) of fuel(s) are used in this building?

Natural Gas Electric Coal Other (specific) Propane
Fuel Oil Wood Solar

What type of mechanical ventilation systems are present and/or currently operating in the building? Chrome welding fumes

Central Air Conditioning Mechanical Fans Bathroom Ventilation
Fan Kitchen Range Hood Open Windows
Individual Air Conditioning Units Air-to-Air Heat Exchanger Other (specify)

Where are they located? Walls

Do you have a fireplace? Yes No
Does the fireplace have an outside combustion air vent? Yes No

SOURCES OF CHEMICAL CONTAMIANTS

- 1. When was the last time dry-cleaned clothes were brought into the building?
 0 to 5 days ago 6 to 10 days ago More than 10 days ago Don't dry-clean
2. How recently were the carpets installed?
 In the last six months More than six months ago No Carpet
3. When was the last time the carpet was cleaned? NA
 In the last six months More than six months ago Never

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

4. Was there any recent remodeling or painting done in the building?

Yes No Details: Containers

5. Are there any pressed wood products in the building (e.g., hardwood plywood wall paneling, particleboard, fiberboard)? OSB Particle board

6. Are there any new upholstery, drapes, or textiles in the building? NA

7. Do you have any spot removers in the building?

Yes No Details: _____

8. Are there any hobbies include model building, arts and crafts, model railroading, or others that require paints, thinners, or glue undertaken in the building?

Yes No Details: _____

9. Do you perform automotive or other vehicle maintenance or repair within the building (e.g., attached garage)?

Yes No Details: Boat Motors

10. Which of these items are present in the building? (Check all that apply)

<i>Potential VOC Source</i>	<i>Location of Source</i>	<i>Removed 48 hours prior to sampling? (Yes/No/NA)</i>
Paints or paint thinners		Yes
Gas-powered equipment		
Gasoline storage cans		No
Cleaning solvents		
Air fresheners		
Oven cleaners		
Carpet/upholstery cleaners		
Hairspray		
Nail polish/polish remover		
Bathroom cleaner		No
Appliance cleaner		
Furniture/floor polish		
Moth balls		
Fuel tank		No
Wood stove		
Fireplace		
Perfume/colognes		
Hobby supplies (e.g., solvents, paints,		

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

lacquers, glues, photographic darkroom chemicals)

Scented trees, wreaths, potpourri, etc.

Other Paint/exterior

Other

Other

Other

11. Do you have pesticides in the building?

Yes No Unsure

12. Do you have any spray insecticides in the building?

Yes No Unsure

13. Have you painted any area of the interior of the building in the last 12 months?

Yes No (Containers)

If yes, please indicate what paint you used

Enamel Vinyl Latex Other

14. Have you painted the exterior of the building in the last 12 months? Yes No

If yes, please indicate what paint you used

Enamel Vinyl Latex Other

15. Where are paint, thinner, pesticides, insecticides stored?

	<i>Paint</i>	<i>Thinner</i>	<i>Pesticides</i>	<i>Insecticides</i>
Garage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Basement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storage shed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I don't store these items in the building

16. Have you purchased one of the following items in the last 12 months?

Rubberized door mat Computer Wiring
 Plastic shower curtain Printer Linoleum
 Wood stains or paint VCR

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

17. Do you have a computer printer in the building?

Yes No

18. Do you have a VCR etc in the building?

Yes No

19. Do you use cleaners to maintain your VCR?

Yes No

If yes, what type? _____

20. Are there any pets in the building?

Yes No

If yes, what type? _____

If yes, number _____

21. Does anyone in the smoke in the building? Yes No

22. Questions asked by Occupant that require follow-up.



Signature and Printed Name of Conducting the Survey



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M Citrus Base Cleaner (Aerosol)
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division
ADDRESS: 3M Center
 St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 04/09/09
Supersedes Date: 09/13/05
Document Group: 11-0029-6

Product Use:
 Specific Use: aerosol cleaner
 Intended Use: Industrial use

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
D-LIMONENE	5989-27-5	70 - 80
PROPANE (AS PROPELLANT)	74-98-6	10 - 20
NONIONIC SURFACTANT MIX - N.J. TRADE SECRET REGISTRY NO. 800927-500P	Trade Secret	7 - 13

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: clear, pale yellow, sweet odor

General Physical Form: Gas Aerosol

Immediate health, physical, and environmental hazards: Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains flammable material under pressure. May cause target organ effects.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Single exposure, above recommended guidelines, may cause:

Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Target Organ Effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. Get immediate medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

4.2 NOTE TO PHYSICIANS

Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	<i>No Data Available</i>
Flash Point	-50.00 °F
Flammable Limits - LEL	<i>Not Applicable</i>

5.2 EXTINGUISHING MEDIA

Ordinary combustible material. Use fire extinguishers with class A extinguishing agents (e.g., water, foam).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains flammable material under pressure.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available.

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Cover spill area with a fire-extinguishing foam. An aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Avoid eye contact with vapors, mists, or spray.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Do not use in a confined area or areas with little or no air movement. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment. Do not use in a confined area or areas with little or no air movement. If exhaust ventilation is not adequate, use appropriate respiratory protection. Provide ventilation adequate to control vapor concentrations below recommended exposure limits and/or control spray or mist.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Safety Glasses with side shields.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Nitrile Rubber, Polyvinyl Alcohol (PVA).

8.2.3 Respiratory Protection

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
PROPANE (AS PROPELLANT)	ACGIH	TWA	1000 ppm	
PROPANE (AS PROPELLANT)	OSHA	TWA	1000 ppm	Table Z-1

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration
 AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color, Grade:	clear, pale yellow, sweet odor
General Physical Form:	Gas Aerosol
Autoignition temperature	<i>No Data Available</i>
Flash Point	-50.00 °F
Flammable Limits - LEL	<i>Not Applicable</i>
Vapor Density	<i>Not Applicable</i>
Vapor Pressure	28 mmHg [@ 20 °C] [<i>Details:</i> Composite Vapor Pressure (Calculated)]
Specific Gravity	0.784 [<i>Ref Std:</i> WATER=1]
pH	<i>Not Applicable</i>
Melting point	<i>No Data Available</i>
Solubility in Water	Slight (less than 10%)
Evaporation rate	<i>Not Applicable</i>
Hazardous Air Pollutants	0 % weight
Volatile Organic Compounds	Approximately 91 % [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Percent volatile	Approximately 91 % weight
VOC Less H2O & Exempt Solvents	Approximately 740 g/l [<i>Test Method:</i> tested per EPA method 24] [<i>Details:</i> CONDITIONS: and SCAQMD305]
Viscosity	<i>Not Applicable</i>

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Heat

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Ketones	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

Facility must be capable of handling aerosol cans. Dispose of empty product containers in a sanitary landfill.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

62-4615-1730-2, 62-4615-4930-5, 62-4615-4935-4

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 4 Reactivity: 1 Special Hazards: None
Aerosol Storage Code: 2

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

- Section 1: Product use information was modified.
- Section 1: Division name was modified.
- Copyright was modified.
- Section 3: Potential effects from inhalation information was modified.
- Section 3: Potential effects from ingestion information was modified.
- Section 6: Release measures information was modified.
- Section 13: Waste disposal method information was modified.
- Section 4: First aid for inhalation - medical assistance - was modified.
- Section 4: First aid for ingestion (swallowing) - decontamination - was modified.
- Section 4: First aid for ingestion (swallowing) - medical assistance - was modified.
- Section 4: Note to physicians heading was added.
- Section 3: Other potential health effects heading was added.
- Section 3: Immediate other hazard(s) was added.

Section 3: Other health effects information was added.
Section 4: Note to physicians was added.
Section 14: ID Number Heading Template 1 was added.
Section 14: ID Number(s) Template 1 was added.
Section 2: Ingredient table was added.
Section 8: Exposure guidelines ingredient information was added.
Section 8: Exposure guidelines data source legend was added.

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MATERIAL SAFETY
DATA SHEET

3M
3M Center
St. Paul, Minnesota
55144-1000
1-800-364-3577 or (651) 737-6501 (24 hours)

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DIVISION: ELECTRICAL PRODUCTS DIVISION

TRADE NAME:

SCOTCHKOTE BRAND ELECTRICAL COATING

ID NUMBER/U.P.C.:

80-6107-3307-5 00-54007-14853-1 80-6112-0519-8 00-54007-43906-6

CS-0406-0592-8 - - -

ISSUED: November 27, 2001

SUPERSEDES: October 24, 2000

DOCUMENT: 10-2644-2

1. INGREDIENT	C.A.S. NO.	PERCENT
ACETONE.....	67-64-1	40.0 - 45.0
METHYL ETHYL KETONE.....	78-93-3	12.0 - 15.0
TOLUENE.....	108-88-3	12.0 - 15.0
ACRYLONITRILE-BUTADIENE POLYMER.....	9003-18-3	10.0 - 15.0
PHENOL-FORMALDEHYDE RESIN.....	25085-50-1	3.0 - 7.0
GLYCEROL ESTERS OF ROSIN ACIDS.....	8050-31-5	3.0 - 7.0
SALICYLIC ACID.....	69-72-7	1.0 - 2.0
ZINC OXIDE.....	1314-13-2	1.0 - 2.0
ANTIOXIDANT.....	68411-46-1	0.1 - 1.0

IN CASE OF EMERGENCY: THE NUMBERS AT THE TOP OF THIS PAGE PROVIDE 24
HOUR RESPONSE FROM ANY PHONE FOR ALL EMERGENCIES WITH THIS PRODUCT.
The components of this product are in compliance with the chemical
notification requirements of TSCA.

All ingredients on TSCA; EINECS; CDSL

This product contains the following toxic chemical or chemicals subject to
the reporting requirements of Section 313 of Title III of the Emergency
Planning and Community Right-To-Know Act of 1986 and 40 CFR Part 372:

METHYL ETHYL KETONE
TOLUENE
ZINC OXIDE

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

2. PHYSICAL DATA

BOILING POINT:..... 56.5C
VAPOR PRESSURE:..... 229 mm Hg @25C
VAPOR DENSITY:..... 2.00
EVAPORATION RATE:..... N/D
SOLUBILITY IN WATER:..... Nil
SPECIFIC GRAVITY:..... 0.88
PERCENT VOLATILE:..... 75
pH:..... N/A
VISCOSITY:..... 325cps
MELTING POINT:..... N/D

APPEARANCE AND ODOR:

Liquid, Brown, solvent odor

3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:..... 0F Closed Cup
FLAMMABLE LIMITS - LEL:..... 2.15%
FLAMMABLE LIMITS - UEL:..... 13.0%
AUTOIGNITION TEMPERATURE:..... N/D

EXTINGUISHING MEDIA:

Carbon dioxide, Dry chemical, Foam

SPECIAL FIRE FIGHTING PROCEDURES:

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Vapors may travel long distances along the ground or floor to an ignition source and flash back.

NFPA HAZARD CODES: HEALTH: 2 FIRE: 3 REACTIVITY: 0
UNUSUAL REACTION HAZARD: none

OSHA FIRE HAZARD CLASS: Class IB Flammable Liquid

4. REACTIVITY DATA

STABILITY: Stable

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

4. REACTIVITY DATA (continued)

INCOMPATIBILITY - MATERIALS/CONDITIONS TO AVOID:
None known.

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS:
Carbon Monoxide and Carbon Dioxide, Oxides of Nitrogen, Hydrocarbons,
Amine Compounds.

5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:

Observe precautions from other sections. Ventilate area. Extinguish all ignition sources. Contain spill. Cover with inorganic absorbent material. Collect spilled material. Clean up residue. Place in an approved metal container.

RECOMMENDED DISPOSAL:

Incinerate in a permitted hazardous waste incinerator.

ENVIRONMENTAL DATA:

Not determined.

REGULATORY INFORMATION:

Volatile Organic Compounds: ca. 2.1 lb/gal.
VOC Less H₂O & Exempt Solvents: ca. 251 gms/liter.

Since regulations vary, consult applicable regulations or authorities before disposal. In the event of an uncontrolled release of this material, the user should determine if the release qualifies as a reportable quantity. U.S. EPA Hazardous Waste Number = D001 (Ignitable)

EPCRA HAZARD CLASS:

FIRE HAZARD: Yes PRESSURE: No REACTIVITY: No ACUTE: Yes CHRONIC: Yes

6. SUGGESTED FIRST AID

EYE CONTACT:

Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

SKIN CONTACT:

Immediately flush skin with large amounts of water. Remove contaminated clothing. If irritation persists, call a physician. Wash contaminated clothing before reuse.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

6. SUGGESTED FIRST AID (continued)

INHALATION:

Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.

IF SWALLOWED:

Do not induce vomiting. Drink two glasses of water. Call a physician.

7. PRECAUTIONARY INFORMATION

EYE PROTECTION:

Avoid eye contact. Wear unvented goggles during operations in which exposure is likely.

SKIN PROTECTION:

Avoid skin contact. Wear appropriate gloves when handling this material. A pair of gloves made from the following material(s) are recommended: butyl rubber. Use one or more of the following personal protection items as necessary to prevent skin contact: apron, coveralls.

RECOMMENDED VENTILATION:

Use with appropriate local exhaust ventilation. Provide appropriate local exhaust ventilation at transfer points. Provide appropriate local exhaust ventilation on open containers. Provide sufficient ventilation to maintain emissions below recommended exposure limits. If exhaust ventilation is not adequate, use appropriate respiratory protection.

RESPIRATORY PROTECTION:

Avoid breathing of vapors, mists or spray. Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: half-mask organic vapor respirator, full-face organic vapor respirator.

PREVENTION OF ACCIDENTAL INGESTION:

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

RECOMMENDED STORAGE:

Store in a cool place. Store away from acids. Store out of direct sunlight. Keep container in well-ventilated area. Contents may be under pressure, open carefully. Keep out of the reach of children.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

7. PRECAUTIONARY INFORMATION (continued)

FIRE AND EXPLOSION AVOIDANCE:

Keep container tightly closed. Flammable liquid and vapor. Keep away from heat, sparks, open flame, and other sources of ignition. Ground containers securely when transferring contents. Wear low static or properly grounded shoes. No smoking while handling this material. Vapors may ignite explosively.

EXPOSURE LIMITS

INGREDIENT	VALUE	UNIT	TYPE	AUTH	SKIN*
ACETONE.....	500	PPM	TWA	ACGIH	
ACETONE.....	750	PPM	STEL	ACGIH	
ACETONE.....	750	PPM	TWA	OSHAV	
			OSHA VACATED PEL		
ACETONE.....	1000	PPM	STEL	OSHAV	
			OSHA VACATED PEL		
ACETONE.....	1000	PPM	TWA	OSHA	
METHYL ETHYL KETONE.....	200	PPM	TWA	OSHA	
METHYL ETHYL KETONE.....	300	PPM	STEL	OSHA	
METHYL ETHYL KETONE.....	200	PPM	TWA	ACGIH	
METHYL ETHYL KETONE.....	300	PPM	STEL	ACGIH	
TOLUENE.....	50	PPM	TWA	ACGIH	Y
TOLUENE.....	100	PPM	TWA	OSHAV	
			OSHA VACATED PEL		
TOLUENE.....	150	PPM	STEL	OSHAV	
			OSHA VACATED PEL		
TOLUENE.....	200	PPM	TWA	OSHA	
TOLUENE.....	300	PPM	CEIL	OSHA	
TOLUENE.....	75	PPM	STEL	CMRG	Y
ACRYLONITRILE-BUTADIENE POLYMER.....	NONE	NONE	NONE	NONE	
PHENOL-FORMALDEHYDE RESIN.....	NONE	NONE	NONE	NONE	
GLYCEROL ESTERS OF ROSIN ACIDS.....	NONE	NONE	NONE	NONE	
SALICYLIC ACID.....	NONE	NONE	NONE	NONE	
ZINC OXIDE.....	10	MG/M3	TWA	ACGIH	
			AS DUST		
ZINC OXIDE.....	10	MG/M3	TWA	OSHAV	
			AS DUST		
			OSHA VACATED PEL		
ZINC OXIDE.....	5	MG/M3	TWA	ACGIH	
			as fume		
ZINC OXIDE.....	10	MG/M3	STEL	ACGIH	
			as fume		
ZINC OXIDE.....	5	MG/M3	TWA	OSHA	
			as fume		
ZINC OXIDE.....	10	MG/M3	STEL	OSHAV	
			as fume		
			OSHA VACATED PEL		
ZINC OXIDE.....	15	MG/M3	TWA	OSHA	

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

EXPOSURE LIMITS (continued)

INGREDIENT	VALUE	UNIT	TYPE	AUTH	SKIN*
ZINC OXIDE.....	5	MG/M3	TWA	OSHA	
		AS TOTAL DUST RESPIRABLE			
ANTIOXIDANT.....	NONE	NONE	NONE	NONE	

* SKIN NOTATION: Listed substances indicated with 'Y' under SKIN refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- CMRG: Chemical Manufacturer Recommended Exposure Guidelines
- OSHA: Occupational Safety and Health Administration
- OSHAV: Occupational Safety and Health Administration Vacated PEL. Vacated Permissible Exposure Limits (PEL) are enforced as the OSHA PEL in some states. Check with your local regulatory authority.
- NONE: None Established

8. HEALTH HAZARD DATA

EYE CONTACT:

Moderate Eye Irritation: signs/symptoms can include redness, swelling, pain, tearing, and hazy vision.

SKIN CONTACT:

Moderate Skin Irritation (after prolonged or repeated contact): signs/symptoms can include redness, swelling, itching, and dryness.

May be absorbed through the skin and produce effects similar to those caused by inhalation and/or ingestion.

INHALATION:

Central Nervous System Depression: signs/symptoms can include headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

Irritation (upper respiratory): signs/symptoms can include soreness of the nose and throat, coughing and sneezing.

Vapors of the uncured product may cause irritation of the respiratory system.

Prolonged or repeated exposure may cause:

Blood disorders: signs/symptoms can include prolonged weakness

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

8. HEALTH HAZARD DATA (continued)

and fatigue.

Liver Effects: signs/symptoms can include yellow skin(jaundice) and tenderness of upper abdomen.

Prolonged or repeated overexposure, above recommended guidelines, may cause:

Cardiac Sensitization: sudden heart stoppage due to a reflex effect on the nerves which control the heart. This effect usually occurs only after inhalation of concentrated vapors such as in intentional abusive sniffing of certain solvents and propellants.

IF SWALLOWED:

Ingestion is not a likely route of exposure to this product.

Irritation of Gastrointestinal Tissues: signs/symptoms can include pain, vomiting, abdominal tenderness, nausea, blood in vomitus, and blood in feces.

Central Nervous System Depression: signs/symptoms can include headache, dizziness, drowsiness, muscular weakness, incoordination, slowed reaction time, fatigue, blurred vision, slurred speech, giddiness, tremors and convulsions.

Aspiration Pneumonitis: signs/symptoms can include coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.

Repeated ingestion may cause:

Kidney Effects: signs/symptoms can include reduced urine volume, blood in urine and back pain.

Liver Effects: signs/symptoms can include yellow skin(jaundice) and tenderness of upper abdomen.

REPRODUCTIVE/DEVELOPMENTAL TOXINS:

WARNING: Contains a chemical which can cause birth defects. (108-88-3)

SALICYLIC ACID (69-72-7) has been associated with lower birth weights, increased perinatal mortality, ante- and postpartum hemorrhage, prolonged gestation and complicated deliveries.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

SECTION CHANGE DATES

PRECAUTIONARY INFO. SECTION CHANGED SINCE October 24, 2000 ISSUE

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ Scotch-Weld™ High Performance Industrial Plastic Adhesive 4693, Clear
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division
ADDRESS: 3M Center
 St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 05/22/09
Supersedes Date: 01/14/08

Document Group: 11-4283-5

Product Use:

Specific Use: Plastic Adhesive
Intended Use: Industrial use

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
Cyclohexane	110-82-7	60 - 100
Styrene-Butadiene Polymer	Trade Secret	7 - 13
Polyterpene Resin	31393-98-3	5 - 10
Dipentene Polymer	9003-73-0	5 - 10
Acetone	67-64-1	0.1 - 1

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: Light amber colored, solvent odor.

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. May cause target organ effects.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Mild Eye Irritation: Signs/symptoms may include redness, pain, and tearing.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Inhalation:

May be harmful if inhaled.

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	245 °C
Flash Point	-4 °F [Test Method: Closed Cup]
Flammable Limits - LEL	1.1 % volume
Flammable Limits - UEL	8.0 % volume
OSHA Flammability Classification:	Class IB Flammable Liquid

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Cover spill area with a fire-extinguishing foam. An aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Contents may be under

pressure, open carefully. Ground containers securely when transferring contents. Wear low static or properly grounded shoes. Do not spray near flames or sources of ignition. Avoid breathing of vapors, mists or spray. Avoid static discharge. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Vapors may ignite explosively. May cause flash fire. Prevent build-up of vapors - open all windows and doors. Maintain vapor concentrations below recommended exposure limits. Use only with cross-ventilation. Without adequate ventilation, vapors may settle in low-lying areas. Keep away from heat, sparks, and open flame. Do not smoke or ignite matches, lighters, etc. Avoid contact with oxidizing agents.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area. Keep container tightly closed. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Provide local exhaust ventilation at transfer points. Provide appropriate local exhaust ventilation on open containers. Use with functioning spray booth or local exhaust. If exhaust ventilation is not available, use appropriate respiratory protection. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Indirect Vented Goggles.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Nitrile Rubber.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
Acetone	ACGIH	TWA	500 ppm	Table A4
Acetone	ACGIH	STEL	750 ppm	Table A4
Acetone	OSHA	TWA, Vacated	750 ppm	
Acetone	OSHA	TWA	1000 ppm	Table Z-1
Acetone	OSHA	STEL, Vacated	1000 ppm	
Cyclohexane	ACGIH	TWA	100 ppm	
Cyclohexane	OSHA	TWA	300 ppm	Table Z-1

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists
 CMRG: Chemical Manufacturer Recommended Guideline
 OSHA: Occupational Safety and Health Administration
 AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color, Grade:	Light amber colored, solvent odor.
General Physical Form:	Liquid
Autoignition temperature	245 °C
Flash Point	-4 °F [<i>Test Method:</i> Closed Cup]
Flammable Limits - LEL	1.1 % volume
Flammable Limits - UEL	8.0 % volume
Boiling point	>=81 °C [<i>Details:</i> Cyclohexane]
Density	0.82 g/ml
Vapor Density	0.8 [<i>Ref Std:</i> AIR=1]
Vapor Pressure	<=95 mmHg [<i>@ 68 °F</i>]
Specific Gravity	0.82 [<i>Ref Std:</i> WATER=1]
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Solubility in Water	Slight (less than 10%)
Evaporation rate	>=2.0 [<i>Ref Std:</i> WATER=1]
Hazardous Air Pollutants	0 % weight [<i>Test Method:</i> Calculated]
Volatile Organic Compounds	594 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Percent volatile	70 - 80 % weight
VOC Less H2O & Exempt Solvents	597 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Viscosity	150 - 300 centipoise [<i>@ 73.4 °F</i>]

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Heat; Sparks and/or flames

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number	UPC	ID Number	UPC
62-4493-3330-1	00-21200-85842-0	62-4493-6530-3	00-21200-83759-3
62-4493-6535-2		62-4493-7530-2	00-21200-83760-9
62-4493-8530-1	00-21200-83761-6	62-4493-9530-0	00-21200-83762-3

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Cyclohexane	110-82-7	60 - 100

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

WHMIS: Hazardous

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 3 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Section 1: Product name was modified.

Copyright was modified.

Page Heading: Product name was modified.

Section 2: Ingredient table was modified.

Section 15: TSCA section 12[b] text was deleted.

Section 15: TSCA section 12[b] information was deleted.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Safety-Walk(TM) Brand Edge Sealing Compound
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes
 Home Care Division
ADDRESS: 3M Center
 St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 03/08/2006
Supersedes Date: 11/28/2001
Document Group: 10-5249-7

Product Use:
Specific Use: Edge Sealing compound

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
POLY(BUTYL METHACRYLATE)	9003-63-8	40 - 50
NONANE, ALL ISOMERS	Mixture	20 - 35
OCTANES, ALL ISOMERS	Mixture	10 - 25
TOLUENE	108-88-3	7 - 13
2,2,4-TRIMETHYLPENTANE	540-84-1	0.1 - 3
N-BUTYL METHACRYLATE	97-88-1	<2.5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: Clear liquid - odor of naphtha

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Flammable liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back. May cause allergic skin reaction. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

3.2 POTENTIAL HEALTH EFFECTS

NFPA Hazard Classification

Health: 2 Flammability: 3 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

No revision information is available.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) PRIMER 94
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division

ADDRESS: 3M Center
 St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 09/19/2006
Supercodes Date: 09/13/2005

Document Group: 06-8243-5

Product Use:
Specific Use: SURFACE PRIMER

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
CYCLOHEXANE	110-82-7	45 - 50
XYLENE	1330-20-7	20 - 35
ETHYL ALCOHOL	64-17-5	5 - 10
ETHYLBENZENE	100-41-4	3 - 7
CHLORINATED POLYOLEFIN	68609-36-9	1 - 7
ACRYLATE POLYMER (N.J. T.S REG. NO. 04499600-5984P)	Trade Secret	1 - 5
ETHYL ACETATE	141-78-6	1 - 5
EPOXY RESIN	25068-38-6	0.1 - 1
TOLUENE	108-88-3	< 0.5
METHYL ALCOHOL	67-56-1	< 0.5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Liquid

Odor, Color, Grade: Amber colored, solvent odor

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and

explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. May cause allergic skin reaction. Contains a chemical or chemicals which can cause cancer. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Prolonged or repeated exposure may cause:

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

May be absorbed through skin and cause target organ effects.

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Chemical (Aspiration) Pneumonitis: Signs/symptoms may include coughing, gasping, choking, burning of the mouth, difficulty breathing, bluish colored skin (cyanosis), and may be fatal.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure may cause:

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

NOTE: This product contains ethanol. In IARC published Monograph No. 44, entitled, "Alcohol Drinking", the carcinogenicity of ethanol was determined based on chronic exposure to ethanol through human consumption of alcoholic beverages. This is not an expected effect during the foreseeable use of this product.

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Class Description</u>	<u>Regulation</u>
ETHYL ALCOHOL	64-17-5	Group 1	International Agency for Research on Cancer
ETHYLBENZENE	100-41-4	Group 2B	International Agency for Research on Cancer

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	<i>No Data Available</i>
Flash Point	Approximately -4 °F [<i>Test Method: Open Cup</i>]
Flammable Limits - LEL	Approximately 1 %
Flammable Limits - UEL	Approximately 6 %
OSHA Flammability Classification:	Class IB Flammable Liquid

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Cover spill area with a fire-extinguishing foam. An aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Ground containers securely when transferring contents. Wear low static or properly grounded shoes. No smoking while handling this material. Avoid breathing of vapors, mists or spray. Avoid static discharge. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Vapors may ignite explosively. May cause flash fire. Prevent build-up of vapors - open all windows and doors. Maintain vapor concentrations below recommended exposure limits. Use only with cross-ventilation. Without adequate ventilation, vapors may settle in low-lying areas. Keep away from heat, sparks, and open flame. Do not smoke or ignite matches, lighters, etc.

7.2 STORAGE

Store away from heat. Keep container in well-ventilated area. Keep container tightly closed.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Provide appropriate local exhaust ventilation on open containers. Use in a well-ventilated area. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Safety Glasses with side shields.

8.2.2 Skin Protection

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with

your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.
Gloves made from the following material(s) are recommended: Fluoroelastomer (Viton), Polyvinyl Alcohol (PVA).

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Not applicable.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
CYCLOHEXANE	ACGIH	TWA	100 ppm	
CYCLOHEXANE	OSHA	TWA	300 ppm	Table Z-1
ETHYL ACETATE	ACGIH	TWA	400 ppm	
ETHYL ACETATE	OSHA	TWA	400 ppm	Table Z-1
ETHYL ALCOHOL	ACGIH	TWA	1000 ppm	Table A4
ETHYL ALCOHOL	OSHA	TWA	1000 ppm	Table Z-1
ETHYLBENZENE	ACGIH	TWA	100 ppm	Table A3
ETHYLBENZENE	ACGIH	STEL	125 ppm	Table A3
ETHYLBENZENE	OSHA	TWA	100 ppm	Table Z-1A
ETHYLBENZENE	OSHA	STEL	125 ppm	Table Z-1A
METHYL ALCOHOL	ACGIH	TWA	200 ppm	Skin Notation*
METHYL ALCOHOL	ACGIH	STEL	250 ppm	Skin Notation*
METHYL ALCOHOL	OSHA	TWA	200 ppm	Skin Notation*; Table Z-1A
METHYL ALCOHOL	OSHA	STEL	250 ppm	Skin Notation*; Table Z-1A
TOLUENE	ACGIH	TWA	50 ppm	Skin Notation*; Table A4
TOLUENE	CMRG	STEL	75 ppm	Skin Notation*
TOLUENE	OSHA	TWA, Vacated	100 ppm	
TOLUENE	OSHA	STEL, Vacated	150 ppm	
TOLUENE	OSHA	TWA	200 ppm	Table Z-2
TOLUENE	OSHA	CEIL	300 ppm	Table Z-2
XYLENE	ACGIH	TWA	100 ppm	Table A4
XYLENE	ACGIH	STEL	150 ppm	Table A4
XYLENE	OSHA	TWA	100 ppm	Table Z-1A
XYLENE	OSHA	STEL	150 ppm	Table Z-1A

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:

Liquid

Odor, Color, Grade:

Amber colored, solvent odor

General Physical Form:	Liquid
Autoignition temperature	<i>No Data Available</i>
Flash Point	Approximately -4 °F [<i>Test Method: Open Cup</i>]
Flammable Limits - LEL	Approximately 1 %
Flammable Limits - UEL	Approximately 6 %
Boiling point	170 °F - 280 °F
Vapor Density	Approximately 0.0043 g/ml [<i>@ 100 °C</i>]
Vapor Pressure	Approximately 68 mmHg [<i>@ 25 °C</i>]
Specific Gravity	Approximately 0.82
pH	Approximately 5.5
Melting point	<i>Not Applicable</i>
Solubility In Water	Approximately 10 %
Evaporation rate	Approximately 6.4 [<i>Ref Std: XYLENE=1</i>]
Hazardous Air Pollutants	34 - 36 % weight
Volatile Organic Compounds	Approximately 750 g/l
Percent volatile	Approximately 94 %
VOC Less H2O & Exempt Solvents	Approximately 755 g/l
Viscosity	30 - 40 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Heat; Sparks and/or flames

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.
Combustion products will include HCl. Facility must be capable of handling halogenated materials.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number	UPC	ID Number	UPC
70-0064-1371-3		70-0160-4782-4	00-21200-46201-6
70-0160-5476-2	00-21200-23930-4	70-0160-5477-0	00-21200-23929-8
70-0160-5478-8	00-21200-23926-7	70-0160-5497-8	00-21200-24481-0
70-0160-5499-4	00-21200-24479-7	70-0160-5500-9	00-21200-24478-0
70-0160-5501-7	00-21200-24477-3	70-0160-5506-6	00-21200-26207-4
70-0160-5507-4	00-21200-26206-7	70-0160-5508-2	00-21200-26205-0
70-0705-7964-7	00-21200-23925-0	70-0707-4298-9	00-21200-31530-5

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

Ingredient	C.A.S. No	% by Wt
ETHYLBENZENE	100-41-4	3 - 7
CYCLOHEXANE	110-82-7	45 - 50
XYLENE	1330-20-7	20 - 35

This material contains a chemical which requires export notification under TSCA Section 12[b]:

<u>Ingredient (Category if applicable)</u>	<u>C.A.S. No</u>	<u>Regulation</u>	<u>Status</u>
CYCLOHEXANE	110-82-7	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable
ETHYL ACETATE	141-78-6	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable

STATE REGULATIONS

Contact 3M for more information.

CALIFORNIA PROPOSITION 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
ETHYLBENZENE	100-41-4	**Carcinogen
TOLUENE	108-88-3	*Developmental Toxin

* WARNING: contains a chemical or chemicals which can cause birth defects or other reproductive harm.

** WARNING: contains a chemical which can cause cancer.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 3 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to

be generated in significant quantities.

Revision Changes:

Section 1: Division name was modified.

Copyright was modified.

Section 14: ID Number(s) and/or UPC(s) was added.

Section 14: ID Number heading was deleted.

Section 14: ID Number(s) was deleted.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP-100 Clear (Part A)

MANUFACTURER: 3M

DIVISION: Industrial Adhesives and Tapes

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 06/16/2005

Supersedes Date: 05/24/2001

Document Group: 10-3341-4

Product Use:

Specific Use: Accelerator for 2 part epoxy adhesive

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
MERCAPTAN POLYMER; NJ TS REG NO. 33611900-5145KP	Trade Secret	80 - 95
2,4,6-TRIS([DIMETHYLAMINO]METHYL) PHENOL	90-72-2	7 - 13
BIS([DIMETHYLAMINO]METHYL)PHENOL	71074-89-0	0.1 - 0.5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Viscous

Odor, Color, Grade: dark amber, strong mercaptan odor

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: May cause allergic skin reaction.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Vapors released during curing may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Dust created by cutting, grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Prolonged or repeated exposure may cause:

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Inhalation:

Vapors released during curing may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: If signs/symptoms develop, remove person to fresh air. If signs/symptoms persist, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature

No Data Available

Flash Point	257 °C [Test Method: Closed Cup]
Flammable Limits - LEL	Not Applicable
Flammable Limits - UEL	Not Applicable

5.2 EXTINGUISHING MEDIA

Ordinary combustible material. Use fire extinguishers with class A extinguishing agents (e.g., water, foam).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may be used to blanket the fire. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Not applicable.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. Collect as much of the spilled material as possible. Clean up residue. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep out of the reach of children. Avoid breathing of dust created by cutting, sanding, grinding or machining. Avoid contact with oxidizing agents.

7.2 STORAGE

Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Provide ventilated enclosure for heat curing. Provide appropriate local exhaust for cutting, grinding, sanding or machining. Curing enclosures must be exhausted to outdoors or to a suitable emission control device.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.

The following eye protection(s) are recommended: Safety Glasses with side shields, Indirect Vented Goggles.

8.2.2 Skin Protection

Avoid skin contact. Do not cure up a mass of combined material larger than 50 grams to prevent the possibility of exotherm.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Polyethylene/Ethylene Vinyl Alcohol.

8.2.3 Respiratory Protection

Avoid breathing of dust created by cutting, sanding, grinding or machining.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with P100 particulate filters, Half facepiece or fullface air-purifying respirator with P95 particulate filters, Half facepiece or fullface air-purifying respirator with N95 particulate filters.

Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
2,4,6-TRIS(DIMETHYLAMINO)METHYL PHENOL	CMRG	TWA	5 ppm	

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Viscous
Odor, Color, Grade:	dark amber, strong mercaptan odor
General Physical Form:	Liquid
Autoignition temperature	No Data Available
Flash Point	257 °C [Test Method: Closed Cup]
Flammable Limits - LEL	Not Applicable
Flammable Limits - UEL	Not Applicable
Boiling point	>=257 °C
Density	1.15 g/ml
Vapor Density	Not Applicable
Vapor Pressure	No Data Available
Vapor Pressure	Negligible
Specific Gravity	1.15
pH	Not Applicable
Melting point	Not Applicable
Solubility in Water	Negligible
Evaporation rate	Not Applicable
Volatile Organic Compounds	0 g/l

VOC Less H2O & Exempt Solvents
Viscosity

0 g/l
8000 - 15000 centipoise [@ 73 °F]

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Strong oxidizing agents; Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature reaction (exotherm) with production of intense heat and smoke.

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Sulfide	During Combustion
Oxides of Nitrogen	During Combustion
Oxides of Sulfur	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of completely cured (or polymerized) wastes in a sanitary landfill. Incinerate in an industrial or commercial facility in the presence of a combustible material. As a disposal alternative, incinerate uncured product in an industrial or commercial incinerator in the presence of a combustible material.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

DP-100

Not regulated per U.S. DOT, IATA or IMO.

*These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and **not the packaging, labeling, or marking requirements**. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.*

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

Additional Information: This Accelerator (Mfg #EC-3675) used with Scotch-Weld DP-100 Part B Clear Epoxy Adh.; (Mfg. #EC-3575 - MSDS DOC #1033372).

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 1 Reactivity: 1 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

No revision information is available.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Scotch-Weld(TM) Structural Plastic Adhesive DP-8005 (Part B)
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 05/20/2008
Supersedes Date: 11/09/2007

Document Group: 08-8286-0

Product Use:
Specific Use: part B of 2 part adhesive
Intended Use: Industrial use

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
Methacrylate	2455-24-5	40 - 60
2-Ethylhexyl Methacrylate	688-84-6	10 - 30
Acrylonitrile-Butadiene-Styrene Terpolymer	9003-56-9	10 - 30
Glass Spheres	68131-74-8	1 - 10
Impact Modifier	20882-04-6	1 - 3

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste
Odor, Color, Grade: Translucent, mild acrylic odor
General Physical Form: Liquid
Immediate health, physical, and environmental hazards:

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Vapors released during curing may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Dust created by cutting, grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature

No Data Available

Flash Point

218 °F [Test Method: SETAFLASH] [Details: SPECIFIC METHOD: ASTM D-3278-96]

Flammable Limits - LEL

No Data Available

Flammable Limits - UEL
OSHA Flammability Classification:

No Data Available
Not Applicable

5.2 EXTINGUISHING MEDIA

Ordinary combustible material. Use fire extinguishers with class A extinguishing agents (e.g., water, foam).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Not applicable.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible. Cloth or paper contaminated with adhesive should be disposed of in a metal container, covered with water and container sealed.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid breathing of vapors, mists or spray. Avoid skin contact. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Keep container closed when not in use. Avoid breathing of dust created by cutting, sanding, grinding or machining. For industrial or professional use only.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Provide appropriate local exhaust for cutting, grinding, sanding or machining. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control dust, fume, or airborne particles. If

ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Safety Glasses with side shields, Indirect Vented Goggles.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Butyl Rubber, Nitrile Rubber, Polyethylene, Polyvinyl Alcohol (PVA).

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray. Avoid breathing of vapors created during cure cycle. Avoid breathing of dust created by cutting, sanding, grinding or machining.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with formaldehyde cartridges and N95 particulate prefilters, Half facepiece or fullface air-purifying respirator with formaldehyde cartridges and P100 particulate prefilters, Half facepiece or fullface air-purifying respirator with formaldehyde cartridges and P95 particulate prefilters. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

None Established

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Paste
Odor, Color, Grade:	Translucent, mild acrylic odor
General Physical Form:	Liquid
Autoignition temperature	<i>No Data Available</i>
Flash Point	218 °F [Test Method: SETAFLASH] [Details: SPECIFIC METHOD: ASTM D-3278-96]
Flammable Limits - LEL	<i>No Data Available</i>
Flammable Limits - UEL	<i>No Data Available</i>
Boiling point	>=95 °F
Vapor Density	<i>No Data Available</i>
Vapor Pressure	<=0.1 mmHg [@ 20 °C]
Specific Gravity	0.984 [Ref Std: WATER=1]
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Solubility in Water	Slight (less than 10%)
Evaporation rate	<i>No Data Available</i>

Hazardous Air Pollutants	0 % weight
Volatile Organic Compounds	39.86 % weight [<i>Test Method:</i> tested per EPA method 24A]
Volatile Organic Compounds	4.81 % weight [<i>Test Method:</i> tested per EPA method 24A] [<i>Details:</i> when mixed 10 parts B to 1 part A]
VOC Less H2O & Exempt Solvents	392 g/l [<i>Test Method:</i> tested per EPA method 24A]
VOC Less H2O & Exempt Solvents	48 g/l [<i>Test Method:</i> tested per EPA method 24A] [<i>Details:</i> when mixed 10 parts B to 1 part A]
Viscosity	25000 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Strong acids; Heat

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Irritant Vapors or Gases	During Combustion
Oxides of Nitrogen	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Cure (harden, set, or react) the product according to product instructions. Dispose of completely cured (or polymerized) wastes in a sanitary landfill. As a disposal alternative, incinerate uncured product in an industrial or commercial incinerator.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

62-2786-8530-0, 62-2786-8535-9, 62-2786-9530-9

Not regulated per U.S. DOT, IATA or IMO.

These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling, or marking requirements. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Glass Spheres (VANADIUM COMPOUNDS)	68131-74-8	1 - 10

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 1 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification

Health: 2 Flammability: 1 Reactivity: 0 Protection: B

Hazardous Material Identification System (HMIS(r)) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS(r) ratings are to be used with a fully implemented HMIS(r) program. HMIS(r) is a registered mark of the National Paint and Coatings Association (NPCA).

Revision Changes:

Copyright was modified.

Section 9: Property description for optional properties was modified.

Section 2: Ingredient table was modified.

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Material Safety Data Sheet

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PRODUCT NAME: Scotch-Weld(TM) Structural Plastic Adhesive DP-8005
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes
ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 09/12/2003
Supersedes Date: 05/22/2001

Document Group: 08-8288-6

ID Number(s):
62-2786-0430-1, 62-2786-0435-0, 62-2786-3630-3, 62-2786-3930-7

This product is a kit or a multipart product which consists of multiple, independently packaged components. An MSDS for each of these components is included. Please do not separate the component MSDSs from this cover page. The document numbers of the MSDSs for components of this product are:

08-8286-0, 08-8284-5

No revision information is available.

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3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the MSDS available directly from 3M.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Vapors released during curing may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Dust created by cutting, grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Severe Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.

Prolonged or repeated exposure may cause:

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Prolonged or repeated exposure may cause:

Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Polyurethane Adhesive Sealant 560, White, Gray, Black
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division

ADDRESS: 3M Center
 St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 01/23/2009
Supersedes Date: 01/09/2009

Document Group: 08-9434-5

Product Use:
 Intended Use: Sealant

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
Urethane Polymer - N.J.T.S. Reg. No. 04499600-6718	Trade Secret	30 - 40
Plasticizer (CAS 91082-17-6 in Europe)	70775-94-9	20 - 30
Poly(vinyl chloride) polymer	9002-86-2	20 - 30
Xylene	1330-20-7	1 - 5
Amorphous Silica	67762-90-7	1 - 5
Calcium Oxide	1305-78-8	< 4
Titanium Dioxide	13463-67-7	< 4
Iron Oxide	1317-61-9	< 4
Ethylbenzene	100-41-4	< 2
p,p'-Methylenebis(phenyl isocyanate)	101-68-8	< 2
3-(Trimethoxysilyl)Propyl Glycidyl Ether	2530-83-8	< 1
2,6-di-tert-butyl-4-(octadecanoxycarbonyl)phenol	2082-79-3	< 0.5
p-Toluenesulfonamide	70-55-3	< 0.3
Carbon Black	1333-86-4	< 0.3

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste

Odor, Color, Grade: Mild xylene odor

General Physical Form: Solid

Immediate health, physical, and environmental hazards: May cause allergic skin reaction. May cause allergic respiratory reaction. Contains a chemical or chemicals which can cause cancer. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Mild Eye Irritation: Signs/symptoms may include redness, pain, and tearing.

Vapors released during curing may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Dust created by cutting, grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, and itching.

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

Prolonged or repeated exposure may cause:

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea,

slowed reaction time, slurred speech, giddiness, and unconsciousness.

Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

Prolonged or repeated exposure may cause:

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

<u>Inгредиент</u>	<u>C.A.S. No.</u>	<u>Class Description</u>	<u>Regulation</u>
Ethylbenzene	100-41-4	Group 2B	International Agency for Research on Cancer

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	≥ 200 °C
Flash Point	Not Applicable
Flammable Limits - LEL	Not Applicable
Flammable Limits - UEL	Not Applicable

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Not applicable.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Avoid contact with incompatible materials listed in the Reactivity Data Section. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Avoid eye contact. Avoid skin contact. Avoid breathing of vapors. Keep out of the reach of children. For industrial or professional use only.

7.2 STORAGE

Store away from heat. Store out of direct sunlight. Keep container tightly closed. Store in a cool, dry place.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.

The following eye protection(s) are recommended: Safety Glasses with side shields.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Polyethylene, Polyvinyl Alcohol (PVA).

8.2.3 Respiratory Protection

Avoid breathing of vapors. Avoid breathing of dust created by cutting, sanding, grinding or machining.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges and N95 particulate prefilters. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
3-(Trimethoxysilyl)Propyl Glycidyl Ether	CMRG	TWA	5 ppm	
Calcium Oxide	ACGIH	TWA	2 mg/m3	
Calcium Oxide	OSHA	TWA	5 mg/m3	Table Z-1
Amorphous Silica	CMRG	CEIL	5 mg/m3	
Ethylbenzene	ACGIH	TWA	100 ppm	Table A3
Ethylbenzene	ACGIH	STEL	125 ppm	Table A3
Ethylbenzene	CMRG	TWA	25 ppm	
Ethylbenzene	CMRG	STEL	75 ppm	
Ethylbenzene	OSHA	TWA	100 ppm	Table Z-1A
Ethylbenzene	OSHA	STEL	125 ppm	Table Z-1A
FREE ISOCYANATES	3M	TWA	0.005 ppm	
FREE ISOCYANATES	3M	STEL	0.02 ppm	
2,6-di-tert-butyl-4-(octadecanoxycarbonylethyl)phenol	CMRG	TWA	10 mg/m3	
p,p'-Methylenebis(phenyl isocyanate)	ACGIH	TWA	0.005 ppm	
p,p'-Methylenebis(phenyl isocyanate)	OSHA	CEIL	0.02 ppm	Table Z-1
Poly(vinyl chloride) polymer	ACGIH	TWA, respirable	1 mg/m3	Table A4
Titanium Dioxide	ACGIH	TWA	10 mg/m3	Table A4
Titanium Dioxide	CMRG	TWA, as respirable dust	5 mg/m3	
Titanium Dioxide	OSHA	TWA, Vacated, as dust	10 mg/m3	
Titanium Dioxide	OSHA	TWA, as total dust	15 mg/m3	Table Z-1
Xylene	ACGIH	TWA	100 ppm	Table A4
Xylene	ACGIH	STEL	150 ppm	Table A4
Xylene	CMRG	TWA	50 ppm	
Xylene	CMRG	STEL	75 ppm	
Xylene	OSHA	TWA	100 ppm	Table Z-1A
Xylene	OSHA	STEL	150 ppm	Table Z-1A

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists
 CMRG: Chemical Manufacturer Recommended Guideline
 OSHA: Occupational Safety and Health Administration
 AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Paste
Odor, Color, Grade:	Mild xylene odor
General Physical Form:	Solid
Autoignition temperature	>=200 °C
Flash Point	<i>Not Applicable</i>
Flammable Limits - LEL	<i>Not Applicable</i>
Flammable Limits - UEL	<i>Not Applicable</i>
Boiling point	>=137 °C
Density	1.17 g/cm3
Vapor Density	<i>Not Applicable</i>
Vapor Pressure	<i>Not Applicable</i>
Specific Gravity	1.17 [<i>Ref Std: WATER=1</i>]
pH	<i>Not Applicable</i>
Melting point	<i>No Data Available</i>
Solubility in Water	Nil
Evaporation rate	<i>No Data Available</i>
Hazardous Air Pollutants	6.3 % weight [<i>Test Method: Calculated</i>]
Volatile Organic Compounds	73.0 g/l
Percent volatile	6.2 % weight
VOC Less H2O & Exempt Solvents	73.0 g/l [<i>Test Method: calculated SCAQMD rule 443.1</i>]
VOC Less H2O & Exempt Solvents	6.2 % [<i>Test Method: calculated per CARB title 2</i>]
Viscosity	>=300000 centipoise [<i>@ 73.4 °F</i>]

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Amines; Alcohols; Water; Heat

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Cyanide	During Combustion
Oxides of Nitrogen	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of completely cured (or polymerized) wastes in a sanitary landfill.
Incinerate uncured product in a permitted hazardous waste incinerator.
As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

62-5487-3530-7, 62-5487-3930-9, 62-5487-3935-8, 62-5487-5230-2, 62-5487-5235-1, 62-5487-9530-1, 62-5488-3530-5, 62-5488-3930-7, 62-5488-5230-0, 62-5488-5235-9, 62-5488-9530-9, 62-5495-3530-0, 62-5495-3930-2, 62-5495-5230-5, 62-5495-9530-4

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Xylene	1330-20-7	1 - 5
Ethylbenzene	100-41-4	< 2
p,p'-Methylenebis(phenyl isocyanate) (Diisocyanates (EPCRA 313))	101-68-8	< 2

STATE REGULATIONS

Contact 3M for more information.

CALIFORNIA PROPOSITION 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
Ethylbenzene	100-41-4	**Carcinogen

** WARNING: contains a chemical which can cause cancer.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 1 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Section 1: Product use information was modified.

Section 16: NFPA hazard classification for flammability was modified.

Section 8: Respiratory protection information was modified.
Section 15: 311/312 Fire Hazard score was modified.
Section 15: Inventories information was modified.
Section 9: Property description for optional properties was modified.
Section 2: Ingredient table was modified.
Section 8: Exposure guidelines ingredient information was modified.
Section 3: Carcinogenicity table was modified.
Section 15: California proposition 65 ingredient information was modified.

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the MSDS available directly from 3M.

3M MSDSs are available at www.3M.com

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

One or more of the components in this material is not listed on the TSCA inventory, but is approved for specific commercial use(s) under a US EPA low volume exemption (up to 10,000 kg/yr). Research and development production quantities are not included in the 10,000 kg/yr limit.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 3 Flammability: 2 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Copyright was modified.

Section 9: Property description for optional properties was modified.

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3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Cure (harden, set, or react) the product according to product instructions. Dispose of completely cured (or polymerized) wastes in a sanitary landfill. As a disposal alternative, incinerate uncured product in an industrial or commercial incinerator.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

62-2886-7530-9, 62-2886-8530-8

Not regulated per U.S. DOT, IATA or IMO.

These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling, or marking requirements. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Paste
Odor, Color, Grade:	mild odor, white
General Physical Form:	Liquid
Autoignition temperature	No Data Available
Flash Point	180 °F [Test Method: Closed Cup]
Flammable Limits - LEL	No Data Available
Flammable Limits - UEL	No Data Available
Boiling point	>=95 °F
Vapor Density	No Data Available
Vapor Pressure	<=0.1 mmHg
Specific Gravity	1.063
Specific Gravity	0.991 [Details: when mixed 10 parts B to 1 part A]
pH	Not Applicable
Melting point	Not Applicable
Solubility in Water	Slight (less than 10%)
Evaporation rate	No Data Available
Volatile Organic Compounds	6.15 % weight [Test Method: tested per EPA method 24A]
Volatile Organic Compounds	4.81 [Test Method: tested per EPA method 24A] [Details: when mixed 10 parts B to 1 part A]
VOC Less H2O & Exempt Solvents	65 g/l [Test Method: tested per EPA method 24A]
VOC Less H2O & Exempt Solvents	48 g/l [Test Method: tested per EPA method 24A] [Details: when mixed 10 parts B to 1 part A]
Viscosity	49000 centipoise [@ 73.4 °F]

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Strong acids; Heat; Sparks and/or flames; Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Irritant Vapors or Gases	During Combustion
Oxides of Nitrogen	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Avoid skin contact. Avoid breathing of vapors. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Keep container closed when not in use. Avoid breathing of dust created by cutting, sanding, grinding or machining. For industrial or professional use only. Avoid contact with oxidizing agents. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area. Keep container tightly closed. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Provide appropriate local exhaust for cutting, grinding, sanding or machining. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control dust, fume, or airborne particles. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.

The following eye protection(s) are recommended: Safety Glasses with side shields, Indirect Vented Goggles.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Butyl Rubber, Nitrile Rubber, Polyethylene, Polyvinyl Alcohol (PVA).

8.2.3 Respiratory Protection

Avoid breathing of vapors. Avoid breathing of dust created by cutting, sanding, grinding or machining.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with formaldehyde cartridges and N95 particulate prefilters, Half facepiece or fullface air-purifying respirator with formaldehyde cartridges and P100 particulate prefilters, Half facepiece or fullface air-purifying respirator with formaldehyde cartridges and P95 particulate prefilters. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
Amorphous Silica	CMRG	CEIL	5 mg/m3	

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	<i>No Data Available</i>
Flash Point	180 °F [<i>Test Method:</i> Closed Cup]
Flammable Limits - LEL	<i>No Data Available</i>
Flammable Limits - UEL	<i>No Data Available</i>
OSHA Flammability Classification:	Class IIIA Combustible Liquid

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Combustible liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Avoid skin contact. Avoid breathing of vapors. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Keep container closed when not in use. Avoid breathing of dust created by cutting, sanding, grinding or machining. For industrial or professional use only. Avoid contact with oxidizing agents. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area. Keep container tightly closed. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Provide appropriate local exhaust for cutting, grinding, sanding or machining. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control dust, fume, or airborne particles. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.
The following eye protection(s) are recommended: Safety Glasses with side shields, Indirect Vented Goggles.

8.2.2 Skin Protection

Avoid skin contact.
Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.
Gloves made from the following material(s) are recommended: Butyl Rubber, Nitrile Rubber, Polyethylene, Polyvinyl Alcohol (PVA).

8.2.3 Respiratory Protection

Avoid breathing of vapors. Avoid breathing of dust created by cutting, sanding, grinding or machining.
Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with formaldehyde cartridges and P95 particulate prefilters, Half facepiece or fullface air-purifying respirator with formaldehyde cartridges and P95 particulate prefilters. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

Inredient	Authority	Type	Limit	Additional Information
Amorphous Silica	CMRG	CELL	5 mg/m ³	

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists
 CMRG: Chemical Manufacturer Recommended Guideline
 OSHA: Occupational Safety and Health Administration

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Cure (harden, set, or react) the product according to product instructions. Dispose of completely cured (or polymerized) wastes in a sanitary landfill. As a disposal alternative, incinerate uncured product in an industrial or commercial incinerator.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

62-2886-7530-9, 62-2886-8530-8

Not regulated per U.S. DOT, IATA or IMO.

These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling, or marking requirements. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Scotch-Weld(TM) Hi-Strength 90 Cylinder Spray Adhesive, (Intermediate and Jumbo Sizes)
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division
ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 07/30/2007
Supersedes Date: 07/19/2007

Document Group: 23-3000-9

Product Use:

Specific Use: general purpose solvent based adhesive
Intended Use: Industrial use

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
Dimethyl Ether	115-10-6	15 - 40
Cyclohexane	110-82-7	10 - 30
Pentane	109-66-0	10 - 30
Non-Volatile Components - N.J.T.S. Reg No. 04499600-6448P	Trade Secret	10 - 30
Acetone	67-64-1	10 - 30
Propane	74-98-6	5 - 10
Isobutane	75-28-5	5 - 10

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: clear, solvent odor

General Physical Form: Gas

Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	No Data Available
Flash Point	-50 °F [Test Method: Closed Cup] [Details: Flammable Gas]
Flammable Limits - LEL	1.2 % volume
Flammable Limits - UEL	27 % volume

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Water may be used to blanket the fire. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available.

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Contents may be under pressure, open carefully. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Ground containers securely when transferring contents. Wear low static or properly grounded shoes. Do not pierce or burn container, even after use. Do not spray near flames or sources of ignition. Avoid breathing of vapors, mists or spray. Avoid skin contact. Avoid static discharge. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Vapors may ignite explosively. May cause flash fire. Prevent build-up of vapors - open all windows and doors. Maintain vapor concentrations below recommended exposure limits. Use only with cross-ventilation. Without adequate ventilation, vapors may settle in low-lying areas. Keep away from heat, sparks, and

Pentane	OSHA	TWA	1000 ppm	Table Z-1
Propane	ACGIH	TWA	1000 ppm	
Propane	OSHA	TWA	1000 ppm	Table Z-1

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- CMRG: Chemical Manufacturer Recommended Guideline
- OSHA: Occupational Safety and Health Administration
- AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color, Grade:	clear, solvent odor
General Physical Form:	Gas
Autoignition temperature	<i>No Data Available</i>
Flash Point	-50 °F [<i>Test Method:</i> Closed Cup] [<i>Details:</i> Flammable Gas]
Flammable Limits - LEL	1.2 % volume
Flammable Limits - UEL	27 % volume
Boiling point	<=68 °F
Density	0.69 g/ml
Vapor Density	>=1.0 [<i>Ref Std:</i> AIR=1]
Vapor Pressure	84.7 psia [<i>@</i> 68 °F]
Specific Gravity	0.69 [<i>Ref Std:</i> WATER=1]
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Solubility in Water	Nil
Evaporation rate	<i>No Data Available</i>
Hazardous Air Pollutants	0 % weight
Volatile Organic Compounds	562 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Percent volatile	65 - 75 % weight
VOC Less H2O & Exempt Solvents	678 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Viscosity	<i>Not Applicable</i>
Solids Content	10 - 20 %

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Heat; Sparks and/or flames

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
------------------	------------------

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Cyclohexane	110-82-7	10 - 30

This material contains a chemical which requires export notification under TSCA Section 12[b]:

<u>Ingredient (Category if applicable)</u>	<u>C.A.S. No</u>	<u>Regulation</u>	<u>Status</u>
Pentane	109-66-0	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable
Cyclohexane	110-82-7	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable
Acetone	67-64-1	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Non hazardous according to WHMIS criteria.

Contact 3M for more information.

WHMIS: Non-hazardous

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Pentane	OSHA	TWA	1000 ppm	Table Z-1
Propane	ACGIH	TWA	1000 ppm	
Propane	OSHA	TWA	1000 ppm	Table Z-1

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- CMRG: Chemical Manufacturer Recommended Guideline
- OSHA: Occupational Safety and Health Administration
- AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color, Grade:	clear, solvent odor
General Physical Form:	Gas
Autoignition temperature	<i>No Data Available</i>
Flash Point	-50 °F [<i>Test Method:</i> Closed Cup] [<i>Details:</i> Flammable Gas]
Flammable Limits - LEL	1.2 % volume
Flammable Limits - UEL	27 % volume
Boiling point	<=68 °F
Density	0.69 g/ml
Vapor Density	>=1.0 [<i>Ref Std:</i> AIR=1]
Vapor Pressure	84.7 psia [<i>@</i> 68 °F]
Specific Gravity	0.69 [<i>Ref Std:</i> WATER=1]
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Solubility in Water	Nil
Evaporation rate	<i>No Data Available</i>
Hazardous Air Pollutants	0 % weight
Volatile Organic Compounds	562 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Percent volatile	65 - 75 % weight
VOC Less H2O & Exempt Solvents	678 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Viscosity	<i>Not Applicable</i>
Solids Content	10 - 20 %

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Heat; Sparks and/or flames

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
------------------	------------------

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Cyclohexane	110-82-7	10 - 30

This material contains a chemical which requires export notification under TSCA Section 12[b]:

<u>Ingredient (Category if applicable)</u>	<u>C.A.S. No</u>	<u>Regulation</u>	<u>Status</u>
Pentane	109-66-0	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable
Cyclohexane	110-82-7	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable
Acetone	67-64-1	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Non hazardous according to WHMIS criteria.

Contact 3M for more information.

WHMIS: Non-hazardous

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

MATERIAL SAFETY
DATA SHEET

3M
3M Center
St. Paul, Minnesota
55144-1000
1-800-364-3577 or (651) 737-6501 (24 hours)

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DIVISION: ENGINEERED ADHESIVES

TRADE NAME:

SCOTCH-WELD (TM) 2216 B/A Part B Gray Epoxy Adhesive
ID NUMBER/U.P.C.:

62-2216-4130-1 00-21200-20353-4 62-2216-5930-3 - - -
62-2216-6830-4 - - - 62-2216-8530-8 00-21200-20360-2
62-2216-9530-7 00-21200-20361-9

ISSUED: May 24, 2001

SUPERSEDES: October 24, 2000

DOCUMENT: 10-3167-3

1. INGREDIENT	C.A.S. NO.	PERCENT
EPOXY RESIN.....	25068-38-6	70.0 - 80.0
KAOLIN.....	1332-58-7	20.0 - 30.0

The components of this product are in compliance with the chemical
notification requirements of TSCA. All applicable chemical
ingredients in this material are listed on the European Inventory of
Existing Chemical Substances (EINECS), or are exempt polymers whose
monomers are listed on EINECS.

This Base (Mfg. EC-2216) used with SCOTCH-WELD 2216 B/A Part A Gray
Epoxy Adhesive; (Mfg. EC-2217 -- MSDS DOC #1031749).

2. PHYSICAL DATA

BOILING POINT:..... N/A
VAPOR PRESSURE:..... N/A
VAPOR DENSITY:..... N/A
EVAPORATION RATE:..... N/A
SOLUBILITY IN WATER:..... nil
SPECIFIC GRAVITY:..... 1.330 Water=1
PERCENT VOLATILE:..... 0.06 % by wt ASTM
pH:..... N/A
VISCOSITY:..... 75000 - 150000 centipoise
MELTING POINT:..... N/D

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

2. PHYSICAL DATA (continued)

APPEARANCE AND ODOR:

creamy paste, off-white, very slight epoxy odor.

3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:..... N/A
FLAMMABLE LIMITS - LEL:..... N/A
FLAMMABLE LIMITS - UEL:..... N/A
AUTOIGNITION TEMPERATURE:..... N/D

EXTINGUISHING MEDIA:

Water, Carbon dioxide, Dry chemical, Foam

SPECIAL FIRE FIGHTING PROCEDURES:

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

None known.

NFPA HAZARD CODES: HEALTH: 1 FIRE: 0 REACTIVITY: 1
UNUSUAL REACTION HAZARD: none

4. REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY - MATERIALS/CONDITIONS TO AVOID:

Strong Acids, Strong Oxidizing Agents. Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature reaction (exotherm) with production of intense heat and smoke.

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon Monoxide and Carbon Dioxide, Aldehydes, Ketones, Hydrocarbons, Toxic Vapors, Gases or Particulates.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Cover with absorbent material. Collect spilled material. Place in a U.S. DOT-approved container.

RECOMMENDED DISPOSAL:

Cure product according to product instructions. Incinerate uncured waste in an industrial or commercial incinerator. Dispose of completely cured (or polymerized) material in a sanitary landfill.

ENVIRONMENTAL DATA:

Not determined.

REGULATORY INFORMATION:

Volatile Organic Compounds: 0.8 gms/liter tested per EPA method 24A.
Volatile Organic Compounds: 12 gms/liter tested per EPA method 24A MIXED WITH PART A.
VOC Less H2O & Exempt Solvents: 0.8 gms/liter tested per EPA method 24A.

Since regulations vary, consult applicable regulations or authorities before disposal. U.S. EPA Hazardous Waste Number = None (Not U.S. EPA Hazardous).

EPCRA HAZARD CLASS:

FIRE HAZARD: No PRESSURE: No REACTIVITY: No ACUTE: Yes CHRONIC: Yes

6. SUGGESTED FIRST AID

EYE CONTACT:

Immediately flush eyes with large amounts of water. Get immediate medical attention.

SKIN CONTACT:

Immediately wash skin with soap and large amounts of water. Remove contaminated clothing. If signs/symptoms occur, call a physician. Wash contaminated clothing before reuse and dispose of contaminated shoes.

INHALATION:

If signs/symptoms occur, remove person to fresh air. If signs/symptoms continue, call a physician.

IF SWALLOWED:

Do not induce vomiting. Drink two glasses of water. Call a physician.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

7. PRECAUTIONARY INFORMATION

EYE PROTECTION:

Avoid eye contact. Wear vented goggles. Wear safety glasses with side shields.

SKIN PROTECTION:

Avoid skin contact. Wear appropriate gloves when handling this material. A pair of gloves made from the following material(s) are recommended: polyethylene/ethylene vinyl alcohol.

RECOMMENDED VENTILATION:

Provide appropriate local exhaust for grinding, cutting or sanding cured material. Curing ovens must be exhausted to outdoors or to a suitable emission control device. Use in a well-ventilated area. If exhaust ventilation is not adequate, use appropriate respiratory protection.

RESPIRATORY PROTECTION:

Avoid breathing of vapors created during the cure cycle. Avoid breathing of dust created by cutting, sanding or grinding. Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: half-mask dust respirator.

PREVENTION OF ACCIDENTAL INGESTION:

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Do not ingest.

RECOMMENDED STORAGE:

Store away from heat. Keep out of the reach of children.

FIRE AND EXPLOSION AVOIDANCE:

Keep container tightly closed.

EXPOSURE LIMITS

INGREDIENT	VALUE	UNIT	TYPE	AUTH	SKIN*
EPOXY RESIN.....	NONE	NONE	NONE	NONE	
KAOLIN.....	2	MG/M3	TWA	ACGIH	
KAOLIN.....	10	MG/M3	TWA	OSHAV	
		RESPIRABLE			
		AS DUST			
KAOLIN.....	15	MG/M3	TWA	OSHA	
		OSHA VACATED PEL			
		AS TOTAL DUST			
KAOLIN.....	5	MG/M3	TWA	OSHA	
		RESPIRABLE			

* SKIN NOTATION: Listed substances indicated with 'Y' under SKIN refer to

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

EXPOSURE LIMITS (continued)

INGREDIENT	VALUE	UNIT	TYPE	AUTH	SKIN*
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the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- OSHA: Occupational Safety and Health Administration
- OSHAV: Occupational Safety and Health Administration Vacated PEL. Vacated Permissible Exposure Limits (PEL) are enforced as the OSHA PEL in some states. Check with your local regulatory authority.
- NONE: None Established

8. HEALTH HAZARD DATA

EYE CONTACT:

Moderate Eye Irritation: signs/symptoms can include redness, swelling, pain, tearing, and hazy vision.

Vapors from heated material may cause eye irritation.

Dust created by cutting, grinding, sanding, or machining may cause eye irritation.

SKIN CONTACT:

Allergic Skin Reaction: signs/symptoms can include redness, swelling, blistering, and itching.

Mild Skin Irritation: signs/symptoms can include redness, swelling, and itching.

INHALATION:

Irritation (upper respiratory): signs/symptoms can include soreness of the nose and throat, coughing and sneezing.

Vapors of heated material may cause respiratory system irritation.

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system.

IF SWALLOWED:

Ingestion may cause:

Irritation of Gastrointestinal Tissues: signs/symptoms can include pain, vomiting, abdominal tenderness, nausea, blood in vomitus, and blood in feces.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

8. HEALTH HAZARD DATA (continued)

OTHER HEALTH HAZARD INFORMATION:

Exposure to this material in normal storage and handling has not been reported to cause significant adverse health effects. However, under normal processing conditions, e.g. grinding or heating, this product may release fumes and vapors of variable composition based on specific process conditions. These process releases may produce irritation or any of the health effects listed above when the emissions are present at elevated concentrations. Use with appropriate local exhaust ventilation.

SECTION CHANGE DATES

HEADING SECTION CHANGED SINCE October 24, 2000 ISSUE

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Scotch-Weld(TM) Epoxy Adhesive 2216, Gray (Part A)

MANUFACTURER: 3M

DIVISION: Industrial Adhesives and Tapes

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 07/10/2003

Supersedes Date: 08/09/2001

Document Group: 10-3174-9

Product Use:

Specific Use: accelerator for 2 part epoxy adhesive

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
ALIPHATIC POLYMER DIAMINE	68911-25-1	40 - 70
KAOLIN	1332-58-7	30 - 60

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Gel

Odor, Color, Grade: pungent odor, gray.

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: May cause chemical eye burns. May cause severe skin irritation. May cause allergic skin reaction.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Vapors from heated material may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Dust created by cutting, grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Severe Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.

Prolonged or repeated exposure may cause:

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Inhalation:

Vapors from heated material may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, nausea, diarrhea and vomiting.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	No Data Available
Flash Point	No Data Available
Flammable Limits - LEL	Not Applicable
Flammable Limits - UEL	Not Applicable

5.2 EXTINGUISHING MEDIA

Material will not burn.

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may be used to blanket the fire. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

Unusual Fire and Explosion Hazards: No unusual fire or explosion hazards are anticipated.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Place in a closed container approved for transportation by appropriate authorities.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Avoid eye contact. Avoid breathing of dust created by cutting, sanding, grinding or machining. Avoid breathing of vapors, mists or spray. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. For industrial or professional use only.

7.2 STORAGE

Store away from heat.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use in a well-ventilated area. Provide ventilated enclosure for heat curing. Provide appropriate local exhaust for cutting, grinding, sanding or machining.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.

The following eye protection(s) are recommended: Safety Glasses with side shields, Indirect Vented Goggles.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Polyethylene/Ethylene Vinyl Alcohol.

8.2.3 Respiratory Protection

Avoid breathing of dust created by cutting, sanding, grinding or machining. Avoid breathing of vapors, mists or spray.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with P100 particulate filters, Half facepiece or fullface air-purifying respirator with P95 particulate filters, Half facepiece or fullface air-purifying respirator with N95 particulate filters. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
KAOLIN	ACGIH	TWA - respirable	2 mg/m3	Table A4
KAOLIN	OSHA	TWA - respirable	5 mg/m3	Table Z-1
KAOLIN	OSHA	TWA, Vacated - as dust	10 mg/m3	
KAOLIN	OSHA	TWA - as total dust	15 mg/m3	Table Z-1

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Gel
Odor, Color, Grade:	pungent odor, gray.
General Physical Form:	Liquid
Autoignition temperature	<i>No Data Available</i>
Flash Point	<i>No Data Available</i>
Flammable Limits - LEL	<i>Not Applicable</i>
Flammable Limits - UEL	<i>Not Applicable</i>
Boiling point	<i>Not Applicable</i>
Density	1.26
Vapor Density	<i>Not Applicable</i>
Vapor Pressure	<=0.1 mmHg [@ 25 °C]
Specific Gravity	1.26 [Ref Std: WATER=1]
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Solubility in Water	Nil
Evaporation rate	<i>Not Applicable</i>
Hazardous Air Pollutants	00 lb HAPS/gal [Test Method: Calculated]
Volatile Organic Compounds	Approximately 43 g/l [Test Method: tested per EPA method 24A]
Percent volatile	0.00 % weight [Details: CONDITIONS: @room temperature]
VOC Less H2O & Exempt Solvents	Approximately 43 g/l [Test Method: tested per EPA method 24A]
Viscosity	40000 - 80000 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature reaction (exotherm) with production of intense heat and smoke.

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Amine Compounds	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Oxides of Nitrogen	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of completely cured (or polymerized) wastes in a sanitary landfill. As a disposal alternative, incinerate uncured product in an industrial or commercial incinerator in the presence of a combustible material.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

62-2217-5530-9, 62-2217-7530-7, 62-2217-8530-6, 62-2217-9530-5

Not regulated per U.S. DOT, IATA or IMO.

*These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and **not** the packaging, labeling, or marking requirements. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.*

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

Additional Information: This Accel. (Mfg. EC-2217) used with SCOTCH-WELD 2216 B/A Part B Gray Epoxy Adhesive; (Mfg. EC-2216 -- MSDS DOC #1031673).

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 3 Flammability: 0 Reactivity: 1 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

No revision information is available.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP-110, Translucent (Part B)

MANUFACTURER: 3M

DIVISION: Industrial Adhesives and Tapes Division

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 02/07/2007

Supersedes Date: Initial Issue

Document Group: 22-1383-3

Product Use:

Specific Use: 2-Part Epoxy Adhesive (Part B)

Intended Use: Industrial use

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
Epoxy Resin	25068-38-6	60 - 100
Methacrylate/Butadiene/Styrene Polymer	25053-09-2	10 - 30
Hydrogenated Terphenyl	Trade Secret	5 - 10
Amorphous Silica	67762-90-7	0.5 - 1.5
Hydrogenated Polyphenyls	Trade Secret	0.5 - 1.5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste

Odor, Color, Grade: Translucent, slight odor.

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: May cause allergic skin reaction.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Vapors released during curing may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Dust created by cutting, grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Prolonged or repeated exposure may cause:

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Inhalation:

Vapors released during curing may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: If signs/symptoms develop, remove person to fresh air. If signs/symptoms persist, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	No Data Available
Flash Point	>=480 °F [Test Method: Closed Cup]
Flammable Limits - LEL	Not Applicable
Flammable Limits - UEL	Not Applicable

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Water may be used to blanket the fire. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: No unusual fire or explosion hazards are anticipated.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Avoid eye contact. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid breathing of vapors, mists or spray. Avoid skin contact. Keep out of the reach of children. Keep container closed when not in use. Avoid breathing of dust created by cutting, sanding, grinding or machining. For industrial or professional use only. Avoid contact with oxidizing agents. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment.

7.2 STORAGE

Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area. Keep container tightly closed. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Provide appropriate local exhaust for cutting, grinding, sanding or machining. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control dust, fume, or airborne particles. If ventilation is not adequate, use respiratory protection equipment. Provide ventilated enclosure for heat curing. If exhaust ventilation is not available, use appropriate respiratory protection.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.

The following eye protection(s) are recommended: Safety Glasses with side shields, Indirect Vented Goggles.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Neoprene, Nitrile Rubber, Polyethylene/Ethylene Vinyl Alcohol.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray. Avoid breathing of dust created by cutting, sanding, grinding or machining.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P95 particulate prefilters, Half facepiece or fullface air-purifying respirator with organic vapor cartridges and N95 particulate prefilters, Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P100 particulate prefilters. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
Amorphous Silica	CMRG	CEIL	5 mg/m ³	
Hydrogenated Terphenyl	ACGIH	TWA	0.5 ppm	
Hydrogenated Terphenyl	OSHA	TWA	0.5 ppm	Table Z-1A

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:

Paste

Odor, Color, Grade:

Translucent, slight odor.

General Physical Form:

Liquid

Autoignition temperature	No Data Available
Flash Point	>=480 °F [Test Method: Closed Cup]
Flammable Limits - LEL	Not Applicable
Flammable Limits - UEL	Not Applicable
Boiling point	>=260 °C
Density	1.13 g/ml
Vapor Density	Not Applicable
Vapor Pressure	Not Applicable
Specific Gravity	1.13 [Ref Std: WATER=1]
pH	Not Applicable
Melting point	No Data Available
Solubility in Water	Nil
Evaporation rate	Not Applicable
Volatile Organic Compounds	0.0 %
Percent volatile	0.0 % volume
VOC Less H2O & Exempt Solvents	Not Applicable
Viscosity	45000 - 65000 centipoise [@ 73.4 °F]

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Ketones	During Combustion
Toxic Vapor, Gas, Particulate	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Cure (harden, set, or react) the product according to product instructions.

Dispose of completely cured (or polymerized) wastes in a sanitary landfill.

As a disposal alternative, incinerate uncured product in an industrial or commercial incinerator in the presence of a combustible material.

As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste. Combustion products will include HCl. Facility must be capable of handling halogenated materials.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

62-3563-8531-0

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS),

or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 1 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

No revision information is available.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP-110, Translucent (Part A)

MANUFACTURER: 3M

DIVISION: Industrial Adhesives and Tapes Division

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 02/07/2007

Supersedes Date: Initial Issue

Document Group: 19-8793-2

Product Use:

Specific Use: Part A of 2-Part Epoxy Adhesive
Intended Use: Industrial use

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
Mercaptan Polymer - N.J.T.S. Reg No. 33611900-5145KP	Trade Secret	60 - 100
Polyamide Resin	68410-23-1	10 - 30
Hydrogenated Terphenyl	Trade Secret	5 - 10
2,4,6-tris[(Dimethylamino)Methyl]Phenol	90-72-2	1 - 5
Epoxy Resin	25068-38-6	1 - 5
Hydrogenated Polyphenyls	Trade Secret	1 - 5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste

Odor, Color, Grade: Translucent, slight odor.

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: May cause severe eye irritation. May cause allergic skin reaction.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Vapors released during curing may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Dust created by cutting, grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Prolonged or repeated exposure may cause:

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Inhalation:

Vapors released during curing may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: If signs/symptoms develop, remove person to fresh air. If signs/symptoms persist, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	No Data Available
Flash Point	>=365 °F [Test Method: Closed Cup]
Flammable Limits - LEL	Not Applicable
Flammable Limits - UEL	Not Applicable

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Water may be used to blanket the fire. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: No unusual fire or explosion hazards are anticipated.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Avoid eye contact. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid breathing of vapors, mists or spray. Avoid skin contact. Keep out of the reach of children. Keep container closed when not in use. Avoid breathing of dust created by cutting, sanding, grinding or machining. For industrial or professional use only. Avoid contact with oxidizing agents. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area. Keep container tightly closed. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 ENGINEERING CONTROLS**

Provide appropriate local exhaust for cutting, grinding, sanding or machining. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control dust, fume, or airborne particles. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)**8.2.1 Eye/Face Protection**

Avoid eye contact.

The following eye protection(s) are recommended: Safety Glasses with side shields, Indirect Vented Goggles.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Neoprene, Nitrile Rubber, Polyethylene/Ethylene Vinyl Alcohol.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray. Avoid breathing of dust created by cutting, sanding, grinding or machining.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P95 particulate prefilters, Half facepiece or fullface air-purifying respirator with organic vapor cartridges and N95 particulate prefilters, Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P100 particulate prefilters. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
Hydrogenated Terphenyl	ACGIH	TWA	0.5 ppm	
Hydrogenated Terphenyl	OSHA	TWA	0.5 ppm	Table Z-1A
2,4,6-tris[(Dimethylamino)Methyl]Phenol	CMRG	TWA	5 ppm	

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:

Paste

Odor, Color, Grade:

Translucent, slight odor.

General Physical Form:

Liquid

Autoignition temperature

No Data Available

Flash Point	≥ 365 °F [Test Method: Closed Cup]
Flammable Limits - LEL	Not Applicable
Flammable Limits - UEL	Not Applicable
Boiling point	≥ 185 °C
Density	1.1 g/ml
Vapor Density	Not Applicable
Vapor Pressure	Not Applicable
Specific Gravity	1.1 [Ref Std: WATER=1]
pH	Not Applicable
Melting point	No Data Available
Solubility in Water	Nil
Evaporation rate	Not Applicable
Volatile Organic Compounds	0.0 %
Percent volatile	0.0 % weight
VOC Less H ₂ O & Exempt Solvents	Not Applicable
Viscosity	30000 - 70000 centipoise [@ 73.4 °F]

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Strong oxidizing agents; Strong acids; Strong bases; Amines; Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature reaction (exotherm) with production of intense heat and smoke.

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Ketones	During Combustion
Oxides of Nitrogen	During Combustion
Oxides of Sulfur	During Combustion
Toxic Vapor, Gas, Particulate	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Cure (harden, set, or react) the product according to product instructions. Dispose of completely cured (or polymerized) wastes in a sanitary landfill. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):
62-3663-8531-8

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 1 Reactivity: 1 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

No revision information is available.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP-100 Clear (Part B)

MANUFACTURER: 3M

DIVISION: Industrial Adhesives and Tapes

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 06/16/2005

Supersedes Date: 06/25/2001

Document Group: 10-3337-2

Product Use:

Specific Use: base for 2 part epoxy adhesive

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
EPOXY RESIN	25068-38-6	100

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Viscous

Odor, Color, Grade: light straw colored, epoxy odor

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: May cause allergic skin reaction.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Vapors released during curing may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Dust created by cutting, grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Prolonged or repeated exposure may cause:

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Inhalation:

Vapors released during curing may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: If signs/symptoms develop, remove person to fresh air. If signs/symptoms persist, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature
Flash Point
Flammable Limits - LEL

No Data Available
249 °C [*Test Method:* Pensky-Martens Closed Cup]
Not Applicable

Flammable Limits - UEL

Not Applicable

5.2 EXTINGUISHING MEDIA

Ordinary combustible material. Use fire extinguishers with class A extinguishing agents (e.g., water, foam).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may be used to blanket the fire. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Not applicable.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. Collect as much of the spilled material as possible. Clean up residue. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep out of the reach of children. Avoid breathing of dust created by cutting, sanding, grinding or machining. Avoid contact with oxidizing agents.

7.2 STORAGE

Store away from acids. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Provide ventilated enclosure for heat curing. Provide appropriate local exhaust for cutting, grinding, sanding or machining. Curing enclosures must be exhausted to outdoors or to a suitable emission control device.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.

The following eye protection(s) are recommended: Safety Glasses with side shields, Indirect Vented Goggles.

8.2.2 Skin Protection

Avoid skin contact. Do not cure up a mass of combined material larger than 50 grams to prevent the possibility of exotherm.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Polyethylene/Ethylene Vinyl Alcohol.

8.2.3 Respiratory Protection

Avoid breathing of dust created by cutting, sanding, grinding or machining.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with P100 particulate filters, Half facepiece or fullface air-purifying respirator with P95 particulate filters, Half facepiece or fullface air-purifying respirator with N95 particulate filters.

Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

None Established

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Viscous
Odor, Color, Grade:	light straw colored, epoxy odor
General Physical Form:	Liquid
Autoignition temperature	<i>No Data Available</i>
Flash Point	249 °C [<i>Test Method: Pensky-Martens Closed Cup</i>]
Flammable Limits - LEL	<i>Not Applicable</i>
Flammable Limits - UEL	<i>Not Applicable</i>
Boiling point	>=249 °C
Density	1.17 g/ml
Vapor Density	<i>Not Applicable</i>
Vapor Pressure	<=0.03 mmHg [<i>@ 70 °C</i>]
Specific Gravity	1.17
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Solubility in Water	Nil
Evaporation rate	<i>Not Applicable</i>
Volatile Organic Compounds	0 g/l
VOC Less H₂O & Exempt Solvents	0 g/l
Viscosity	10000 - 30000 centipoise [<i>@ 73.400000000 °F</i>] [<i>Details: MITS data</i>]

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Strong acids; Strong oxidizing agents; Heat is generated during cure. Do not cure a mass larger

than 50 grams in a confined space to prevent a premature reaction (exotherm) with production of intense heat and smoke.

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Ketones	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of completely cured (or polymerized) wastes in a sanitary landfill. Incinerate in an industrial or commercial facility in the presence of a combustible material. As a disposal alternative, incinerate uncured product in an industrial or commercial incinerator in the presence of a combustible material.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

DP-100

Not regulated per U.S. DOT, IATA or IMO.

These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's

*transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and **not the packaging, labeling, or marking requirements**. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.*

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

Additional Information: This Base (Mfg. #EC-3575) used with Scotch-Weld DP-100 Part A Clear Epoxy Adh.; (Mfg. #EC-3675 - MSDS DOC #1033414).

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 1 Reactivity: 1 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

No revision information is available.

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Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M-Super Weatherstrip and Gasket Adhesive - Black, P.N. 08008

MANUFACTURER: 3M

DIVISION: Automotive Aftermarket

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 02/24/2008

Supersedes Date: 11/06/2006

Document Group: 08-0531-7

Product Use:

Intended Use: Automotive
Specific Use: Adhesive

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
2-CHLORO-1,3-BUTADIENE POLYMERS AND COPOLYMERS	Mixture	10 - 30
P-TERT-BUTYLPHENOL-FORMALDEHYDE RESIN	25085-50-1	10 - 30
HEXANE, OTHER ISOMERS	Mixture	10 - 30
METHYL ETHYL KETONE	78-93-3	10 - 30
HEXANE	110-54-3	5 - 15
MAGNESIUM OXIDE	1309-48-4	5 - 10
TOLUENE	108-88-3	5 - 10
HEPTANE, ALL ISOMERS	Mixture	1 - 7
XYLENE	1330-20-7	0.5 - 5
CYCLOPENTANE	287-92-3	< 1.5
CYCLOHEXANE	110-82-7	< 1.5
CARBON BLACK	1333-86-4	0.1 - 1
ZINC OXIDE	1314-13-2	< 1.0
ETHYLBENZENE	100-41-4	<= 0.272233
TALC	14807-96-6	<= 0.1613
BENZENE	71-43-2	<= 0.033322
FORMALDEHYDE	50-00-0	<= 0.02918

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: Black; Solvent odor

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Flammable liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Dust clouds of this material in combination with an ignition source may be explosive. Vapors may travel long distances along the ground or floor to an ignition source and flash back. May cause allergic skin reaction. May cause severe skin irritation. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm. Contains a chemical or chemicals which can cause cancer.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Severe Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Inhalation:

Intentional concentration and inhalation may be harmful or fatal.

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure may cause:

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision.

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Peripheral Neuropathy: Signs/symptoms may include tingling or numbness of the extremities, incoordination, weakness of

the hands and feet, tremors and muscle atrophy.

Olfactory Effects: Signs/symptoms may include decreased ability to detect odors and/or complete loss of smell.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Class Description</u>	<u>Regulation</u>
BENZENE	71-43-2	Group 1	International Agency for Research on Cancer
BENZENE	71-43-2	Known human carcinogen	National Toxicology Program Carcinogens
BENZENE	71-43-2	Cancer hazard	OSHA Carcinogens
CARBON BLACK	1333-86-4	Group 2B	International Agency for Research on Cancer
ETHYLBENZENE	100-41-4	Group 2B	International Agency for Research on Cancer
FORMALDEHYDE	50-00-0	Group 1	International Agency for Research on Cancer
FORMALDEHYDE	50-00-0	Anticipated human carcinogen	National Toxicology Program Carcinogens
FORMALDEHYDE	50-00-0	Cancer hazard	OSHA Carcinogens

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	<i>No Data Available</i>
Flash Point	-6.00 °F [<i>Test Method:</i> Tagliabue Closed Cup]
Flammable Limits - LEL	1.00 % volume
Flammable Limits - UEL	11.50 % volume
OSHA Flammability Classification:	Class IB Flammable Liquid

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Dust clouds of this material in combination with an ignition source may be explosive. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Cover spill area with a fire-extinguishing foam. An aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Avoid eye contact. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Ground containers securely when transferring contents. Wear low static or properly grounded shoes. Avoid breathing of vapors, mists or spray. Avoid skin contact. Avoid static discharge. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Avoid contact with oxidizing agents.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area. Keep container tightly closed. Store away from oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Provide appropriate local exhaust ventilation on open containers. Do not use in a confined area or areas with little or no air movement. Provide ventilation adequate to maintain dust concentration below minimum explosive concentrations.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.

The following eye protection(s) are recommended: Safety Glasses with side shields, Indirect Vented Goggles.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Fluoroelastomer (Viton), Nitrile Rubber, Polyvinyl Alcohol (PVA).

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray. Consult the current 3M Respirator Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P95 particulate prefilters. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
BENZENE	ACGIH	TWA	0.5 ppm	Skin Notation*; Table A1
BENZENE	ACGIH	STEL	2.5 ppm	Skin Notation*; Table A1
BENZENE	OSHA	TWA	1 ppm	Standard Appendix
BENZENE	OSHA	STEL	5 ppm	Standard Appendix
CARBON BLACK	ACGIH	TWA	3.5 mg/m3	Table A4
CARBON BLACK	CMRG	TWA	0.5 mg/m3	
CARBON BLACK	OSHA	TWA	3.5 mg/m3	Table Z-1
CYCLOHEXANE	ACGIH	TWA	100 ppm	
CYCLOHEXANE	OSHA	TWA	300 ppm	Table Z-1
CYCLOPENTANE	ACGIH	TWA	600 ppm	
CYCLOPENTANE	OSHA	TWA	600 ppm	Table Z-1A
ETHYLBENZENE	ACGIH	TWA	100 ppm	Table A3
ETHYLBENZENE	ACGIH	STEL	125 ppm	Table A3
ETHYLBENZENE	OSHA	TWA	100 ppm	Table Z-1A
ETHYLBENZENE	OSHA	STEL	125 ppm	Table Z-1A
FORMALDEHYDE	ACGIH	CEIL	0.3 ppm	Sensitizer; Table A2
FORMALDEHYDE	OSHA	TWA	0.5 ppm	Standard Appendix
HEXANE	ACGIH	TWA	50 ppm	Skin Notation*
HEXANE	OSHA	TWA, Vacated	50 ppm	Table Z-1A
HEXANE	OSHA	TWA	500 ppm	Table Z-1A
MAGNESIUM OXIDE	ACGIH	TWA, as fume	10 mg/m3	Table A4
MAGNESIUM OXIDE	OSHA	TWA, as total dust	15 mg/m3	Table Z-1
METHYL ETHYL KETONE	ACGIH	TWA	200 ppm	
METHYL ETHYL KETONE	ACGIH	STEL	300 ppm	
METHYL ETHYL KETONE	OSHA	TWA	200 ppm	Table Z-1A
METHYL ETHYL KETONE	OSHA	STEL	300 ppm	Table Z-1A
TALC	ACGIH	TWA, respirable	2 mg/m3	Table A4
TALC	CMRG	TWA, as respirable dust	0.5 mg/m3	
TALC	OSHA	TWA, respirable	2 mg/m3	Table Z-1A
TOLUENE	ACGIH	TWA	20 ppm	Table A4
TOLUENE	CMRG	STEL	75 ppm	Skin Notation*

TOLUENE	OSHA	TWA, Vacated	100 ppm	
TOLUENE	OSHA	STEL, Vacated	150 ppm	
TOLUENE	OSHA	TWA	200 ppm	Table Z-2
TOLUENE	OSHA	CEIL	300 ppm	Table Z-2
XYLENE	ACGIH	TWA	100 ppm	Table A4
XYLENE	ACGIH	STEL	150 ppm	Table A4
XYLENE	OSHA	TWA	100 ppm	Table Z-1A
XYLENE	OSHA	STEL	150 ppm	Table Z-1A
ZINC OXIDE	ACGIH	TWA, respirable	2 mg/m3	
ZINC OXIDE	ACGIH	STEL	10 mg/m3	
ZINC OXIDE	OSHA	TWA, as fume	5 mg/m3	Table Z-1
ZINC OXIDE	OSHA	TWA, respirable	5 mg/m3	Table Z-1
ZINC OXIDE	OSHA	STEL, Vacated, as fume	10 mg/m3	
ZINC OXIDE	OSHA	TWA, Vacated, as dust	10 mg/m3	
ZINC OXIDE	OSHA	TWA, as total dust	15 mg/m3	Table Z-1

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- CMRG: Chemical Manufacturer Recommended Guideline
- OSHA: Occupational Safety and Health Administration
- AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color, Grade:	Black; Solvent odor
General Physical Form:	Liquid
Autoignition temperature	<i>No Data Available</i>
Flash Point	-6.00 °F [<i>Test Method:</i> Tagliabue Closed Cup]
Flammable Limits - LEL	1.00 % volume
Flammable Limits - UEL	11.50 % volume
Boiling point	148 - 189 °F
Density	7.6 lb/gal
Vapor Density	3.00 [<i>Ref Std:</i> AIR=1]
Vapor Pressure	120.0000 mmHg [@ 68 °F]
Specific Gravity	0.90 [<i>Ref Std:</i> WATER=1]
pH	<i>Not Applicable</i>
Melting point	<i>No Data Available</i>
Solubility in Water	Slight (less than 10%)
Evaporation rate	>=3.60 [<i>Ref Std:</i> ETHER=1]
Hazardous Air Pollutants	59.96 % weight
Volatile Organic Compounds	60.7 % weight [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Percent volatile	60.7 % weight
VOC Less H2O & Exempt Solvents	546 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Viscosity	7500.0 - 9500.0 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Heat; Sparks and/or flames; Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified
Toxic Vapor, Gas, Particulate	Not Specified

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

Combustion products will include HCl. Facility must be capable of handling halogenated materials.

Dispose of empty product containers in a sanitary landfill.

Benzene concentration less than .0052%.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable), D035 (Methyl ethyl ketone)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

41-3701-2175-2, 60-4550-2996-1, 60-9800-3122-7, LB-K000-1071-0

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
TOLUENE	108-88-3	5 - 10
XYLENE	1330-20-7	0.5 - 5
HEXANE	110-54-3	5 - 15
CYCLOHEXANE	110-82-7	< 1.5
ETHYLBENZENE	100-41-4	<= 0.272233

This material contains a chemical which requires export notification under TSCA Section 12[b]:

<u>Ingredient (Category if applicable)</u>	<u>C.A.S. No</u>	<u>Regulation</u>	<u>Status</u>
CYCLOHEXANE	110-82-7	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable

STATE REGULATIONS

Contact 3M for more information.

CALIFORNIA PROPOSITION 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
BENZENE	71-43-2	*Male reproductive toxin
BENZENE	71-43-2	**Carcinogen
BENZENE	71-43-2	*Developmental Toxin
ETHYLBENZENE	100-41-4	**Carcinogen
FORMALDEHYDE	50-00-0	**Carcinogen
TOLUENE	108-88-3	*Developmental Toxin

* WARNING: contains a chemical or chemicals which can cause birth defects or other reproductive harm.

** WARNING: contains a chemical which can cause cancer.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

WHMIS: Hazardous

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 3 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Copyright was modified.

Section 3: Immediate physical hazard(s) was modified.

Section 3: Potential effects from skin contact information was modified.

Section 3: Potential effects from inhalation information was modified.

Section 5: Unusual fire and explosion hazard information was modified.

Section 7: Handling information was modified.

Section 7: Storage information was modified.

Section 8: Respiratory protection information was modified.

Section 8: Respiratory protection - recommended respirators information was modified.

Section 3: Immediate other hazard(s) was modified.

Section 3: Other health effects information was modified.

Section 9: Vapor pressure value was modified.

Section 9: Boiling point information was modified.

Sections 3 and 9: Odor, color, grade information was modified.

Section 9: Property description for optional properties was modified.

Section 3: Immediate skin hazard(s) was added.

Section 14: ID Number Heading Template 1 was added.

Section 14: ID Number(s) Template 1 was added.

Section 2: Ingredient table was added.

Section 15: TSCA section 12[b] text was added.

Section 15: EPCRA 313 information was added.

Section 15: EPCRA 313 text was added.
Section 8: Exposure guidelines ingredient information was added.
Section 8: Exposure guidelines legend was added.
Section 8: Exposure guideline note was added.
Section 15: TSCA section 12[b] information was added.
Section 8: Exposure guidelines data source legend was added.
Section 3: Carcinogenicity table was added.
Section 3: Carcinogenicity heading was added.
Section 15: California proposition 65 ingredient information was added.
Section 15: California proposition 65 heading was added.
Section 15: California proposition 65 cancer warning was added.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ Polyurethane Sealant 540, White, Gray, Black

MANUFACTURER: 3M

DIVISION: Industrial Adhesives and Tapes Division

ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 06/05/09

Supersedes Date: 03/06/09

Document Group: 08-9432-9

Product Use:

Intended Use: Sealant

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
Urethane Polymer - N.J.T.S. Reg. No. 04499600-6720	Trade Secret	30 - 60
Plasticizer	70775-94-9	20 - 35
Poly(Vinyl Chloride) Polymer	9002-86-2	20 - 35
Xylene	1330-20-7	3 - 7
Calcium Oxide	1305-78-8	1 - 5
Petroleum Distillate	64742-47-8	1 - 5
Titanium Dioxide	13463-67-7	<3
Ethylbenzene	100-41-4	<2
Iron Oxide (Fe3O4)	1317-61-9	<2
3-(Trimethoxysilyl)Propyl Glycidyl Ether	2530-83-8	<1
Carbon Black	1333-86-4	<0.3
2,6-di-tert-butyl-4-(octadecanoxycarbonylethyl)phenol	2082-79-3	<0.2
p-Toluenesulfonamide	70-55-3	<0.2

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste

Odor, Color, Grade: Mild xylene odor

General Physical Form: Solid

Immediate health, physical, and environmental hazards: May cause allergic skin reaction. Contains a chemical or chemicals which can cause cancer. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Mild Eye Irritation: Signs/symptoms may include redness, pain, and tearing.

Vapors released during curing may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Dust created by cutting, grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, and itching.

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Prolonged or repeated exposure may cause:

Pneumoconiosis: Signs/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea,

slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure may cause:

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Class Description</u>	<u>Regulation</u>
Ethylbenzene	100-41-4	Group 2B	International Agency for Research on Cancer

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	>=200 °C
Flash Point	Not Applicable
Flammable Limits - LEL	Not Applicable
Flammable Limits - UEL	Not Applicable

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Not applicable.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. Avoid contact with water. Collect as much of the spilled material as possible. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS. Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Avoid eye contact. Avoid skin contact. Avoid breathing of vapors. Keep out of the reach of children. For industrial or professional use only.

7.2 STORAGE

Store away from heat. Store out of direct sunlight. Keep container tightly closed. Store in a cool, dry place.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.

The following eye protection(s) are recommended: Safety Glasses with side shields.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Polyethylene, Polyvinyl Alcohol (PVA).

8.2.3 Respiratory Protection

Avoid breathing of vapors. Avoid breathing of dust created by cutting, sanding, grinding or machining.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges and N95 particulate prefilters. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
3-(Trimethoxysilyl)Propyl Glycidyl Ether	CMRG	TWA	5 ppm	
Calcium Oxide	ACGIH	TWA	2 mg/m3	
Calcium Oxide	OSHA	TWA	5 mg/m3	Table Z-1
Carbon Black	ACGIH	TWA	3.5 mg/m3	Table A4
Carbon Black	CMRG	TWA	0.5 mg/m3	
Carbon Black	OSHA	TWA	3.5 mg/m3	Table Z-1
Ethylbenzene	ACGIH	TWA	100 ppm	Table A3
Ethylbenzene	ACGIH	STEL	125 ppm	Table A3
Ethylbenzene	CMRG	TWA	25 ppm	
Ethylbenzene	CMRG	STEL	75 ppm	
Ethylbenzene	OSHA	TWA	100 ppm	Table Z-1A
Ethylbenzene	OSHA	STEL	125 ppm	Table Z-1A
FREE ISOCYANATES	3M	TWA	0.005 ppm	
FREE ISOCYANATES	3M	STEL	0.02 ppm	
2,6-di-tert-butyl-4-(octadecanoxycarbonylethyl)phenol	CMRG	TWA	10 mg/m3	
Petroleum Distillate	CMRG	TWA	300 ppm	
Poly(Vinyl Chloride) Polymer	ACGIH	TWA, respirable	1 mg/m3	Table A4
Titanium Dioxide	ACGIH	TWA	10 mg/m3	Table A4
Titanium Dioxide	CMRG	TWA, as respirable dust	5 mg/m3	
Titanium Dioxide	OSHA	TWA, Vacated, as dust	10 mg/m3	
Titanium Dioxide	OSHA	TWA, as total dust	15 mg/m3	Table Z-1
Xylene	ACGIH	TWA	100 ppm	Table A4
Xylene	ACGIH	STEL	150 ppm	Table A4
Xylene	CMRG	TWA	50 ppm	
Xylene	CMRG	STEL	75 ppm	
Xylene	OSHA	TWA	100 ppm	Table Z-1A
Xylene	OSHA	STEL	150 ppm	Table Z-1A

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- CMRG: Chemical Manufacturer Recommended Guideline
- OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Paste
Odor, Color, Grade:	Mild xylene odor
General Physical Form:	Solid
Autoignition temperature	>=200 °C
Flash Point	<i>Not Applicable</i>
Flammable Limits - LEL	<i>Not Applicable</i>
Flammable Limits - UEL	<i>Not Applicable</i>
Boiling point	>=136 °C
Density	1.17 g/m3
Vapor Density	<i>Not Applicable</i>
Vapor Pressure	<i>Not Applicable</i>
Specific Gravity	1.17 [<i>Ref Std: WATER=1</i>]
pH	<i>Not Applicable</i>
Melting point	<i>No Data Available</i>
Solubility in Water	Nil
Evaporation rate	<i>No Data Available</i>
Hazardous Air Pollutants	5.6 % weight [<i>Test Method: Calculated</i>]
Percent volatile	8.1 % weight
VOC Less H2O & Exempt Solvents	53.7 g/l [<i>Test Method: tested per EPA method 24</i>]
VOC Less H2O & Exempt Solvents	4.6 % [<i>Test Method: tested per EPA method 24</i>]
Viscosity	>=300000 centipoise [<i>@ 73.4 °F</i>]

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Amines; Alcohols; Heat; Water

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Cyanide	During Combustion
Oxides of Nitrogen	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of completely cured (or polymerized) wastes in a sanitary landfill. As a disposal alternative, incinerate uncured product in an industrial or commercial incinerator in the presence of a combustible material. Combustion products will include HCl. Facility must be capable of handling halogenated materials.

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number	UPC	ID Number	UPC
62-5484-3530-4	000-21200-96278-3	62-5484-3930-6	000-21200-56561-8
62-5484-5230-9	00-21200-49054-5	62-5484-5235-8	00-00000-00000-0
62-5484-5238-2	00-00000-00000-0	62-5484-8530-9	00-21200-49058-3
62-5484-9530-8	00-21200-49055-2	62-5485-3530-1	000-21200-96277-6
62-5485-3535-0	000-00000-00000-0	62-5485-3930-3	000-21200-56562-5
62-5485-3935-2		62-5485-5230-6	00-21200-41594-4
62-5485-5235-5	00-00000-00000-0	62-5485-8530-6	000-21200-49062-0
62-5485-9530-5	00-21200-45112-6	62-5486-3530-9	000-21200-96276-9
62-5486-3930-1	000-21200-96272-1	62-5486-5230-4	00-21200-41595-1
62-5486-5235-3	00-00000-00000-0	62-5486-8530-4	000-21200-49060-6
62-5486-9530-3	00-21200-45190-4		

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

Health: 2 Flammability: 1 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:

Section 1: Product name was modified.

Page Heading: Product name was modified.

Section 2: Ingredient table was modified.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Super 77 Classic Spray Adhesive
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division
ADDRESS: 3M Center
 St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 04/07/09
Supersedes Date: 11/24/08

Document Group: 11-4257-9

Product Use:
 Intended Use: Adhesive aerosol

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
NON-VOLATILE COMPONENTS (N.J. TRADE SECRET REGISTRY NO. 04499600-5776P)	Trade Secret	15 - 40
CYCLOHEXANE	110-82-7	10 - 30
2-METHYLPENTANE	107-83-5	10 - 30
ISOBUTANE	75-28-5	7 - 13
PROPANE	74-98-6	7 - 13
DIMETHYL ETHER	115-10-6	7 - 13
3-METHYLPENTANE	96-14-0	3 - 7
2,3-DIMETHYLBUTANE	79-29-8	1 - 5
2,2-DIMETHYLBUTANE	75-83-2	1 - 5
HEXANE	110-54-3	0.5 - 1.5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: light cream colored, sweet/fruity odor.

General Physical Form: Gas

Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains flammable material under pressure. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:

Prolonged or repeated exposure may cause:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, and itching.

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Intentional concentration and inhalation may be harmful or fatal.

Single exposure, above recommended guidelines, may cause:

Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

May be absorbed following inhalation and cause target organ effects.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Prolonged or repeated exposure may cause:

Peripheral Neuropathy: Signs/symptoms may include tingling or numbness of the extremities, incoordination, weakness of the hands and feet, tremors and muscle atrophy.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

3.3 POTENTIAL ENVIRONMENTAL EFFECTS

HALOGEN ANALYSIS: The dry ingredients of 3M Super 77 Spray Adhesive were subjected to combustion in a Parr oxygen bomb. The decomposition products were analyzed by Ion Chromatographic analysis for halogen and sulfur content. Chlorine 0.05%; Fluorine <0.001%, Bromine <0.001%; Sulfur <0.035%.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Wash affected area with soap and water. If signs/symptoms develop, get medical attention.

Inhalation: Remove person to fresh air. Get immediate medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

4.2 NOTE TO PHYSICIANS

Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	<i>No Data Available</i>
Flash Point	-42.00 °F [<i>Test Method:</i> Tagliabue Closed Cup]
Flammable Limits - LEL	Approximately 1.5 % volume
Flammable Limits - UEL	Approximately 8.6 % volume
OSHA Flammability Classification:	Class IA Flammable Liquid

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains gas under pressure. Aerosol container contains flammable material under pressure.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available.

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. Cover spill area with a fire-extinguishing foam. An aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Do not pierce or burn container, even after use. No smoking while handling this material. Avoid breathing of vapors, mists or spray. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Vapors may ignite explosively. May cause flash fire. Prevent build-up of vapors - open all windows and doors. Maintain vapor concentrations below recommended exposure limits. Use only with cross-ventilation. Without adequate ventilation, vapors may settle in low-lying areas. Keep away from heat, sparks, and open flame. Do not smoke or ignite matches, lighters, etc. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment.

7.2 STORAGE

Store away from acids. Store away from heat. Store out of direct sunlight.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Use with functioning spray booth or local exhaust. Do not use in a confined area or areas with little or no air movement. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment. Do not use in a confined area or areas with little or no air movement. If exhaust ventilation is not adequate, use appropriate respiratory protection. Provide ventilation adequate to control vapor concentrations below recommended exposure limits and/or control spray or mist.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Safety Glasses with side shields.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

Gloves made from the following material(s) are recommended: Nitrile Rubber.

8.2.3 Respiratory Protection

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with organic vapor cartridges. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance. Organic vapor cartridges may have short service life.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Not applicable.

8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
CYCLOHEXANE	ACGIH	TWA	100 ppm	
CYCLOHEXANE	OSHA	TWA	300 ppm	Table Z-1
DIMETHYL ETHER	AIHA	TWA	1000 ppm	
DIMETHYL ETHER	CMRG	TWA	1000 ppm	
HEXANE	ACGIH	TWA	50 ppm	Skin Notation*
HEXANE	OSHA	TWA, Vacated	50 ppm	Table Z-1A
HEXANE	OSHA	TWA	500 ppm	Table Z-1A
HEXANE (ISOMERS OTHER THAN N-HEXANE)	ACGIH	TWA	500 ppm	
HEXANE (ISOMERS OTHER THAN N-HEXANE)	ACGIH	STEL	1000 ppm	
ISOBUTANE	ACGIH	TWA	1000 ppm	
PROPANE	ACGIH	TWA	1000 ppm	
PROPANE	OSHA	TWA	1000 ppm	Table Z-1

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color, Grade: light cream colored, sweet/fruity odor.
General Physical Form: Gas
Autoignition temperature: *No Data Available*
Flash Point: -42.00 °F [*Test Method:* Tagliabue Closed Cup]
Flammable Limits - LEL: Approximately 1.5 % volume
Flammable Limits - UEL: Approximately 8.6 % volume

Vapor Density: 2.97 [*Ref Std:* AIR=1]

Specific Gravity: 0.697 [*Ref Std:* WATER=1]
pH: Approximately 6.7 Units not avail. or not appl.
Melting point: *No Data Available*

Solubility in Water: Nil
Evaporation rate: 1.90 [*Ref Std:* ETHER=1]
Hazardous Air Pollutants: <=1 % weight
Volatile Organic Compounds: 75 % [*Test Method:* tested per SCAQMD method 305]
Percent volatile: 75 % weight
VOC Less H2O & Exempt Solvents: 527 g/l [*Test Method:* tested per SCAQMD method 305]
Viscosity: *Not Applicable*

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Heat

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Toxic Vapor, Gas, Particulate	During Combustion

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

The facility should be equipped to handle gaseous waste.

Facility must be capable of handling aerosol cans. Dispose of empty product containers in a sanitary landfill.

RECYCLE EMPTY AEROSOL CONTAINERS WHERE AVAILABLE.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number	UPC	ID Number	UPC
62-4437-4920-5		62-4437-4921-3	
62-4437-4930-4	00-21200-96315-5	62-4437-4935-3	
62-4437-4950-2		62-4437-4955-1	

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
CYCLOHEXANE	110-82-7	10 - 30

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

Additional Information: Synthetic polymer, resin and antioxidant. Not hazardous according to Canadian WHMIS criteria. Non-WHMIS controlled.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

WHMIS: Hazardous

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 4 Reactivity: 0 Special Hazards: None
Aerosol Storage Code: 3

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification

Health: 2 Flammability: 4 Reactivity: 0 Protection: X - See PPE section.

Hazardous Material Identification System (HMIS(r)) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS(r) ratings are to be used with a fully implemented HMIS(r) program. HMIS(r) is a registered mark of the National Paint and Coatings Association (NPCA).

Revision Changes:

Copyright was modified.

Section 14: ID Number(s) and/or UPC(s) Template 1 was modified.

Section 15: TSCA section 12[b] text was deleted.

Section 15: TSCA section 12[b] information was deleted.

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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3M MSDSs are available at www.3M.com

MATERIAL SAFETY DATA SHEET

MSDS NUMBER: 016165
 PART NUMBER: 016165 *ACE*
 PRODUCT NAME: AC 21641 CUTTING OIL 1 GAL CLR
 CAS. NUMBER: 0
 SPECIAL NAME: AC 21641 CUTTING OIL 1 GAL CLR

SECTION I

MANUFACTURER: WILLIAM H. HARVEY COMPANY

ADDRESS: 4334 SOUTH 67TH STREET
 OMAHA, NE 68117-1019

EMERGENCY TELEPHONE NUMBER: (800)424-9300

INFORMATION TELEPHONE NUMBER: (800)228-9681
 / REACT.

HMIS RATINGS:

HEALTH: 1 HEA
 FIRE: 1
 REACTIVITY: 0
 PERSONAL PROTECTION: X

0
 SPEC. H

DATE PREPARED: 04/24/95

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

CAS NUMBER	HAZARDOUS COMPONENT	NTP	IARC	PART/Z	SUB- SARA 313	OSHA PEL	ACGIH	T
NI	0 OIL MISTS	N	N	N	N NI	5 MG/M3		

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT 345 F DEG SPECIFIC GRAVITY (H2O = 1
 VAPOR PRESSURE (m He.) NI MELTING POINT
 VAPOR DENSITY (AIR = 1) NI EVAPORATION RATE (Butyl A
 SOLUBILITY IN WATER: NEGLIGIBLE
 APPEARANCE AND ODOR: LIGHT AMBER OIL WITH HYDROCARBON ODOR.
 OTHER INFORMATION: NI

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 356 F DEG FLAMMABLE LIMITS: LEL
 EXTINGUISHING MEDIA: WATER FOG, FOAM, DRY CHEMICAL, CO2, HALOGEN.
 SPECIAL FIRE FIGHTING PROCEDURES: TREAT AS AN OIL FIRE, EXCEPT THAT
 CONTAIN SULFUR OXIDES AND HYDROGEN CHLORIDE. RECOMMENDED SELF CONT
 APPARATUS.
 UNUSUAL FIRE FIGHTING PROCEDURES: NI

SECTION V - REACTIVITY DATA

STABILITY: STABLE

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: IF BURNED: SO, HCL
HAZARDOUS POLYMERIZATION: DOES NOT OCCUR

SECTION VI - HEALTH HAZARD DATA

ROUTE(S) OF ENTRY: SKIN, EYES, INHALATION

HEALTH HAZARDS (ACUTE AND CHRONIC):

SIGNS AND SYMPTOMS OF EXPOSURE: EYES: MAY CAUSE EYE IRRITATION.

SKIN: MAY CAUSE DEFATTING AND BLISTERS

INHALATION: MAY CAUSE DELAYED LUNG INJURY. FUMES MAY CAUSE DIZZINES

HE, OR UNCON-

SCIOUSNESS.

INGESTION: MAY CAUSE THROAT AND STOMACH PAINS.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NI

EMERGENCY AND FIRST AID PROCEDURES: EMERGENCY FIRST AID CALL: 1-303

716 COLLECT

ATTENTION
EYES: FLUSH IMMEDIATELY WITH WATER FOR AT LEAST 15 MINUTES; GET MED
TTENTION

IF IRRITATION PERSIST.

SKIN: WASH THOURHGLY WITH SOAP AND WATER. GET MEDICAL ATTENTION FOR

INHALATION: GET MEDICAL ATTENTION IF ADVERSE EFFECTS OCCUR.

IGNIFICANT
INGESTION: DO NOT INDUCE VOMITING. GET MEDICAL ATTENTION IMMEDIATEL
AMOUNT IS SWALLOWED.

OTHER HEALTH WARNINGS: NI

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN USE MATERIAL IS RELEASED OR SPILLED: TAKE UP S
WITH SAND, DIRT

OR OTHER ABSORBENT. CLEAN SURFACES SO THEY DO NOT REMAIN SLIPPERY.
AN OIL SPILL.

WASTE DISPOSAL METHOD: IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL
ATIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: STORE AWAY FROM FL
HEAT, OXIDIZING

AGENTS, AND STORING ALKALIES. KEEP CONTAINERS CLOSED WHEN NOT IN U
OUT OF THE

REACH OF CHILDREN AND PETS.

OTHER PRECAUTIONS: OILY METAL CUTTTING SHOULD BE HANDELD WITH THE S
PRECAUTIONS AS FOR

THE CUTTING OIL. KEEP AWAY FROM IGNITION SOURCES.

SECTION VIII - CONTROL MEASURES

ventilation REQUIREMENTS: NI

PERSONAL PROTECTIVE EQUIPMENT: EYES: WEAR SPLAH PROOF GOGGELS SKIN:
OIL RESISTANT

CLOVES. REMOVE CONTAMINATED CLOTHING PROMPTLY TO AVOID SKIN EFFECT
SIBILTY OF

FIRE.

INHALATION: WEAR RISK AND/OR ORGANIC VAPOR RESPIRATOR WHEN MISTS OR
E PRESENT.

VENTILATE WORK AREA.
INGESTION: AVOID SWALLOWING. WEAR FACE CONTACT IS LIKELY.

SECTION IX - ADDITIONAL INFORMATION

ADDITIONAL MANUFACTURER WARNINGS:

OTHER PRECAUTIONS AND COMMENTS:
TRANSPORTATION INFORMATION:

DOT PROPER SHIPPING NAME: N/A
DOT LABEL: N/A
DOT NUMBER: N/A
UN NUMBER: N/A
IMCO CLASS: N/A
DOT HAZARD CLASSIFICATION: N/A

ABBREVIATIONS:

N/A = NOT APPLICABLE N/I = NONE INDICATED NDA = NO DATA AVAIL
N/E = NOT ESTABLISHED C = CELSIUS DEGREES F = FAHRENHEIT DEG

DISCLAIMER:

THE INFORMATION HEREIN HAS BEEN COMPILED FROM SOURCES BELIEVED TO BE REL
BLE, UP-TO-DATE,
AND IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, WILLIAM H. HARVEY
COMPANY CANNOT GIVE
ANY GUARANTEES REGARDING INFORMATION FROM OTHER SOURCES, AND EXPRESSLY D
S NOT MAKE
WARRANTIES, NOR ASSUMES ANY LIABILITY FOR ITS USES.

UPC: 082901216414
SKU: 21641
RYr:95
MFG#: 016165

Crown 8035 Slix-It - Aerosol



Material Safety Data Sheet

TO: MSDS USERS

Please find below the material safety data sheet as per your request.

The information presented in these forms is believed to be correct and sufficient to meet the requirements of OSHA Hazard Communication standard (29 CFR 1910.1200) concerning worker's right to know. In order for the information contained in the MSDS to be most helpful we recommend that these forms be made available to all those who handle or may otherwise be exposed to the product.

This MSDS covers the following AerVOE aerosol product.

PRODUCT NAME:

HMIS CODES: H F R P
2 4 0 X



8035 Slix-It

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: AerVOE Industries Inc.
INFORMATION PHONE: 775-782-0100
DATE REVISED: 08-02-02

ADDRESS: 1198 Mark Circle, Gardnerville, NV 89410
EMERGENCY PHONE: 1-800-424-9300
REASON REVISED: New

SECTION II - HAZARDOUS INGREDIENTS / SARA III INFORMATION
OCCUPATIONAL EXPOSURE LIMITS

HAZARDOUS COMPONENTS	WEIGHT PERCENT	OSHA PEL	ACGIH TLV	OTHER	LD50 SPECIES & ROUTE	LC50 SPECIES & ROUTE
ALIPHATIC HYDROCARBONS (CAS 8052 41 3)	30 - 40	500 PPM	100 PPM		N/A	N/A
HEPTANE (CAS 142 82 5)	30 - 40	400 PPM	400 PPM	500 PPM (STEL)	N/A	N/A
HYDROCARBON PROPELLANT (CAS 68476 86 8)	20 - 30	1000 PPM	1000 PPM		N/A	N/A

No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 are present.

NOTE: N/A applies to not available or not applicable

PRODUCT: Crown Slix-It - Aerosol

SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

BOILING POINT: N/A
VAPOR DENSITY: Heavier than air
EVAPORATION RATE: Slower than Ether

SPECIFIC GRAVITY (H2O=1, @70°F): 0.67
SOLUBILITY IN WATER: Negligible
APPEARANCE AND ODOR: Clear Colorless / Hydrocarbon Odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: < 0° F (-18° C)
EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical.
SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be used to cool containers exposed to heat or fire to prevent pressure build up. Self-contained breathing apparatus should be used if product is involved in fire.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Treat as cylinders of compressed gas. Closed containers may rupture due to pressure build up from extreme heat or fire.

SECTION V - REACTIVITY DATA

STABILITY: Stable
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizing agents, strong acids or bases.
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Carbon Monoxide and Carbon Dioxide.
HAZARDOUS POLYMERIZATION: Will not occur.

SECTION VI - HEALTH HAZARD DATA

INHALATION: Respiratory tract irritant. May cause dizziness, light-headedness and / or headaches.
SKIN CONTACT: Prolonged or repeated contact may cause defatting and / or dermatitis.
EYE CONTACT: Painful with slight to moderate irritation.
SKIN ABSORPTION: Not likely in toxic amounts.
INGESTION: Not likely - low toxicity.
CARCINOGENICITY: None known
TERATOGENICITY: Not established
MEDICAL CONDITION GENERALLY AGGRAVATED BY EXPOSURE: Not established.
EMERGENCY AND FIRST AID PROCEDURES: VAPORS - Remove from exposure. Seek medical attention if signs/symptoms persist.
SPLASH - (SKIN) Wash affected area with soap and water, remove contaminated clothing, seek medical attention if irritation persists.
SPLASH - (EYES) Flush immediately with water for 15 minutes and seek medical attention if irritation persists.
INGESTION - Do NOT induce vomiting. Drink plenty of water and seek medical attention.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition: Flames, sparks, static electricity & electrical. Ventilate area, avoid run off into sewer by diking, and soak up with inert absorbent using non-sparking type tools.
WASTE DISPOSAL METHOD: Dispose of in accordance with local, state and federal regulations. Do not incinerate closed containers.
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Do not store above 120° F (49° C). Do not store or use near heat, sparks or flame.
OTHER PRECAUTIONS: Do not get in eyes. Do not breathe vapors. Avoid skin contact. Do not take internally. Smoking while using this product must be strictly prohibited.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION: Respiratory protection program should be in accordance with 29 CFR 1910.134.
VENTILATION: All application areas should be adequately ventilated in order to keep the items in SECTION II below their exposure limits.
PROTECTIVE GLOVES: Polyethylene or Neoprene gloves are recommended.
EYE PROTECTION: Safety glasses with side shields are recommended.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Not established.
WORK /HYGIENIC PRACTICES: Avoid prolonged or repeated contact. Do not breathe vapors. Wash contaminated clothing prior to reuse.

SECTION IX - DISCLAIMER

THE INFORMATION CONTAINED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE SO. NOTHING CONTAINED HEREIN CONSTITUTES A SPECIFICATION NOR IS IT INTENDED TO WARRANT SUITABILITY FOR THE INTENDED USE.

Crown 8060 Nfp Safety Solvent - Bulk



Material Safety Data Sheet

The information presented in these forms is believed to be correct and sufficient to meet the requirements of OSHA Hazard Communication standard (29 CFR 1910.1200) concerning worker's right to know.
This MSDS covers the following AerVOE bulk product.

PRODUCT NAME:



8060 Nfp Safety Solvent

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: AerVOE Industries Inc. ADDRESS: 1198 Mark Circle, Gardnersville, NV 89410
INFORMATION PHONE: 775-782-0100 EMERGENCY PHONE: 1-800-424-9300
DATE REVISED: 07-08-05 REASON REVISED: Updated

**SECTION II - HAZARDOUS INGREDIENTS / SARA III INFORMATION
OCCUPATIONAL EXPOSURE LIMITS**

HAZARDOUS COMPONENTS	WEIGHT PERCENT	OSHA PEL	ACGIH TLV	LD50 SPECIES & ROUTE	LC50 SPECIES & ROUTE
*Trichloroethylene (CAS 79-01-6)	> 99	100 ppm	50 ppm	4920 mg / kg (Rat-Oral) 10,000 mg / kg (Rabbit-Skin)	12,500 ppm / 4 hr (Rat-Inha)

*Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.
NOTE: N / AP = Not Applicable N / AV = Not Available

SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 189° F (87° C) Specific Gravity (H₂O=1): 1.5
Vapor Density: Heavier than air Solubility in Water: approximately 0.1%
Evaporation Rate: Slower than Ether Appearance and Odor: Clear, colorless liquid with irritating odor at high concentrations.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: None METHOD USED: TCC FLAMMABLE LIMITS - LEL: 8.0% UEL: 10.5%
EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, water spray.
SPECIAL FIRE FIGHTING PROCEDURES: Use water spray to cool containers exposed to heat or fire to prevent pressure build up. Self-contained breathing apparatus should be used if product is involved in fire.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers may rupture due to pressure build up from extreme temperature.
FLAMMABILITY: Product does not meet flammable or combustible classification requirements.
SENSITIVITY TO IMPACT: Product will be leak if container is punctured SENSITIVITY TO STATIC DISCHARGE: Primarily vapors

SECTION V - REACTIVITY DATA

STABILITY: Stable CONDITIONS TO AVOID: Open flames, sparks, electrical arcs.
INCOMPATIBILITY (MATERIALS TO AVOID): Metal powders such as Aluminum, Magnesium, Potassium, Sodium, and Zinc. Strong bases in Aluminum or its alloys.
HAZARDOUS COMBUSTION OR BY-PRODUCTS: Carbon Monoxide. May include Hydrogen Chloride and trace amounts of Phosgene and Chlorine.
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Hydrogen Chloride and very small amounts of Phosgene and Chlorine.
HAZARDOUS POLYMERIZATION: Will not occur

SECTION VI - HEALTH HAZARD DATA

INHALATION: Respiratory tract irritant. May cause dizziness, light-headedness and / or headaches.
SKIN CONTACT: Prolonged or repeated contact may cause irritation and dermatitis.
EYE CONTACT: Painful with slight to moderate irritation.
SKIN ABSORPTION: Not likely to be absorbed in toxic amounts under normal use.
INGESTION: Not likely in normal use but swallowing large amounts may be harmful.
CARCINOGENICITY: Trichloroethylene is not listed as a human carcinogen by OSHA. It is listed by ACGIH as TLV-A5, "Not suspected as a Human Carcinogen"; by NTP as R "Reasonably Anticipated To Be A Human Carcinogen"; by IARC as 2A "Probably Carcinogenic to Humans".
TERATOGENICITY: Not established MUTAGENICITY: Not established
MEDICAL CONDITION GENERALLY AGGRAVATED BY EXPOSURE: Not established
EMERGENCY AND FIRST AID PROCEDURES: INHALATION - Remove from exposure, seek medical attention if signs/symptoms persist.
SKIN - Wash affected area with soap and water, remove contaminated clothing, seek medical attention if irritation persists.
EYES - Flush immediately with water for 15 minutes, seek medical attention if irritation persists.
INGESTION - Do NOT induce vomiting, drink plenty of water, seek medical attention.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. Ventilate area. Prevent from entering a watercourse. Use an inert absorbent material and non-sparking type tools.
WASTE DISPOSAL METHOD: Dispose of in accordance with local, state and federal regulations. Do not incinerate closed containers.
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Do not store above 120° F (49° C). Do not store or use near heat, sparks or flame.
OTHER PRECAUTIONS: Do not smoke while using this product.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION: In areas with poor ventilation, use a NIOSH approved Organic Vapor Cartridge Respirator.
For concentrations above the TLV (as defined in Section II), use a positive air supplied respirator.
VENTILATION: General ventilation to maintain exposure limits below TLV's as defined in Section II.
PROTECTIVE GLOVES: Chemical resistant gloves such as Neoprene or Nitrile rubber.
EYE PROTECTION: Safety glasses or goggles.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Not established.
WORK / HYGIENIC PRACTICES: Avoid prolonged or repeated contact. Do not breathe vapors. Wash contaminated clothing prior to reuse.

SECTION IX - DISCLAIMER

THE INFORMATION CONTAINED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE SO. NOTHING CONTAINED HEREIN CONSTITUTES A SPECIFICATION NOR IS IT INTENDED TO WARRANT SUITABILITY FOR THE INTENDED USE.

8060NFB

MATERIAL SAFETY DATA SHEET

Product:	BD-6PB	<i>Note: The information herein is given in good faith. No warranty, expressed or implied, is made.</i>	
Printed:			
Printed For:			
Original Issue Date:	11/12/85	Approved By:	Chuck Hiddema
Revision No. 6 Date:	04/22/96		V.P. Technical Operations

Section I - Identification

Manufacturer:	AGS Company		
Street Address:	2651 Hoyt St		
City/State/Zip	Muskegon Hts., MI 49444		
Phone:	800-253-0403		
Phone:	231-733-2101		
FAX:	231-733-1784		
Transportation Emergency:	CHEM-TEL		
Phone:	800-255-3924		
Trade Name:	Pep Boys Belt Dressing		
Catalog No.:	BD-6PB		
Common Name:	BELT-EASE		
Container/Size:	Aerosol, 4 oz.		
NFPA - Health:	1		
Flammability:	2		
Reactivity:	0		
Specific Hazard:			
HMIS - Health:	1		
Flammability:	2		
Reactivity:	0		
Protective Equipment:	A		

Section II - Hazardous Ingredients

Hazardous Ingredient	CAS No.	Wgt. %	TLV
1 Aliphatic Petroleum Naphtha	8052-41-3	75-85	100 ppm (500 ppm PEL)
2 Polybutene Polymer	9003-29-6	15-25	Not Assigned
3 Carbon Dioxide	124-38-9	1-5	5000 ppm
4			
5			
6			
7			
8			
9			
10			

NOTES:

Section III Physical Data			Catalog No. BD-6PB
pH - Supplied:	Not Determined		
pH - Diluted:	Not Determined		
Water Solubility:	Nil		
Specific Gravity:	(Water=1) 0.82		
Melting Point:	Not Applicable		
Boiling Point:	Not Determined		
% Volatiles:	67%		
Vapor Pressure:	Not Determined		
Vapor Density:	(Air=1) > 1		
Evaporation Rate:	Not Determined		
Appearance:	Clear liquid with petroleum odor in an aerosol package.		
Section IV Fire & Explosion Data			
Flash Point:	> 100° F(liquid)		
Method:	T.C.C.		
Auto Ignition Temperature:	Not Determined		
Flammable Limits In Air	LEL:	Not Determined	
	UEL:	Not Determined	
Extinguishing Media:	Carbon dioxide, dry chemical, foam and/or water fog.		
Special Procedures:	Wear self-contained breathing apparatus. Water fog may be used to reduce vapor concentration.		
Unusual Hazards:	Vapors are heavier than air and accumulate in low areas.		
Section V - Reactivity Data			
Unstable and/or Auto Reactive:	Stable		
Incompatible Materials:	Oxidizers		
Hazardous Decomposition Products:	Oxides of carbon.		
Section VI - Emergency First Aid			
Eyes:	Flush with water for at least 15 minutes. Get medical attention.		
Skin:	Wash with soap and water. Remove contaminated clothing. If adverse effects occur, consult a physician.		
Ingestion:	Keep patient quiet. Do not induce vomiting. Get medical attention.		
Inhalation:	Remove to fresh air. Administer oxygen or artificial respiration as needed. Get medical attention.		
Section VII - Health Effects			
Eyes:	May cause discomfort and irritation.		
Skin:	May cause irritation, defatting, dermatitis. Contaminated clothing may cause severe irritation.		
Ingestion:	May cause nausea, vomiting and irritation of G. I. Tract.		
Inhalation:	Acts as a CNS depressant and may cause irritation of upper respiratory system.		
Other Effects:	Aspiration into lungs may cause chemical pneumonitis.		

Section VIII - Ventilation and Protective Measures		Cat. No. BD-6PB
Ventilation Requirement:	Suitable to maintain concentrations below TLV.	
Eyes:	Yes	
Gloves:	Yes	
Clothing:	No	
Respiratory:	Yes	
Other:	Eye bath and safety shower in work area.	
Section IX - Storage and Handling Procedures		
Conditions to Avoid:	Excessive and/or direct heat, do not puncture or incinerate.	
Section X - Spill Procedures and Waste Disposal		
Spill Procedure:	Remove ignition source. Absorb on an inert material and place in appropriate container for disposal.	
Disposal Method:	Removal by an approved, licensed waste hauler.	
EPA Waste I.D. NO.:	D001	

Material Safety Data Sheet



Argon

Section 1. Chemical product and company identification

Product name : Argon
Supplier : AIRGAS INC., on behalf of its subsidiaries
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253
Product use : Synthetic/Analytical chemistry.
Synonym : argon, compressed; Cryogenic Liquid Argon, Liquid Argon
MSDS # : 001004
Date of Preparation/Revision : 2/13/2009.
In case of emergency : 1-866-734-3438

Section 2. Hazards identification

Physical state : Gas. [COLORLESS, ODORLESS INERT GAS OR LIQUID]
Emergency overview : WARNING!
GAS:
CONTENTS UNDER PRESURE.
Do not puncture or incinerate container.
Can cause rapid suffocation.
May cause severe frostbite.
LIQUID:
Extremely cold liquid and gas under pressure.
Can cause rapid suffocation.
May cause severe frostbite.
Do not puncture or incinerate container.
Contact with rapidly expanding gases or liquids can cause frostbite.

Routes of entry : Inhalation

Potential acute health effects

Eyes : Contact with rapidly expanding gas may cause burns or frostbite. Contact with cryogenic liquid can cause frostbite and cryogenic burns.
Skin : Contact with rapidly expanding gas may cause burns or frostbite. Contact with cryogenic liquid can cause frostbite and cryogenic burns.
Inhalation : Acts as a simple asphyxiant.
Ingestion : Ingestion is not a normal route of exposure for gases. Contact with cryogenic liquid can cause frostbite and cryogenic burns.
Potential chronic health effects : **CARCINOGENIC EFFECTS:** Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.

Medical conditions aggravated by over-exposure : Acute or chronic respiratory conditions may be aggravated by overexposure to this gas.

See toxicological information (section 11)

Argon

Section 3. Composition, Information on Ingredients

<u>Name</u>	<u>CAS number</u>	<u>% Volume</u>	<u>Exposure limits</u>
Argon	7440-37-1	100	Oxygen Depletion [Asphyxiant]

Section 4. First aid measures

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Frostbite** : Try to warm up the frozen tissues and seek medical attention.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : As this product is a gas, refer to the inhalation section.

Section 5. Fire-fighting measures

- Flammability of the product** : Non-flammable.
- Products of combustion** : No specific data.
- Fire-fighting media and instructions** : Use an extinguishing agent suitable for the surrounding fire.
- Apply water from a safe distance to cool container and protect surrounding area. If involved in fire, shut off flow immediately if it can be done without risk.
- Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

- Personal precautions** : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (section 8). Shut off gas supply if this can be done safely. Isolate area until gas has dispersed.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- Methods for cleaning up** : Immediately contact emergency personnel. Stop leak if without risk. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Section 7. Handling and storage

- Handling** : High pressure gas. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.
- Never allow any unprotected part of the body to touch uninsulated pipes or vessels that contain cryogenic liquids. Prevent entrapment of liquid in closed systems or piping without pressure relief devices. Some materials may become brittle at low temperatures and will easily fracture.

Argon

- Storage** : Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).
For additional information concerning storage and handling refer to Compressed Gas Association pamphlets P-1 Safe Handling of Compressed Gases in Containers and P-12 Safe Handling of Cryogenic Liquids available from the Compressed Gas Association, Inc.

Section 8. Exposure controls/personal protection

- Engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protection

- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
When working with cryogenic liquids, wear a full face shield.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
The applicable standards are (US) 29 CFR 1910.134 and (Canada) Z94.4-93
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Insulated gloves suitable for low temperatures
- Personal protection in case of a large spill** : Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product.

Product name

argon Oxygen Depletion [Asphyxiant]

Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

- Molecular weight** : 39.95 g/mole
Molecular formula : Ar
Boiling/condensation point : -185.7°C (-302.3°F)
Melting/freezing point : -189.2°C (-308.6°F)
Critical temperature : -122.4°C (-188.3°F)
Vapor density : 1.38 (Air = 1). Liquid Density@BP: 87 lb/ft³ (1393 kg/m³)
Specific Volume (ft³/lb) : 9.70874
Gas Density (lb/ft³) : 0.103

Section 10. Stability and reactivity

- Stability and reactivity** : The product is stable.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Toxicity data

Other toxic effects on humans : No specific information is available in our database regarding the other toxic effects of this material to humans.

Specific effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Reproduction toxicity : No known significant effects or critical hazards.

Section 12. Ecological information

Aquatic ecotoxicity

Not available.

Environmental fate : Not available.

Environmental hazards : No known significant effects or critical hazards.

Toxicity to the environment : Not available.

Section 13. Disposal considerations

Product removed from the cylinder must be disposed of in accordance with appropriate Federal, State, local regulation. Return cylinders with residual product to Airgas, Inc. Do not dispose of locally.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	UN1006	ARGON, COMPRESSED	2.2	Not applicable (gas).		Limited quantity Yes.
	UN1951	Argon, refrigerated liquid				Packaging instruction Passenger aircraft Quantity limitation: 75 kg Cargo aircraft Quantity limitation: 150 kg
TDG Classification	UN1006	ARGON, COMPRESSED	2.2	Not applicable (gas).		Explosive Limit and Limited Quantity Index 0.125
	UN1951	Argon, refrigerated liquid				Passenger Carrying Road or Rail Index 75 Special provisions 42

Argon						
Mexico Classification	UN1006	ARGON, COMPRESSED	2.2	Not applicable (gas).		-
	UN1951	Argon, refrigerated liquid				

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Section 15. Regulatory information

United States

U.S. Federal regulations : **United States inventory (TSCA 8b):** This material is listed or exempted.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: argon
SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
argon: Sudden release of pressure
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

State regulations : **Connecticut Carcinogen Reporting:** This material is not listed.
Connecticut Hazardous Material Survey: This material is not listed.
Florida substances: This material is not listed.
Illinois Chemical Safety Act: This material is not listed.
Illinois Toxic Substances Disclosure to Employee Act: This material is not listed.
Louisiana Reporting: This material is not listed.
Louisiana Spill: This material is not listed.
Massachusetts Spill: This material is not listed.
Massachusetts Substances: This material is listed.
Michigan Critical Material: This material is not listed.
Minnesota Hazardous Substances: This material is not listed.
New Jersey Hazardous Substances: This material is listed.
New Jersey Spill: This material is not listed.
New Jersey Toxic Catastrophe Prevention Act: This material is not listed.
New York Acutely Hazardous Substances: This material is not listed.
New York Toxic Chemical Release Reporting: This material is not listed.
Pennsylvania RTK Hazardous Substances: This material is listed.
Rhode Island Hazardous Substances: This material is not listed.

Canada

WHMIS (Canada) : Class A: Compressed gas.
CEPA Toxic substances: This material is not listed.
Canadian ARET: This material is not listed.
Canadian NPRI: This material is not listed.
Alberta Designated Substances: This material is not listed.
Ontario Designated Substances: This material is not listed.
Quebec Designated Substances: This material is not listed.

Section 16. Other information

United States

Argon

Label requirements : GAS:
 CONTENTS UNDER PRESURE.
 Do not puncture or incinerate container.
 Can cause rapid suffocation.
 May cause severe frostbite.
 LIQUID:
 Extremely cold liquid and gas under pressure.
 Can cause rapid suffocation.
 May cause severe frostbite.

Canada

Label requirements : Class A: Compressed gas.

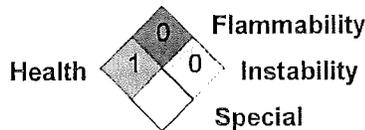
Hazardous Material Information System (U.S.A.)

Health	1
Flammability	0
Physical hazards	0

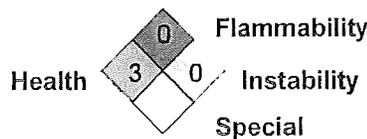
liquid:

Health	3
Fire hazard	0
Reactivity	0
Personal protection	X

National Fire Protection Association (U.S.A.)



liquid:



Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



A Subsidiary of The ESAB Group, Inc.

MATERIAL SAFETY DATA SHEET

Original: November 29, 1984 Supersedes: December 20, 2000 Revised: June 27, 2001

Product Name: **ALUMINUM WELDING WIRE AND METALLIZING WIRE**

Emergency Phone: 1-717-637-8911 or 1-800-424-9300

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Chemical Formula: Mixture.

Other Designations: AlcoTec ALMIGWELD (Aluminum spooled electrode)
AlcoTec ALTIGWELD (Aluminum straight length welding rod)
Aluminum Metallizing Wire (coils and spools)

Manufacturer: AlcoTec Wire Corporation, 2750 Aero Park Drive, Traverse City, MI 49686-9263 USA

Product Use: Welding, Filler Metal, Metallizing, Brazing

2. COMPOSITION INFORMATION ON INGREDIENTS

Alloy Ingredients: (% by weight shown as a maximum or a range, except for Aluminum, which is a minimum % by weight)

Alloy	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Others Each ¹	Others Total	Al
1100	0.95	= Si + Fe	0.05-0.20	0.05	--	--	--	0.10	--	0.05	0.15	99.00
1350	0.10	0.40	0.05	0.01	--	0.01	--	0.05	--	0.03 ³	0.10	99.50
1188	0.06	0.06	0.005	0.01	0.01	--	--	0.03	0.01	0.01 ⁴	--	99.88
1199	0.006	0.006	0.006	0.002	0.006	--	--	0.006	0.002	0.002 ¹⁰	--	99.99
2011	0.40	0.7	5.0-6.0	--	--	--	--	0.30	--	0.05 ⁵	0.15	Rmnd ²
2319	0.20	0.30	5.8-6.8	0.20-0.40	0.02	--	--	0.10	0.10-0.20	0.05 ⁵	0.15	Rmnd ²
4043	4.5-6.0	0.8	0.30	0.05	0.05	--	--	0.10	0.20	0.05	0.15	Rmnd ²
4047 (718)	11.0-13.0	0.8	0.30	0.15	0.10	--	--	0.20	--	0.05	0.15	Rmnd ²
4145 (716)	9.3-10.7	0.8	3.3-4.7	0.15	0.15	0.15	--	0.20	--	0.05	0.15	Rmnd ²
4643	3.6-4.6	0.8	0.10	0.05	0.10-0.30	--	--	0.10	0.15	0.05	0.15	Rmnd ²
5180	0.35	= Si + Fe	0.10	0.20-0.7	3.5-4.5	0.10	--	1.7-2.8	0.06-0.20	0.05 ⁷	0.15	Rmnd ²
5183	0.40	0.40	0.10	0.50-1.0	4.3-5.2	0.05-0.25	--	0.25	0.15	0.05	0.15	Rmnd ²
5356	0.25	0.40	0.10	0.05-0.20	4.5-5.5	0.05-0.20	--	0.10	0.06-0.20	0.05	0.15	Rmnd ²
5554	0.25	0.40	0.10	0.50-1.0	2.4-3.0	0.05-0.20	--	0.25	0.05-0.20	0.05	0.15	Rmnd ²
5556	0.25	0.40	0.10	0.50-1.0	4.7-5.5	0.05-0.20	--	0.25	0.05-0.20	0.05	0.15	Rmnd ²
5654	0.45	= Si + Fe	0.05	0.01	3.1-3.9	0.15-0.35	--	0.20	0.05-0.15	0.05	0.15	Rmnd ²
206.0	0.10	0.15	4.2-5.0	0.20-0.50	0.15-0.35	--	0.05	0.10	0.15-0.30	0.05 ⁸	0.15	Rmnd ²
C355.0 (4009)	4.5-5.5	0.20	1.0-1.5	0.10	0.40-0.6	--	--	0.10	0.20	0.05	0.15	Rmnd ²
A356.0 (4008, 4010)	6.5-7.5	0.20	0.20	0.10	0.25-0.45	--	--	0.10	0.20	0.05	0.15	Rmnd ²
A357.0 (4011)	6.5-7.5	0.20	0.20	0.10	0.40-0.7	--	--	0.10	0.04-0.20	0.05 ⁹	0.15	Rmnd ²
357.0	6.5-7.5	0.15	0.05	0.03	0.45-0.6	--	--	0.05	0.20	0.05	0.15	Rmnd ²
DURALCAN 90/10	-	-	-	-	-	-	-	-	-	-	-	88.00 ¹¹

Notes:

- (1) Beryllium shall not exceed 0.0008 percent with the exception of A357.0 (4011).
- (2) Rmnd = remainder.
- (3) 1350 may contain Gallium, 0.03% (max.), Boron 0.05% (max.), and Vanadium plus Titanium, 0.02% (max.).
- (4) 1188 may contain Gallium, 0.03% (max.), and Vanadium, 0.05% (max.).
- (5) 2011 contains Lead, 0.20-0.6%, and Bismuth, 0.20-0.6%.
- (6) 2319 contains Vanadium, 0.05-0.15% and Zirconium, 0.10-0.25%.
- (7) 5180 contains Zirconium, 0.08-0.25%.
- (8) 206.0 may contain Tin, 0.05% (max.).
- (9) A357.0 (4011) contains Beryllium, 0.04 to 0.07%.
- (10) 1199 may contain 0.005% each (max.) of Gallium and Vanadium.
- (11) 8-12 percent Aluminum Oxide

AlcoTec Wire Corporation

2750 Aero Park Drive • Traverse City, MI 49686-9263 USA • Phone (231) 941-4111
Sales and Marketing Fax (231) 941-9154 • Administrative and Quality Control Fax (231) 941-1040
alcotec@traverse.com E-mail www.alcotec.com Web site

MATERIAL SAFETY DATA SHEET

Original: November 29, 1984 Supersedes: December 20,2000 Revised: June 27, 2001

Product Name: ALUMINUM WELDING WIRE AND METALLIZING WIRE

Component	CAS No.	Form	EXPOSURE LIMITS (TWA in mg/m ³ unless noted)	
			ACGIH_TLV	OSHA_PEL
Aluminum	7429-90-5	Total dust, fume Respirable	15, 5 ----	15 5
Beryllium	7440-41-7	All compounds as Be	0.002	0.002, 0.005 (ceiling); 0.025 (30 min peak/8 hr shift)
Copper	7440-50-8	Fume Dust/mist	0.2 1	0.1 1
Iron	7439-89-6	Oxide dust & fume (as Fe)	5	10
Lead (nonvolatile)	7439-92-1	Elemental and inorganic compounds	0.05 as Pb	0.05 as Pb
Magnesium	7439-95-4	Oxide fume	10	15 Total particulate
Manganese	7439-96-5	Dust fume	0.2	Dust (ceiling)
Gallium	7440-55-3			---
Nickel	7440-02-0	Metal & insoluble compounds Soluble compounds	1 as Ni 0.1 as Ni	1 as Ni 1 as Ni
Silicon	7440-21-3	Total dust Respirable	10 ----	15 5
Titanium	7440-32-6	Oxide dust	10	15 (total particulate)
Vanadium	7440-62-2	Respirable dust Respirable fume	0.05 as V ₂ O ₅	0.5 (ceiling) as V ₂ O ₅ 0.1 (ceiling) as V ₂ O ₅
Zinc	7440-66-6	Oxide fume Total Oxide dust Respirable oxide dust	5, 10 (STEL) 10 ----	5 15 5
Zirconium	7440-67-7		5, 10 (STEL)	5
Chromium	7440-47-3	Metals Cr II compounds Cr III compounds Cr VI compounds* Cr VI compounds**	0.5 ---- 0.5 as Cr 0.05 as Cr 0.01 as Cr	1.0 0.5 as Cr 0.5 as Cr 0.1 (ceiling) as CrO ₃ 0.1 (ceiling) as CrO ₃

*(water soluble)

** (certain water insoluble)

Possible hazards during processing by welding, or arc spray metallizing

	ACGIH TLV	OSHA PEL
Ozone	0.1 ppm (ceiling)	0.1 ppm
Nitric oxide	25 ppm	25 ppm
Nitrogen dioxide	3, 5ppm (STEL)	5 ppm (ceiling)
Welding fumes	5 mg/m ³	---

3. HAZARDS INFORMATION

EMERGENCY OVERVIEW

Solid, silvery, odorless. Non-flammable as supplied. Small chips, fine turnings, and dust from processing may ignite readily.
 Explosion/fire hazards may be present when (See Sections 5, 7 and 10 for additional information):

- Dust or fines are dispersed in the air.
- Fines or dust are in contact with other metal oxides (e.g., rust).
- Chips, fines, or dust are in contact with water.
- Molten aluminum is in contact with water/moisture or other metal oxides.

Dust or fume from processing can cause eye, skin, or upper respiratory tract irritation; metal fume fever; lung diseases and other systematic effects.

MATERIAL SAFETY DATA SHEET

Original: November 29, 1984 Supersedes: December 20, 2000 Revised: June 27, 2001 Page 3 of 8
Product Name: ALUMINUM WELDING WIRE AND METALLIZING WIRE

Potential Health Effects

EYES: Fume can cause irritation. Ultraviolet radiation from welding can cause flash burns.
SKIN: Can cause irritation. Ultraviolet radiation from welding can cause flash burns.
INHALATION: Can cause respiratory tract irritation, metal fume fever, and other health effects listed below:
Cancer hazard

Aluminum is welded in a protective, inert atmosphere such as argon or helium using the MIG or TIG process. Welding processes generate welding fumes and an intense ultraviolet radiation that results in the formation of ozone, and oxides of nitrogen. Ultraviolet radiation from welding can also cause flash burns to the eyes and skin.

- Welding fumes are carcinogenic and are listed as an IARC Group 2B*.
- Exposure to low levels of ozone can cause irritation of the eyes, nose, and throat. Inhalation can cause chest tightness, headache, shortness of breath, cough, wheeze, nausea, and narrowing of airways. Symptoms disappear when removed from exposure.
- Exposure to high levels of ozone may cause acute respiratory distress with shortness of breath, pulmonary changes, hemorrhage, and pulmonary edema (fluid in the lungs). Symptoms of pulmonary edema may be delayed for one or more hours. Exposure of test animals and human tissue to high concentrations has shown chromosomal changes, reproductive effects, blood changes, and death from lung congestion.
- Oxides of nitrogen can cause irritation of the eyes, skin (when moist), and respiratory tract. Exposure to high levels of nitrogen oxides can cause delayed pulmonary edema (fluid in the lungs) which may be fatal. Nitric oxide can cause formation of methemoglobin, which decreases the blood's ability to carry oxygen. Chronic overexposure can cause pulmonary fibrosis (scarring of the lungs).
- Aluminum dust/fines and fumes are a low health risk by inhalation. For standard operations (milling, cutting, grinding), aluminum dust should be treated as a nuisance dust as defined by the ACGIH.
- Overexposure to magnesium oxide fumes can cause respiratory tract irritation and fever, chills, shortness of breath, and malaise (metal fume fever). Temporary symptoms can include fever, chills, nausea, vomiting, and muscular pain. Chronic exposure to high levels of manganese dust or fumes can cause nervous system disorders, pneumonitis (inflammation of lung tissue), and may cause fibrosis (scarring of lung tissue) and reproductive disorders in males.
- Chronic exposure to inert dusts of silicon can cause increased airway resistance and contributes to chronic bronchitis. Intratracheal administration of silicon in rabbits produced significant pulmonary lesions.
- Exposure to zinc oxide fumes subsequent to burning, welding, and molten metal work can result in fever, chills, shortness of breath, and malaise (metal fume fever), and upper respiratory tract irritation. Temporary symptoms can include fever, chills, nausea, vomiting, and muscular pain. Exposure to dust or fines presents a low health risk by inhalation.
- Hexavalent chromium (Chrome VI) can cause asthma, kidney damage, primary irritant dermatitis, sensitization dermatitis, skin ulceration, and pulmonary edema (fluid in the lungs). Chronic inhalation or overexposure has been associated with lung, nasal, and gastrointestinal cancer. Hexavalent chromium is listed as carcinogenic to humans by IARC (Group 1)*. Chromium and some of its compounds are listed as carcinogenic by the NTP. Hexavalent chromium compounds may be generated during welding operations, with alloys containing chromium.
- The potential for overexposure to copper fume may exist when welding, flame cutting, etc. Overexposure to copper dust/mists can cause irritation of the eyes, skin, and upper respiratory tract. Chronic overexposure may result in blood disorders (anemia), and skin and hair discolorations. Overexposure to copper fume can result in respiratory tract irritation, nausea, and fever, chills, shortness of breath and malaise (metal fume fever).
- Nickel dust and fume can cause skin sensitization, allergic contact dermatitis, and conjunctivitis. Chronic inhalation of high levels of nickel can cause irritation of airways and lungs, lung fibrosis (scarring of the lungs), nasal septum perforation, nasal sinusitis, respiratory sensitization and asthma. Nickel compounds have been associated with cancer of lungs, larynx, and paranasal sinuses in humans. Nickel compounds are listed on the NTP and are listed as carcinogenic to humans by IARC (Group 1)*. Nickel metal is possibly carcinogenic to humans as defined by IARC (Group 2B)*.

MATERIAL SAFETY DATA SHEET

Original: November 29, 1984 Supersedes: December 20, 2000 Revised: June 27, 2001

Page 4 of 8

Product Name: **ALUMINUM WELDING WIRE AND METALLIZING WIRE**

- Beryllium can cause irritant dermatitis, allergic contact dermatitis, and skin granulomas. Inhalation of excessive levels of beryllium can result in acute pneumonitis (inflammation of the lung tissues).
Beryllium can cause lung sensitization in susceptible individuals. Chronic inhalation of dust and fumes by these sensitized individuals can result in a serious, progressive disease called Chronic Beryllium Disease (CBD). This disease, often misdiagnosed as sarcoidosis, is an allergic condition in which the lung tissues become inflamed. This inflammation, sometimes accompanied with fibrosis (lung scarring), restricts the uptake of oxygen into the blood stream. CBD can, over time, be fatal.
Inhalation of beryllium has produced lung tumors in animals. Beryllium is listed on the NTP and is known to be carcinogenic to humans by IARC (Group 1)*. (See Section 8)
- Lead inorganic dust and fume is listed as a possibly carcinogenic to humans by IARC Group 2B*. Overexposure to lead dust or fume can cause weakness of extremities (peripheral neuropathy), stomach disturbances, harm to the kidneys, liver, central nervous system, blood and blood forming tissues, and reproductive organs. Overexposure to lead has been associated with human reproductive effects (e.g. reduced fertility and damage to the fetus of exposed pregnant women). Lead is a cumulative toxic metal by inhalation or ingestion.
- Warning: This product contains or produces a chemical known to the State of California to cause cancer and birth defects (or other reproductive harm). (California Health & safety Code 25249.5 et seq.)

Medical conditions aggravated by exposure to the product:

Chronic lung disease, skin rashes, and asthma.

*IARC CLASSIFICATIONS:

Group 1: The agent is carcinogenic to humans.

There is sufficient evidence that a causal relationship existed between exposure to the agent and human cancer.

Group 2B: The agent is possibly carcinogenic to humans.

Generally includes agents for which there is limited evidence in humans in the absence of sufficient evidence in experimental animals.

4. FIRST AID MEASURES

EYES: Flush eyes with plenty of water or saline for at least 15 minutes. Consult a physician.
SKIN: Wash thoroughly with soap and water. Consult a physician if irritation persists.
INHALATION: Remove to fresh air. Check for clear airway, breathing, and presence of pulse. Provide CPR for persons without pulse or respirations. Consult a physician immediately.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES: Non-flammable as shipped. Small chips and dust from processing may ignite readily.

FIRE/EXPLOSION: May be a potential hazard under the following conditions:

- Dusts or fines dispersed in the air can be explosive.
- Chips, fines and dust in contact with water can generate flammable/explosive hydrogen gas. These gases could present an explosion hazard in confined or poorly ventilated spaces.
- Fines and dust in contact with certain metal oxides (e.g., rust). A thermite reaction, with considerable heat generation, can be initiated by a weak ignition source.
- Molten aluminum in contact with water/moisture or other metal oxides (e.g., rust). Moisture entrapped by molten aluminum can be explosive. Contact of molten aluminum with other metal oxides can initiate a thermite reaction.

EXTINGUISHING MEDIA: Use fire fighting methods and materials that are appropriate for surrounding fire. Use coarse water spray on chips or turnings. For fines, dust or molten aluminum, use Class D extinguishing agents.

DO NOT USE: Halogenated extinguishing agents on small chips/fines. Do not use water in fighting fires around molten aluminum.

FIRE FIGHTING INSTRUCTIONS: Fire fighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing when appropriate.

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Product Name: **ALUMINUM WELDING WIRE AND METALLIZING WIRE**

6. ACCIDENTAL RELEASE MEASURES

SMALL/LARGE SPILL: *If molten:* Contain the flow using dry sand or salt flux as a dam. Do not use shovels or hand tools to halt the flow of molten aluminum. Allow the spill to cool before remelting as scrap.

7. HANDLING AND STORAGE

Product should be kept dry. Avoid generating dust. Avoid contact with sharp edges or heated metal. Hot and cold aluminum are not visually different.

REQUIREMENTS FOR PROCESSES WHICH GENERATE DUSTS OR FINES

- If processing of these products includes operations where dust or extremely fine particulate is generated, obtain and follow the safety procedures and equipment guides contained in Aluminum Association Bulletin FI and National Fire Protection Association (NFPA) brochures listed in Section 16. Use non-sparking handling equipment. Cover and reseal partially empty containers. Provide grounding and bonding where necessary to prevent accumulation of static charges during aluminum dust handling and transfer operations. (See Section 15).
- Local ventilation and vacuum systems must be designed to handle explosive dusts. Dry vacuums and electrostatic precipitators must not be used. Dust collection systems must be dedicated to aluminum dust only and should be clearly labeled as such. Do not co-mingle fines of aluminum with fines of iron, iron oxide (rust) or other metal oxides.
- Do not allow chips, fines or dust to contact water, particularly in enclosed areas.
- Avoid all ignition sources. Good housekeeping practices must be maintained.

REQUIREMENTS FOR REMELTING OF ALUMINUM SCRAP MATERIAL AND/OR INGOT

- Molten aluminum and water can be an explosive combination. The risk is greatest when there is sufficient molten aluminum to entrap or seal off the water. Water and other forms of contamination on or contained in aluminum scrap or remelt ingot are known to have caused explosions in melting operations. While the products may have minimal surface roughness and internal voids, there remains the possibility of moisture contamination or entrapment. If confined, even a few drops of water can lead to violent explosions.
- All tooling and containers which come in contact with molten aluminum must be preheated or specially coated and rust free. Molds and ladles must be preheated or oiled before casting. Any surfaces that may contact molten aluminum (i.e., concrete) should be specially coated.
- Drops of molten aluminum in water (e.g. from plasma arc cutting), while not normally an explosion hazard, can generate enough flammable hydrogen gas to present an explosion hazard. Circulation of the water and removal of the aluminum particles minimize the hazards.

During melting operations, the following minimum guidelines should be observed:

- Inspect all aluminum materials before furnace charging and completely remove surface contamination such as water, ice, snow, deposits of grease and oil or other surface contamination resulting from weather exposure, shipment, or storage.
- Store materials in dry, heated areas with any cracks or cavities pointed downwards.
- Preheat and dry large or heavy items such as ingot adequately before charging into a furnace containing molten aluminum. This is typically done by use of a drying oven or homogenizing furnace. The drying cycle should bring the internal metal temperature of the coldest item of the batch to 400°F and then hold at that temperature for 6 hours.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Use with adequate explosion-proof ventilation to meet the limits listed in Section 2.

RESPIRATORY PROTECTION: Use NIOSH-approved respiratory protection [dust, fume, high efficiency dust/fume mask for lead, or other (organic vapor)] as specified by an Industrial Hygienist or other qualified professional if concentrations exceed the limits listed in Section 2.

EYE PROTECTION: Welders should use appropriate equipment (e.g. welder's helmet, face shield, filter lens) to prevent eye irritation or flash burns.

SKIN PROTECTION: Wear impervious gloves to avoid any skin injury.

- The presence of airborne beryllium has been detected during the welding of aluminum alloys with beryllium content at only 0.002% by weight. In accordance with OSHA 29 CFR 1910.252: Welding or cutting operations involving beryllium-containing base or filler metals shall be done using local exhaust ventilation

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Product Name: ALUMINUM WELDING WIRE AND METALLIZING WIRE

and airline respirators unless atmospheric tests under the most adverse conditions have established that the workers' exposures is within the acceptable concentrations defined by 29 CFR 1910.1000. In all cases, workers in the immediate vicinity of the welding or cutting operations shall be protected as necessary by local exhaust ventilation or airline respirators.

- Good industrial hygiene practices, including reducing occupational exposures to as low as reasonably achievable, are recommended. Where employees are exposed to beryllium above the PEL or where excessive contamination of clothing with beryllium is possible, adequate protective clothing should be provided to prevent contamination of personal clothing. Personnel assigned to launder such clothing should be advised of beryllium's presence and potential health effects.
- Sampling to establish lead level exposure is advised where exposure to airborne particulate or fumes is possible. Consult OSHA Lead Standard 29 CFR 1910.1025 for specific health/industrial hygiene precautions and requirements to follow when handling lead compounds.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Solid
BOILING POINT:	Not applicable
FREEZE-MELT POINT:	970 ^o -1215 ^o F (521 ^o -657 ^o C)
VAPOR PRESSURE (mm):	Not applicable
VAPOR DENSITY (air = 1):	Not applicable
SOLUBILITY IN WATER:	None
SPECIFIC GRAVITY:	Not determined
DENSITY:	Approximately .1 lb./in
pH:	Not applicable
ODOR:	None
ODOR THRESHOLD (ppm):	Not applicable
COEFFICIENT OF WATER/OIL DISTRIBUTION:	Not applicable

10. STABILITY AND REACTIVITY

Stable under normal conditions of use, storage, and transportation as shipped. Chips, fines, dust and molten aluminum are considerable more reactive with the following:

- **Water:** Slowly generates flammable/explosive hydrogen gas and heat. Generation rate is greatly increased with smaller particles (e.g., fines and dusts).
Molten aluminum can react violently/explosively with water or moisture, particularly when the water is entrapped.
- **Heat:** Oxidizes at a rate dependent upon temperature and particle size.
- **Strong oxidizers:** Violent reaction with considerable heat generation.
Can react explosively with nitrates (e.g., ammonium nitrate and fertilizers containing nitrate) when heated or molten.
- **Acids and alkalis:** Reacts to generate flammable/explosive hydrogen gas. Generation rate is greatly increased with smaller particles (e.g., fines and dusts).
- **Halogenated compounds:** Many halogenated hydrocarbons, including halogenated fire extinguishing agents, can react violently with finely divided aluminum.
- **Iron oxide (rust) and other metal oxides (e.g., copper and lead oxides):** A violent thermite reaction generating considerable heat can occur. Reaction with aluminum fines and dusts requires only very weak ignition sources for initiation.
Molten aluminum can react violently without external ignition source.
- **Iron powder:** An explosive reaction forming hydrogen gas occurs when heated above 1470^oF (600^oC).

11. TOXICOLOGICAL INFORMATION

LD₅₀ or LC₅₀ found for oral, dermal or inhalation routes of administration:

Nickel:	oral rat LD ₅₀ : 9000 mg/kg body weight
Silicon:	oral rat LD ₅₀ : 3160 mg/kg body weight
Manganese:	oral rat LD ₅₀ : 9000 mg/kg body weight
Iron:	intraperitoneal rabbit LD ₅₀ : 20 mg/kg - no toxic effect noted

MATERIAL SAFETY DATA SHEET

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Product Name: **ALUMINUM WELDING WIRE AND METALLIZING WIRE****12. ECOLOGICAL INFORMATION**

ECOTOXICOLOGICAL/CHEMICAL FATE INFORMATION: Not available.

13. DISPOSAL CONSIDERATION

Collect scrap for remelting and recycling. To maintain metal purity, it may be desirable to segregate this scrap from other alloys.

RCRA Status: Characterize in accordance with 40 CFR 261 or state equivalent.

14. TRANSPORT INFORMATION

USA DOT: Not Regulated - Enter the proper freight classification, "MSDS Number," and "Product Name" on the shipping paperwork.

Canadian TDG Hazard Class & PIN: Not regulated.

15. REGULATORY INFORMATION

All electrical equipment must be suitable for use in hazardous atmospheres involving aluminum powder in accordance with 29 CFR 1910.307. The National Electrical Code, NFPA 70, contains guidelines for determining the type and design of equipment and installation, which will meet this requirement.

U.S. Federal Regulations

TSCA STATUS: All components of this product are listed on the TSCA inventory.

CERCLA HAZARDOUS SUBSTANCES: Beryllium, Chromium, Chromium compounds, Copper, Lead, Manganese, Nickel, Zinc.

SARA TITLE III:

Section 311/312 Physical and Health Hazard Categories: Immediate (acute), delayed (chronic) if particulate fumes are generated during processing.

Section 313 Toxic Chemicals: Aluminum (fume/dust), Beryllium, Chromium, Copper, Lead, Manganese, Nickel, Vanadium (fume/dust), and Zinc (fume/dust).

State Regulations:

PENNSYLVANIA "Special Hazardous Substance": Beryllium; Nickel; Chromium compounds, hexavalent.

International Regulations

CANADIAN DOMESTIC SUBSTANCES LIST: All components of this product are listed on the Canadian DSL.

EUROPEAN COMMUNITY: All components of this product are listed on ECHOIN, the European Core Inventory.

16. OTHER INFORMATION

STATUS: Changes in all Sections except 9 and 12.

PREPARED BY: Hazardous Materials Control Committee

- OSHA Appendix 29 CFR 1910.1025 (Lead)
- OSHA Appendix 29 CFR 1910.252
- ANSI Z49.1, Safety in Welding and Cutting
- Aluminum Association's Bulletin F-1, "Guidelines for Handling Aluminum Fines Generated during Various Aluminum Fabricating Operations." The Aluminum Association, 900 19th Street, NW, Washington, DC 20006.
- NFPA 485, Standard for Processing and Finishing of Aluminum (NFPA phone: 800-344-3555)
- NFPA 70, Standard for National Electrical Code
- NFPA 77, Standard for Static Electricity
- Guide to Occupational Exposure Values-1997, Compiled by the American Conference of Governmental Industrial Hygienists (ACGIH).
- Dept. of Health and Human Services, NIOSH: Registry of Toxic Effects of Chemical Substances, 1985-86 Edition
- Sax, Irving. Dangerous Properties of Industrial Materials, Van Nostrand Reinhold Co., Inc., 1984

INFORMATION HEREIN IS GIVEN IN GOOD FAITH AS AUTHORITATIVE AND VALID;
HOWEVER, NO WARRANTY, EXPRESS OR IMPLIED, CAN BE MADE.

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Product Name: ALUMINUM WELDING WIRE AND METALLIZING WIRE**LEGEND:**

ACGIH	American Conference of Governmental Industrial Hygienists	atm	atmosphere
AICS	Australian Inventory of Chemical Substances	cm	centimeter
CAS	Chemical Abstract Services	g	gram
CERCLA	Comprehensive Environmental Response, Compensation, & Liability Act	in	inch
CFR	Code of Federal Regulations	kg	kilogram
DOT	Department of Transportation	lb.	pound
DSL	Domestic Substances List (Canada)	m	meter
ECOIN	European Core Inventory	mg	milligram
EPA	Environmental Protection Agency	mm	millimeter
IARC	International Agency for Research on Cancer	n.o.s.	not otherwise specified
LC ₅₀	Lethal Concentration (50 percent kill)	ppb	parts per billion
LC _{Lo}	Lowest published lethal concentration	ppm	parts per million
LD ₅₀	Lethal dose (50 percent kill)	psia	pounds/square inch absolute
LC _{Lo}	Lowest published lethal dose	ug	microgram
MIG	Metal Inert Gas		
NFPA	National Fire Protection Association		
NIOSH	National Institute for Occupational Safety and Health		
NTP	National Toxicology Program		
OSHA	Occupational Safety and Health Administration		
PEL	Permissible Exposure Limit		
PIN	Product Identification Number		
RCA	Resource Conservation and Recovery Act		
SARA	Superfund Amendments and Reauthorization Act		
STEL	Short Term Exposure Limit		
TCLP	Toxic Chemicals Leachate Program		
TDG	Transportation of Dangerous Goods		
TIG	Tungsten Inert Gas		
TLV	Threshold Limit Value		
TSCA	Toxic Substances Control Act		
TWA	Time Weighted Average		

1. IDENTIFICATION AND GENERAL INFORMATION

P/N#: 2041-11K
 Nomenclature: Bitrex Fit Sensitivity Solution # 1
 Company Name: Allegro Industries
 Address: 7221 Oranewood Avenue
 Garden Grove, CA 92841
 714-899-9855
 Chemtrac: 800-424-9300

NFPA Code
 H 1
 F 1
 R 1
 O None

2. COMPOSITION

Chemical Name: Ammonium Benzoate
 Chemical Family: Carboxylic Acids
 Synonyms: Benzenemethaniamium, Bittering Agent
 Molecular Weight: 446.57
 Molecular Formula: $C_{28}H_{34}N_2O_3$
Ingredient: **Benzoate** **Sodium Chloride** **Water**
 CAS Number: 3734-33-6 7647-14-5 N/A
 Percent: 0.01350% 4.99932% 94.98718%

3. HAZARDS IDENTIFICATION

Physical Dangers: Stable
 Chemical Dangers: Stable. Materials/conditions to avoid: None known
 Routes of Exposure: Ingestion, inhalation, absorption
 Target Organs: No significant target effect reported.
Health Hazards:
 Inhalation: No adverse health effects are expected. Avoid prolonged breathing of mist
 Skin Contact: No need for first aid is anticipated
 Eye Contact: No need for first aid is anticipated
 Ingestion: Profuse bad taste. Taste Antidote: Chocolate (Do not ingest)
 Chronic Exposure: No information available.
 Acute Exposure: Unknown
 Aggravation of Pre-Ex.Cond: None known. Denatonium Benzoate is a very bitter chemical used in many consumer products as an aversive agent against child ingestion

4. FIRST AID MEASURES

Inhalation: N/A. No adverse health effects are expected
 Skin Contact: The affected area should be washed with soap and water.
 Eye Contact: Flush immediately with cold water.
 Ingestion: Administer water or milk to dilute.

5. FIRE FIGHTING MEASURES

Fire Hazards: No fire hazard
 Fire Extinguisher: N/A
 Explosion: May liberate CO NOx.
 Flash Point: N/A
 Volatile (% by volume): N/A
 Exp. Limits (Vol % in air): N/A
 Auto Ignition Temperature: N/A

6. ACCIDENTAL RELEASE MEASURES

Procedure for spill/leak: Absorb spills with vermiculite or other suitable absorbent material and remove to an approved disposal container.
 Waste Disposal: Keep out of water supplies and sewers. Dispose of in accordance with current laws and regulations.

7. HANDLING AND STORAGE

Storage: Store in tight containers in a cool dry place away from light and heat. (Room Temperature)
 Self Life: 2 Years
 PPE: N/A
 Notes: None

8. EXPOSURE CONTROLS

Inhalation:	Respiratory protection is normally not required. No adverse health effects are expected from inhalation exposure	
Skin:	No adverse health effects are expected.	
Eye:	No adverse health effects are expected.	
Ingestion:	Do not ingest.	
Ventilation:	Ventilation meeting ACGIH standard should be employed.	
Engineering Controls:	N/A	
Work/Hygienic Practices:	Use good personal hygiene practices. Wash after any contact.	
Exposure Limits:	N/A	
Chemical:	Benzoate	Sodium Chloride
TLV (ACGIH TLV):	None Established	None listed
PEL (OSHA PEL):	None Established	None listed
IDLH	None Established	None listed
Control Parameter:	Wash after any contact. Thoroughly wash any contaminated clothing or shoes before reuse.	

9. PHYSICAL AND CHEMICAL PROPERTIES

Color/Appearance/Odor:	Clear odorless liquid, extreme bitter taste.
Boiling Point	N/A
Melting Point	163 - 170 °C
Specific Gravity (H ₂ O=1):	N/A
Refractive Index:	N/A
Relative Density:	N/A
Evaporative Rate:	N/A
Water Content:	95%
Vapor Density(Air-1):	N/A
Vapor Pressure:	N/A
Solubility in Water:	1:20

10. STABILITY AND REACTIVITY

Conditions to avoid:	This material presents no significant reactivity hazard. Hazardous polymerization will not occur and it will not react violently with water. Stable at normal temperature and pressure.
Materials to avoid	Contact with highly reactive chemical oxidants should be avoided.

11. TOXICOLOGICAL INFORMATION

Health effects:	No information available on significant adverse effects.
Oral LD50:	612 mg/kg/ (rat)
Dermal LD50:	N/A
Human Lethal Dose:	N/A
Notes:	Carcinogenicity not listed.

12. ECOLOGICAL INFORMATION

No Information available

13. DISPOSAL CONSIDERATIONS

No Information available.

14. TRANSPORT INFORMATION

Proper shipping name:	Denatonium Benzoate
Transport Emergency Card:	N/A
Packing Group:	N/A
UN Number:	N/A
Reportable Quantity	N/A
Notes:	None

15. REGULATORY INFORMATION

TSCA Registered:	TSCA 12 (b) Export notification - Not Listed.	RTECS:	N/A
	CAS# 7647-145 is listed on the TSCA inventory	EC Number (EINECS):	223-095-2
FDA Approved:	N		
California Proposition 65:	N		
ICSC:	N/A		

16. OTHER INFORMATION

No other information available.

DISCLAIMER: THE INFORMATION FURNISHED HEREIN IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST DATA CURRENTLY AVAILABLE TO US. NO WARRANTY, EXPRESSED OR IMPLIED IS MADE AND ALLEGRO INDUSTRIES ASSUMES NO LEGAL RESPONSIBILITY OR LIABILITY RESULTING FROM ITS USE.

1. IDENTIFICATION AND GENERAL INFORMATION

P/N#: 2041-12K
 Nomenclature: Bitrex Fit Test Solution # 2
 Company Name: Allegro Industries
 Address: 7221 Orangewood Avenue
 Garden Grove, CA 92841
 714-899-9855
 Chemtrac: 800-424-9300

NFPA Code

H 1
 F 1
 R 1
 O None

2. COMPOSITION

Chemical Name: Ammonium Benzoate
 Chemical Family: Carboxylic Acids
 Synonyms: Benzenemethaniamium, Bittering Agent
 Molecular Weight: 446.57
 Molecular Formula: $C_{25}H_{34}N_2O_3$
Ingredient: **Benzoate** **Sodium Chloride** **Water**
 CAS Number: 3734-33-6 7647-14-5 N/A
 Percent: 0.16850% 4.99160% 94.83990%

3. HAZARDS IDENTIFICATION

Physical Dangers: Stable
 Chemical Dangers: Stable. Materials/conditions to avoid: None known
 Routes of Exposure: Ingestion, Inhalation, absorption
 Target Organs: No significant target effect reported.
Health Hazards:
 Inhalation: No adverse health effects are expected. Avoid prolonged breathing of mist
 Skin Contact: No need for first aid anticipated
 Eye Contact: No need for first aid anticipated
 Ingestion: Profuse bad taste. Taste Antidote: Chocolate (Do not ingest)
 Chronic Exposure: No information available.
 Acute Exposure: Unknown
 Aggravation of Pre-Ex.Cond: None Known. Denatonium Benzoate is a very bitter chemical used in many consumer products as an aversive agent against child ingestion

4. FIRST AID MEASURES

Inhalation: N/A. No adverse health effects are expected
 Skin Contact: The affected area should be thoroughly washed with soap and water.
 Eye Contact: Flush immediately with cold water.
 Ingestion: Administer water or milk to dilute.

5. FIRE FIGHTING MEASURES

Fire Hazards: No fire hazard
 Fire Extinguisher: N/A
 Explosion: May liberate CO NOx.
 Flash Point: N/A
 Volatile (% by volume): N/A
 Exp. Limits (Vol % in air): N/A
 Auto Ignition Temperature: N/A

6. ACCIDENTAL RELEASE MEASURES

Procedure for spill/leak: Absorb spills with vermiculite or other suitable absorbent material and remove to an approved disposal container.
 Waste Disposal: Keep out of water supplies and sewers. Dispose of in accordance with current laws and regulations.

7. HANDLING AND STORAGE

Storage: Store in tight containers in a cool dry place away from light and heat. (Room temperature)
 Self Life: 2 Years
 PPE: N/A
 Notes: None

8. EXPOSURE CONTROLS

Inhalation:	Respiratory protection is normally not required. No adverse health effects are expected from inhalation exposure.	
Skin:	No adverse health effects are expected.	
Eye:	No adverse health effects are expected.	
Ingestion:	Do not ingest.	
Ventilation:	Ventilation meeting ACGIH standard should be employed.	
Engineering Controls:	N/A	
Work/Hygienic Practices:	Use good personal hygiene practices. Wash after any contact.	
Exposure Limits:	N/A	
Chemical:	Benzoate	Sodium Chloride
TLV (ACGIH TLV):	None Established	None listed
PEL (OSHA PEL):	None Established	None listed
IDLH	None Established	None listed
Control Parameter:	Wash after any contact. Thoroughly wash any contaminated clothing or shoes before reuse.	

9. PHYSICAL AND CHEMICAL PROPERTIES

Color/Appearance/Odor:	Clear odorless liquid, extreme bitter taste.
Boiling Point	N/A
Melting Point	163 - 170 °C
Specific Gravity (H ₂ O=1):	N/A
Refractive Index:	N/A
Relative Density:	N/A
Evaporative Rate:	N/A
Water Content:	95%
Vapor Density(Air-1):	N/A
Vapor Pressure:	N/A
Solubility in Water:	1:20

10. STABILITY AND REACTIVITY

Conditions to avoid:	This material presents no significant reactivity hazard. Hazardous polymerization will not occur and it will not react violently with water. Stable at normal temp. and press.
Materials to avoid	Contact with highly reactive chemical oxidants should be avoided.

11. TOXICOLOGICAL INFORMATION

Health effects:	No information available on significant adverse effects.
Oral LD50:	612 mg/kg/ (rat)
Dermal LD50:	N/A
Human Lethal Dose:	N/A
Notes:	Carcinogenicity not listed.

12. ECOLOGICAL INFORMATION

No Information available

13. DISPOSAL CONSIDERATIONS

No Information available.

14. TRANSPORT INFORMATION

Proper shipping name:	Denatonium Benzoate
Transport Emergency Card:	N/A
Packing Group:	N/A
UN Number:	N/A
Reportable Quantity	N/A
Notes:	None

15. REGULATORY INFORMATION

TSCA Registered:	TSCA 12 (b) Export notification - Not Listed.	RTECS:	N/A
	CAS# 7647-145 is listed on the TSCA inventory	EC Number (EINECS):	223-095-2
FDA Approved:	N		
California Proposition 65:	N		
ICSC:	N/A		

16. OTHER INFORMATION

No other information available.

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AMERADA HESS CORPORATION

MATERIAL SAFETY DATA SHEET

Gasoline, All Grades

MSDS No. 9950

EMERGENCY OVERVIEW

DANGER!

**EXTREMELY FLAMMABLE - EYE AND MUCOUS MEMBRANE IRRITANT
- EFFECTS CENTRAL NERVOUS SYSTEM - HARMFUL OR FATAL IF
SWALLOWED - ASPIRATION HAZARD**



NFPA 704 (Section 16)

High fire hazard. Keep away from heat, spark, open flame, and other ignition sources.

If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs). Contact may cause eye, skin and mucous membrane irritation. Harmful if absorbed through the skin. Avoid prolonged breathing of vapors or mists. Inhalation may cause irritation, anesthetic effects (dizziness, nausea, headache, intoxication), and respiratory system effects.

Long-term exposure may cause effects to specific organs, such as to the liver, kidneys, blood, nervous system, and skin. Contains benzene, which can cause blood disease, including anemia and leukemia.

1. CHEMICAL PRODUCT and COMPANY INFORMATION (rev. Jan-04)

Amerada Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

EMERGENCY TELEPHONE NUMBER (24 hrs):
COMPANY CONTACT (business hours):
MSDS Internet Website

CHEMTREC (800)424-9300
Corporate Safety (732)750-6000
www.hess.com/about/environ.html

SYNONYMS: Hess Conventional (Oxygenated and Non-oxygenated) Gasoline; Reformulated Gasoline (RFG); Reformulated Gasoline Blendstock for Oxygenate Blending (RBOB); Unleaded Motor or Automotive Gasoline

See Section 16 for abbreviations and acronyms.

2. COMPOSITION and INFORMATION ON INGREDIENTS * (rev. Jan-04)

INGREDIENT NAME (CAS No.)	CONCENTRATION PERCENT BY WEIGHT
Gasoline (86290-81-5)	100
Benzene (71-43-2)	0.1 - 4.9 (0.1 - 1.3 reformulated gasoline)
n-Butane (106-97-8)	< 10
Ethyl Alcohol (Ethanol) (64-17-5)	0 - 10
Ethyl benzene (100-41-4)	< 3
n-Hexane (110-54-3)	0.5 to 4
Methyl-tertiary butyl ether (MTBE) (1634-04-4)	0 to 15.0
Tertiary-amyl methyl ether (TAME) (994-05-8)	0 to 17.2
Toluene (108-88-3)	1 - 25
1,2,4- Trimethylbenzene (95-63-6)	< 6
Xylene, mixed isomers (1330-20-7)	1 - 15

A complex blend of petroleum-derived normal and branched-chain alkane, cycloalkane, alkene, and aromatic hydrocarbons. May contain antioxidant and multifunctional additives. Non-oxygenated Conventional Gasoline and RBOB do not have oxygenates (Ethanol or MTBE and/or TAME). Oxygenated Conventional and Reformulated Gasoline will have oxygenates for octane enhancement or as legally required.

AMERADA HESS CORPORATION

MATERIAL SAFETY DATA SHEET

Gasoline, All Grades

MSDS No. 9950

3. HAZARDS IDENTIFICATION (rev. Dec-97)

EYES

Moderate irritant. Contact with liquid or vapor may cause irritation.

SKIN

Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are exposed repeatedly.

INGESTION

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

INHALATION

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

CHRONIC EFFECTS and CARCINOGENICITY

Contains benzene, a regulated human carcinogen. Benzene has the potential to cause anemia and other blood diseases, including leukemia, after repeated and prolonged exposure. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with systemic toxicity. See also Section 11 - Toxicological Information.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash). Chronic respiratory disease, liver or kidney dysfunction, or pre-existing central nervous system disorders may be aggravated by exposure.

4. FIRST AID MEASURES (rev. Dec-97)

EYES

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

SKIN

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops.

INGESTION

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

INHALATION

Remove person to fresh air. If person is not breathing, ensure an open airway and provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

AMERADAHESSE CORPORATION

MATERIAL SAFETY DATA SHEET

Gasoline, All Grades

MSDS No. 9950

5. FIRE FIGHTING MEASURES (rev. Dec-97)

FLAMMABLE PROPERTIES:

FLASH POINT: -45 °F (-43°C)
AUTOIGNITION TEMPERATURE: highly variable; > 530 °F (>280 °C)
OSHA/NFPA FLAMMABILITY CLASS: 1A (flammable liquid)
LOWER EXPLOSIVE LIMIT (%): 1.4%
UPPER EXPLOSIVE LIMIT (%): 7.6%

FIRE AND EXPLOSION HAZARDS

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. Flowing product may be ignited by self-generated static electricity. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

EXTINGUISHING MEDIA

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO₂, water spray, fire fighting foam, or Halon.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

During certain times of the year and/or in certain geographical locations, gasoline may contain MTBE and/or TAME. Firefighting foam suitable for polar solvents is recommended for fuel with greater than 10% oxygenate concentration - refer to NFPA 11 "Low Expansion Foam - 1994 Edition."

FIRE FIGHTING INSTRUCTIONS

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

See Section 16 for the NFPA 704 Hazard Rating.

6. ACCIDENTAL RELEASE MEASURES (rev. Dec-97)

ACTIVATE FACILITY SPILL CONTINGENCY or EMERGENCY PLAN.

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product

AMERADA HESS CORPORATION

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Gasoline, All Grades

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vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal - caution, flammable vapors may accumulate in closed containers. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

7. HANDLING and STORAGE (rev. Dec-97)

HANDLING PRECAUTIONS

*****USE ONLY AS A MOTOR FUEL*****

*****DO NOT SIPHON BY MOUTH*****

Handle as a flammable liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents.

STORAGE PRECAUTIONS

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

WORK/HYGIENIC PRACTICES

Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

8. EXPOSURE CONTROLS and PERSONAL PROTECTION (rev. Jan-04)

EXPOSURE LIMITS

Component (CAS No.)	Source	Exposure Limits		Note
		TWA (ppm)	STEL (ppm)	
Gasoline (86290-81-5)	ACGIH	300	500	A3
Benzene (71-43-2)	OSHA	1	5	Carcinogen
	ACGIH	0.5	2.5	A1, skin
	USCG	1	5	
n-Butane (106-97-8)	ACGIH	800	--	2003 NOIC: 1000 ppm (TWA) Aliphatic Hydrocarbon Gases Alkane (C1-C4)
Ethyl Alcohol (ethanol) (64-17-5)	OSHA	1000	--	
	ACGIH	1000	--	A4
Ethyl benzene (100-41-4)	OSHA	100	--	
	ACGIH	100	125	A3

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Component (CAS No.)	Source	Exposure Limits			Note
		TWA (ppm)	STEL (ppm)		
n-Hexane (110-54-3)	OSHA	500	--		
	ACGIH	50	--	skin	
Methyl-tertiary butyl ether [MTBE] (1634-04-4)	ACGIH	50	--	A3	
Tertiary-amyl methyl ether [TAME] (994-05-8)				None established	
Toluene (108-88-3)	OSHA	200	--		Ceiling: 300 ppm; Peak: 500 ppm (10 min.)
	ACGIH	50	--	A4 (skin)	
1,2,4-Trimethylbenzene (95-63-6)	ACGIH	25	--		
Xylene, mixed isomers (1330-20-7)	OSHA	100	--		
	ACGIH	100	150	A4	

ENGINEERING CONTROLS

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

EYE/FACE PROTECTION

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

SKIN PROTECTION

Gloves constructed of nitrile or neoprene are recommended. Chemical protective clothing such as that made of of E.I. DuPont Tychem®, products or equivalent is recommended based on degree of exposure.

Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

RESPIRATORY PROTECTION

A NIOSH-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection and limitations.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL and CHEMICAL PROPERTIES (rev. Jan-04)

APPEARANCE

A translucent, straw-colored or light yellow liquid

ODOR

A strong, characteristic aromatic hydrocarbon odor. Oxygenated gasoline with MTBE and/or TAME may have a sweet, ether-like odor and is detectable at a lower concentration than non-oxygenated gasoline.

ODOR THRESHOLD

	<u>Odor Detection</u>	<u>Odor Recognition</u>
Non-oxygenated gasoline:	0.5 - 0.6 ppm	0.8 - 1.1 ppm
Gasoline with 15% MTBE:	0.2 - 0.3 ppm	0.4 - 0.7 ppm
Gasoline with 15% TAME:	0.1 ppm	0.2 ppm

BASIC PHYSICAL PROPERTIES

BOILING RANGE:	85 to 437 °F (39 to 200 °C)
VAPOR PRESSURE:	6.4 - 15 RVP @ 100 °F (38 °C) (275-475 mm Hg @ 68 °F (20 °C))
VAPOR DENSITY (air = 1):	AP 3 to 4
SPECIFIC GRAVITY (H ₂ O = 1):	0.70 - 0.78
EVAPORATION RATE:	10-11 (n-butyl acetate = 1)
PERCENT VOLATILES:	100 %

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SOLUBILITY (H₂O): Non-oxygenated gasoline - negligible (< 0.1% @ 77 °F). Gasoline with 15% MTBE - slight (0.1 - 3% @ 77 °F); ethanol is readily soluble in water

10. STABILITY and REACTIVITY (rev. Dec-94)

STABILITY: Stable. Hazardous polymerization will not occur.

CONDITIONS TO AVOID

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources

INCOMPATIBLE MATERIALS

Keep away from strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke). Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.

11. TOXICOLOGICAL PROPERTIES (rev. Dec-97)

ACUTE TOXICITY

Acute Dermal LD50 (rabbits): > 5 ml/kg

Acute Oral LD50 (rat): 18.75 ml/kg

Primary dermal irritation (rabbits): slightly irritating

Draize eye irritation (rabbits): non-irritating

Guinea pig sensitization: negative

CHRONIC EFFECTS AND CARCINOGENICITY

Carcinogenicity: OSHA: NO IARC: YES - 2B

NTP: NO

ACGIH: YES (A3)

IARC has determined that gasoline and gasoline exhaust are possibly carcinogenic in humans. Inhalation exposure to completely vaporized unleaded gasoline caused kidney cancers in male rats and liver tumors in female mice. The U.S. EPA has determined that the male kidney tumors are species-specific and are irrelevant for human health risk assessment. The significance of the tumors seen in female mice is not known. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with effects to the central and peripheral nervous systems, liver, and kidneys. The significance of these animal models to predict similar human response to gasoline is uncertain.

This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC, OSHA and ACGIH.

This product may contain methyl tertiary butyl ether (MTBE): animal and human health effects studies indicate that MTBE may cause eye, skin, and respiratory tract irritation, central nervous system depression and neurotoxicity. MTBE is classified as an animal carcinogen (A3) by the ACGIH.

12. ECOLOGICAL INFORMATION (rev. Jan-04)

Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations. If released, oxygenates such as ethers and alcohols will be expected to exhibit fairly high mobility in soil, and therefore may leach into groundwater. The API (www.api.org) provides a number of useful references addressing petroleum and oxygenate contamination of groundwater.

13. DISPOSAL CONSIDERATIONS (rev. Dec-97)

Consult federal, state and local waste regulations to determine appropriate disposal options.

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Gasoline, All Grades

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14. TRANSPORTATION INFORMATION (rev. Jan-04)

DOT PROPER SHIPPING NAME: Gasoline
 DOT HAZARD CLASS and PACKING GROUP: 3, PG II
 DOT IDENTIFICATION NUMBER: UN 1203
 DOT SHIPPING LABEL: FLAMMABLE LIQUID

PLACARD:



15. REGULATORY INFORMATION (rev. Jan-04)

U.S. FEDERAL, STATE, and LOCAL REGULATORY INFORMATION

This product and its constituents listed herein are on the EPA TSCA Inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other federal, state, or local regulations; consult those regulations applicable to your facility/operation.

CLEAN WATER ACT (OIL SPILLS)

Any spill or release of this product to "navigable waters" (essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) or, if not practical, the U.S. Coast Guard with follow-up to the National Response Center, as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g., SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

SARA SECTION 311/312 - HAZARD CLASSES

<u>ACUTE HEALTH</u>	<u>CHRONIC HEALTH</u>	<u>FIRE</u>	<u>SUDDEN RELEASE OF PRESSURE</u>	<u>REACTIVE</u>
X	X	X	--	--

SARA SECTION 313 - SUPPLIER NOTIFICATION

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372:

INGREDIENT NAME (CAS NUMBER)	CONCENTRATION WT. PERCENT
Benzene (71-43-2)	0.1 to 4.9 (0.1 to 1.3 for reformulated gasoline)
Ethyl benzene (100-41-4)	< 3
n-Hexane (110-54-3)	0.5 to 4
Methyl-tertiary butyl ether (MTBE) (1634-04-4)	0 to 15.0
Toluene (108-88-3)	1 to 15
1,2,4- Trimethylbenzene (95-63-6)	< 6
Xylene, mixed isomers (1330-20-7)	1 to 15

US EPA guidance documents (www.epa.gov/tri) for reporting Persistent Bioaccumulating Toxics (PBTs) indicate this product may contain the following deminimis levels of toxic chemicals subject to Section 313 reporting:

INGREDIENT NAME (CAS NUMBER)	CONCENTRATION - Parts per million (ppm) by weight
Polycyclic aromatic compounds (PACs)	17
Benzo (g,h,i) perylene (191-24-2)	2.55
Lead (7439-92-1)	0.079

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CANADIAN REGULATORY INFORMATION (WHMIS)

Class B, Division 2 (Flammable Liquid)

Class D, Division 2A (Very toxic by other means) and Class D, Division 2B (Toxic by other means)

16. OTHER INFORMATION (rev. Jan-04)

NFPA® HAZARD RATING HEALTH: 1 Slight
FIRE: 3 Serious
REACTIVITY: 0 Minimal

HMIS® HAZARD RATING HEALTH: 1* Slight
FIRE: 3 Serious
REACTIVITY: 0 Minimal
* CHRONIC

SUPERSEDES MSDS DATED: 12/30/97

ABBREVIATIONS:

AP = Approximately < = Less than > = Greater than
N/A = Not Applicable N/D = Not Determined ppm = parts per million

ACRONYMS:

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
AIHA	American Industrial Hygiene Association	OPA	Oil Pollution Act of 1990
ANSI	American National Standards Institute (212)642-4900	OSHA	U.S. Occupational Safety & Health Administration
API	American Petroleum Institute (202)682-8000	PEL	Permissible Exposure Limit (OSHA)
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act	RCRA	Resource Conservation and Recovery Act
DOT	U.S. Department of Transportation [General Info: (800)467-4922]	REL	Recommended Exposure Limit (NIOSH)
EPA	U.S. Environmental Protection Agency	SARA	Superfund Amendments and Reauthorization Act of 1986 Title III
HMIS	Hazardous Materials Information System	SCBA	Self-Contained Breathing Apparatus
IARC	International Agency For Research On Cancer	SPCC	Spill Prevention, Control, and Countermeasures
MSHA	Mine Safety and Health Administration	STEL	Short-Term Exposure Limit (generally 15 minutes)
NFPA	National Fire Protection Association (617)770-3000	TLV	Threshold Limit Value (ACGIH)
NIOSH	National Institute of Occupational Safety and Health	TSCA	Toxic Substances Control Act
NOIC	Notice of Intended Change (proposed change to ACGIH TLV)	TWA	Time Weighted Average (8 hr.)
		WEEL	Workplace Environmental Exposure Level (AIHA)
		WHMIS	Workplace Hazardous Materials Information System (Canada)

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.



**MATERIAL
SAFETY
DATA SHEET
(MSDS)**

**USA
HMIS INDEX**
HEALTH INDEX- 0
FLAMMABILITY- 0
REACTIVITY- 0
PERSONAL
PROTECTION - A*
(See Section VIII)

NFPA CODE
HEALTH
FIRE
REACTIVITY
SPECIAL
HAZARD

**CANADA
WHMIS INDEX**
HEALTH - 0
FLAMMABILITY- 0
REACTIVITY- 0
PERSONAL
PROTECTION - A*
(See Section VIII)

SECTION I

EMERGENCY TELEPHONE NO.

TRADE NAME
(If None, Put Chemical) **Lenox® Lube Tube™**

413-525-3961 ext. 608

**CHEMICAL NAME
AND SYNONYMS** Stick Lubricant

REVISED DATE 7/1/02

MANUFACTURER'S NAME American Saw & Mfg. Company

SUPERCEDES 11/1/99

**ADDRESS (Number, Street,
City, State, Zip Code)** 301 Chestnut Street, East Longmeadow, MA 01028 U.S.A.

SECTION II - INGREDIENTS

No Reportable Quantities Of Hazardous Ingredients Are Present.

This Product Does Not Contain Any Toxic Chemicals Subject To The Reporting Requirements Of Section 313 Of Title III And CFR 372.

Note - Canadian Users: This Is Not A Controlled Product Under The WHMIS Guidelines.

SECTION III - PHYSICAL DATA

BOILING POINT (°C) / (°F)	NA	PERCENT VOLATILE BY VOLUME (%)	NA
VAPOR PRESSURE (mm Hg.) < 1mm Hg.	NA	pH	NA
VAPOR DENSITY (AIR = 1)	>1	EVAPORATION RATE	>1
SOLUBILITY IN WATER	Insoluble	MELTING POINT (°C) / (°F)	43°C / 109°F
SPECIFIC GRAVITY (H₂O=1)	0.92	VISCOSITY (Room Temp.) (72°F)	NA

APPEARANCE AND ODOR Creamy White Solid; Slight Lime Aroma

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) None	FLAMMABLE LIMITS None	LEL NA	UEL NA
EXTINGUISHING MEDIA CO ₂ , Dry Chemical, Foam. Do Not Use Water Or Alcohol Foam.			
SPECIAL FIRE FIGHTING PROCEDURES Firefighters Should Use Self Contained Breathing Apparatus In Confined Areas			
UNUSUAL FIRE AND EXPLOSION HAZARDS None			

NA - Not Applicable

AMERICAN SAW & MFG. COMPANY
301 CHESTNUT STREET, EAST LONGMEADOW, MA 01028 U.S.A.
800/628-3030 • 413/525-3961
FAX: 800/223-7906 • 413/525-2336

EDP 40603

SECTION V - HEALTH HAZARD INFORMATION

SYMPTOMS/EFFECTS OF OVEREXPOSURE None Known

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE None Known

CARCINOGENICITY No

FIRST AID

EYES Flush Eyes With Water.

SKIN Wash Hands At The End Of The Workday.

INGESTION Do Not Induce Vomiting. Contact A Physician.
If Vomiting Occurs, Keep Head Below Hips To Prevent Aspiration.

SECTION VI - REACTIVITY

STABILITY Chemically Stable.

INCOMPATIBLE MATERIALS Strong Oxidizing Agents.

HAZARDOUS DECOMPOSITION PRODUCTS None Known.

SECTION VII - SPILL OR LEAK PROCEDURES

PROCEDURES Use Mop Or Absorbent Material. Wash Area. Discard In Suitable Container.

WASTE DISPOSAL METHOD Remove To A Waste Disposal Facility Operating In Compliance With Federal, State, and Local Laws.

SECTION VIII - SPECIAL PROTECTION INFORMATION

EYEWEAR Use Of Eye Protection Is A Good Industrial Practice Or As Required By Your Employer.

CLOTHING/GLOVES Use Impervious Gloves/Clothing As Needed Or As Required.

RESPIRATORY No Protection Needed At Normal Handling Temperatures.

VENTILATION Local Exhaust Is Recommended For Confined Areas.

WORK/HYGIENIC PRACTICES Follow Current HMIS Regulations.

SECTION IX - SPECIAL PRECAUTIONS

None.

PREPARED BY Heather Desmarais Chemical Engineer
NAME *TITLE*

The information contained herein has been developed based upon current available scientific data. New information may be developed from time to time which may render the conclusions of this report obsolete. Therefore, no warranty is extended as to the applicability of this information to the user's intended purpose or for the consequences of its misuse.

Material Safety Data Sheet

Material Name: **Honda Marine Engine Oil 10W-30 (SM), 55 Gallon Drum**

ID: 1705-021B

Honda Marine Engine Oil 10W-30 (SM), 55 Gallon Drum

Section 1 - Chemical Product and Company Identification

Part Number: 1705-021B

Chemical Name: Refined Mineral Oil and Additives.

Product Use: Engine Oil

Supplier Information

Apollo America
701 Port Road
Jeffersonville, IN 47130

Phone: (812) 284-3300
Fax: (812) 284-6840
Emergency # 1-800-424-9300 (CHEMTREC)

Section 2 - Composition / Information on Ingredients

CAS #	Component	Percent
Mixture	Lubricating Oil	80-90
Proprietary	PR1	5-8

Component Information/Information on Non-Hazardous Components

Section 3 - Hazards Identification

Emergency Overview

Toxic fumes may be released in case of fire. Firefighters should wear full protective clothing and self contained breathing apparatus. If heated above its flashpoint in the presence of air, product can support combustion.

Label Information

WARNING: Never use welding or cutting torch on or near container because product can ignite. Combustible liquid. Launder or discard soiled clothes. Avoid prolonged contact.

Potential Health Effects: Eyes

This product may cause irritation to the eyes.

Potential Health Effects: Skin

Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.

Potential Health Effects: Ingestion

Will have a laxative effect if swallowed. Low toxicity.

Potential Health Effects: Inhalation

If sprayed or misted may cause chemical pneumonitis. Exposure may cause irritation to eyes, nose, and throat.

Section 4 - First Aid Measures

First Aid: Eyes

Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.

First Aid: Skin

For skin contact, flush with large amounts of water. If irritation persists, get medical attention. Wash contaminated clothing before reuse.

First Aid: Ingestion

If material is ingested, immediately contact a physician or poison control center. Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration.

First Aid: Inhalation

Move person to non-contaminated air. If the affected person is not breathing, apply artificial respiration. Seek medical attention.

First Aid: Notes to Physician

Provide general supportive measures and treat symptomatically.

Material Safety Data Sheet

Material Name: Honda Marine Engine Oil 10W-30 (SM), 55 Gallon Drum

ID: 1705-021B

Section 5 - Fire Fighting Measures

Flash Point: 225 C
Upper Flammable Limit (UFL): N/D
Auto Ignition: N/D
Rate of Burning: N/D

Method Used: COC
Lower Flammable Limit (LFL): N/D
Flammability Classification: N/D

General Fire Hazards

This product is combustible at high temperatures. Shut off the source of fuel, if possible. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition.

Hazardous Combustion Products

Irritating and toxic gases or fumes may be released during a fire. Carbon monoxide, carbon dioxide and other hydrocarbon fragments.

Extinguishing Media

Dry chemical, foam, carbon dioxide.

Fire Fighting Equipment/Instructions

Firefighters should wear full-face, self contained breathing apparatus and impervious protective clothing. Firefighters should avoid inhaling any combustion products. Do not direct a solid stream of water or foam into hot, burning pools; this may result in frothing and increase fire intensity.

NFPA Ratings: Health: 2 Fire: 1 Reactivity: 0 Other: B
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Section 6 - Accidental Release Measures

Containment Procedures

Stop the flow of material, if this is without risk. Eliminate all sources of ignition or flammables that may come into contact with a spill of this material. Absorb the spilled material with an inert absorbent (nonflammable) material. Do not allow the spilled product to enter public drainage system or open water courses.

Clean-Up Procedures

Ventilate the contaminated area. Sweep up or gather material and place in appropriate container for disposal. Wash spill area thoroughly. Wear appropriate protective equipment during cleanup. Follow all Local, State, Federal and Provincial regulations for disposal.

Evacuation Procedures

Evacuate the area promptly and keep upwind of the spilled material. Isolate the spill area to prevent people from entering.

Special Procedures

Have emergency equipment readily available.

Section 7 - Handling and Storage

Handling Procedures

When using this material, do not eat, drink or smoke. Avoid prolonged or repeated skin contact with this material. Wash thoroughly after handling.

Storage Procedures

Store in a cool, dry, well-ventilated area. Do not handle or store near an open flame, heat or other sources of ignition. Do not store this material in open or unlabeled containers.

Section 8 - Exposure Controls / Personal Protection

Exposure Guidelines

A: General Product Information

Eye wash fountain and emergency showers are recommended.

B: Component Exposure Limits

Following the OSHA Haz Com 1910.1200 Regulation, the ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

Engineering Controls

Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear chemical goggles; face shield (if splashing is possible).

Material Safety Data Sheet

Material Name: Honda Marine Engine Oil 10W-30 (SM), 55 Gallon Drum

ID: 1705-021B

Personal Protective Equipment: Skin

Wear impervious gloves for prolonged contact. Normal work clothing (long sleeved shirts and long pants) is recommended. Do not wear rings, watches, or similar apparel that could entrap the material and cause a skin reaction.

Personal Protective Equipment: Respiratory

If mist is generated (heating, spraying) and engineering controls are not sufficient, wear approved organic vapor respirator suitable for oil mist.

Personal Protective Equipment: General

Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2-1992). A written respiratory protection program, including provisions for medical certification, training, fit testing, exposure assessments, maintenance, inspection, cleaning, and convenient, sanitary storage must be implemented.

Section 9 - Physical & Chemical Properties

Physical Properties: Additional Information

No additional information available.

Appearance: Brown
Physical State: Liquid
Vapor Pressure: <5
Boiling Point: N/D
Solubility (H₂O): Insoluble
Evaporation Rate: Negligible

Odor: Mild
pH: N/D
Vapor Density: N/D
Melting Point: N/A
Specific Gravity: 0.87
VOC: 2.1% / 0.2 lb/gal

Section 10 - Chemical Stability & Reactivity Information

Chemical Stability

Stable under normal conditions.

Chemical Stability: Conditions to Avoid

Keep away from heat, sparks, or open flame.

Incompatibility

This product may react with strong oxidizing agents.

Hazardous Decomposition

Hazardous combustion products may include carbon monoxide, carbon dioxide and hydrocarbon fragments.

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information

General Toxicity

A: General Product Information

No additional information available.

B: Component Analysis - LD50/LC50

Lubricating Oil (Mixture)

Inhalation LC50 Rat: 2.18 mg/L/4H; Oral LD50 Rat: >5000 mg/kg; Dermal LD50 Rabbit: >2000 mg/kg

PR1 (Proprietary)

Oral LD50 Rat: >5000 mg/kg

Carcinogenicity

A: General Product Information

No additional information available.

B: Component Carcinogenicity

Following the OSHA Haz Com 1910.1200 Regulation, the components in this product are not listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Section 12 - Ecological Information

Ecotoxicity

A: General Product Information

No information available.

Material Safety Data Sheet

Material Name: Honda Marine Engine Oil 10W-30 (SM), 55 Gallon Drum

ID: 1705-021B

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Lubricating Oil (Mixture)

96 Hr LC50 Oncorhynchus mykiss: >5000 mg/L

PR1 (Proprietary)

96 Hr LC50 Lepomis macrochirus: >10000 mg/L

Environmental Fate

No information available for the product. Do not allow this material to drain into sewers/water supplies.

Section 13 - Disposal Considerations

US EPA Waste Number & Descriptions

A: General Product Information

Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA. You must test your waste using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions

Recycling of this product is encouraged. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

Section 14 - Transportation Information

US DOT Information

Shipping Name: This product is not regulated as a hazardous material by the United States (DOT) or Canadian (TDG) transportation regulations.

International Transportation Regulations

NOTE: The data in this section (Section 14) is meant as a guide to the overall classification of the product. However, transportation classifications may be subject to change with changes in package size. Consult shipper requirements under I.M.O., I.C.A.O. (I.A.T.A.) and 49 CFR to assure regulatory compliance.

Section 15 - Regulatory Information

US Federal Regulations

A: General Product Information

Components of this product have been checked against the non-confidential TSCA inventory by CAS Registry Number.

B: Sara Information

Following the OSHA Haz Com 1910.1200 Regulation, None of this product's components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

State Regulations

A: General Product Information

Other state regulations may apply. Check individual state requirements.

B: Component Analysis - State

Following the OSHA Haz Com 1910.1200 Regulation, none of the components in this product are listed on the following state lists :CA, FL, MA, MN, NJ, or PA.

Other Regulations

A: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Lubricating Oil	Mixture	Yes	Yes	Yes
PR1	Proprietary	Yes	Yes	Yes

B: Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

Section 16 - Other Information

Other Information

The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

Material Safety Data Sheet

Material Name: Honda Marine Engine Oil 10W-30 (SM), 55 Gallon Drum

ID: 1705-021B

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry. HMIS = Hazardous Material Information System. NFPA = National Fire Protection Association. OSHA = Occupational Safety and Health Administration. NTP = National Toxicology Program. NIOSH = National Institute of Occupational Safety and Health. ACGIH = American Conference of Governmental Industrial Hygienists.

Contact Robin Hutchens

Contact Phone (812) 285-8234

Contact Email rhutchens@apolloamerica.com

Exception For Ground Shipping**DOT Limited Quantity:** Up to 5L per inner packaging, 30 kg gross weight per package.**Identification Number:** UN 1133**Consumer Commodity:** Depending on packaging, these quantities may qualify under DOT as "ORM-D".**SECTION 15 – Regulatory Information****Precautionary Label Information:** Highly Flammable,

Harmful Ingredient Listings: USA TSCA, Europe EINECS, Canada DSL, Australia Korea ECL/TCCL, Japan MITI (ENCS)

Symbols: F, Xn AICS,**Risk Phrases:** R-11 Highly Flammable

R-20 Harmful by inhalation

R-21 Harmful if contact with skin

R-22 Harmful if swallowed

R-36/37/38 Irritating to eyes, respiratory system and skin

R-43 May cause sensitization by skin contact.

Safety Phrases: S-2 Keep out of reach of children

S-7 Keep container tightly closed when not in use

S-9 Keep container in a well-ventilated place

S-15/16 Keep away from heat and sources of

ignition. No smoking

S-23 Do not breathe vapor

S-24/25 Avoid contact with skin and eyes.

S-29 Do not empty into drains

S-37 Wear suitable gloves

S-51 Use only in well ventilated areas

SECTION 16 – Other Information**Specification Information:**

All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances).

Training necessary:

Yes, training in practices and procedures contained in product literature.

Reissue date:

01/01/10

Intended Use of Product:

2-Component Adhesive for bonding thermoplastics, metals and other composites

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Associated Technologies, LLC. does not assume responsibility for any results obtained by persons over whose methods Associated Technologies, LLC has no control. It is the user's responsibility to determine the suitability of Associated Technologies, LLC products or any other production methods mentioned herein for a particular purpose and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in handling and use of any Associated Technologies, LLC's products. In light of the foregoing, Associated Technologies, LLC. specifically disclaims all warranties, expressed or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Associated Technologies, LLC's products. Associated Technologies further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

Decomposition Temperature: "A" - Not Applicable, "B" - 110°C (230°F) **Vapor Density:** "A" - > 3.0 (Air = 1), "B" - N/E
VOC Content : "A" - < 50 g/l mixed, "B" - None
Odor Threshold: "A" - 0.75 ppm: MMA
Active Oxygen Content: "B"- <1 %
Evaporation Rate: "A" - > 1.0, "B" - <1 (BUAC = 1)
Flammability: "A" - Category 2, "B" - Category 4
Flammability Limits: LEL: "A" - 1.6% based on MMA
UEL: "A" - 12.5% based on MMA
LEL & UEL: "B" - Not Established
Vapor Pressure: "A" - 28 mm Hg @ 20°C (68°F): MMA

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable, unless heated
Hazardous decomposition products: None in normal use. Oxides of carbon, oxides of nitrogen, hydrogen chloride, hydrocarbons, acrid smoke and gases upon combustion.
Conditions to avoid: Keep away from direct sunlight, heat, sparks, open flame and other ignition sources.
Incompatible Materials: Reducing and oxidizing agents and metal contaminants

SECTION 11 – TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, Eye and Skin Contact
Acute symptoms and effects:
Inhalation: Severe overexposure may result in nausea, dizziness, and headache. Can cause drowsiness, irritation of eyes and nasal passages.
Eye Contact: Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.
Skin Contact: Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
Ingestion: May cause nausea, vomiting, diarrhea and mental sluggishness.
Chronic (long-term) effects: None known to humans

	LD50	LC50
Methyl Methacrylate Monomer (MMA)	Oral: 7900 mg/kg (rat),	Dermal: >35000 mg/kg (rabbit) Inhalation: 3 hrs. 7093 PPM (rat)
Methacrylic Acid	Oral: 1600 mg/kg (rat),	Dermal: 500 mg/kg (rabbit) Inhalation: 6.7 mg/l (rat)
Styrene	Oral: 2650 mg/kg (rat)	Inhalation: 12000 PPM (rat)
Benzoyl Peroxide	Oral: 6400 mg/kg (rat)	Oral: 2 mg/l 96 hours (guppy)

<u>Reproductive Effects</u>	<u>Teratogenicity</u>	<u>Mutagenicity</u>	<u>Embryotoxicity</u>	<u>Sensitization to Product</u>	<u>Synergistic Products</u>
Not Established	Not Established	Not Established	Not Established	Not Established	Not Established

SECTION 12 – Ecological Information

Ecotoxicity: None known
Mobility: In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of <50 g/l
Degradability: Not Established
Bioaccumulation: Not Established

SECTION 13 – Disposal Considerations

Follow local and national regulations. Consult local disposal expert.

SECTION 14 – TRANSPORT INFORMATION

DOT(49 CFR 172)

PROPER SHIPPING NAME: Adhesives / Consumer Commodity
IDENTIFICATION NUMBER: UN 1133
HAZARD CLASS: 3
PACKING GROUP: II
LABEL REQUIRED: Class 3 Flammable Liquid
CLASS/DIVISION: ORM-D - 3

SECTION 5 – FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical powder, carbon dioxide gas, foam, Halon, water fog. **HMIS NFPA** 0-Minimal
Unsuitable Extinguishing Media: Water spray or stream. **Health** 2 2 1-Slight
Exposure Hazards: Inhalation and dermal contact **Flammability** 3 3 2-Moderate
Combustion Products: Oxides of carbon, oxides of nitrogen, hydrogen chloride **Reactivity** 2 2 3-Serious
hydrocarbons, acrid smoke and gases. 4-Severe
Protection for Firefighters: Self-contained breathing apparatus or full-face positive pressure air-supply masks.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep away from heat, sparks and open flame. Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment. Prevent contact with skin or eyes (see section 8).
Environmental Precautions: Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.
Methods for Cleaning up: Contain spill with sand or other inert adsorbent or absorbent material. Use non-sparking tools. Transfer to a closable vessel (Metal or polyethylene [PE])

SECTION 7 – HANDLING AND STORAGE

Handling: Avoid breathing of vapor; avoid contact with eyes, skin and clothing. Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods. Do not eat, drink or smoke while handling.
Storage: Store in ventilated room or shade and away from direct sunlight. Keep container tightly closed when not in use. Keep away from ignition sources and incompatible materials. Follow all precautionary information on container label and product bulletins.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS

Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
Methyl Methacrylate Mon	50 ppm	100 ppm	100 ppm	N/E
Methacrylic Acid	20 ppm	N.E	20 ppm Skin	N/E
Styrene	50 ppm	100 ppm	100 ppm	200 ppm
Benzoyl Peroxide	5 mg/ m3		5 mg/ m3	

Engineering Controls: Use local exhaust as needed.
Monitoring: Maintain breathing zone airborne concentrations below exposure limits.
Personal Protective Equipment (PPE):
Eye Protection: Avoid contact with eyes; wear splash proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields.
Skin Protection: Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion. Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.
Respiratory Protection: Use in a well-ventilated room. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above. With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance: "A" - Off-white, viscous liquid, "B" - White or gray viscous liquid
Odor: "A" - Strong Solvent Odor, "B" - Mild
pH: Not Applicable
Boiling Point: "A" - 100.5°C (212.9°F) Based on first boiling component: MMA
" B" - Not Established
Flash Point: "A" - 11.5°C (52.7°F) T.C.C. based on MMA, "B" - 84°C (184°F) for BPO
Specific Gravity: "A" - 1.010, "B" - 1.130 @23°C (73°F)
Solubility: "A" - Slight in Water (MMA, MAA), "B" - Insoluble in Water
Auto-ignition Temperature: "A" - 421°C (789.8°F): MMA, "B" - Not Established "B" - N/E

Material Safety Data Sheet

Prepared 1/01/10

Associated Technologies – AT-6030 (Component A & B) – Acrylic Adhesive

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: AT-630 (Parts A & B)
Associated Technologies
694 Higganum Road
Durham, CT 06422

Product Type: Acrylics
Information Telephone 860-788-3380
Emergency Telephone # (800) 255-3924 (CHEM•TEL)
Outside North America #: (813) 248-0585 (Call Collect)

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

None of the ingredients below are listed as carcinogens by IARC, NTP or OSHA

CHEMICAL NAME – Component A (Resin 90%)	CAS #	Approx %	ACGIH-TLV	ACGIH-STEL	OSHA-PEL	OSHA-STEL
Synthetic Polymer Resin	NON/HAZ					
Methyl Methacrylate Monomer, Stabilized	80-62-6	50-60*	100 ppm		100 ppm	
Methacrylic Acid	79-41-4	1-10	20 ppm(skin)	N/E	N/E	N/E

CHEMICAL NAME - Component B (Activator)	CAS #	Approx %	ACGIH-TLV	ACGIH-STEL	OSHA-PEL	OSHA-STEL
Synthetic Polymer Resin	NON/HAZ					
Blend mixture of Benzoate Esters	NON/HAZ					
55% Benzoyl Peroxide	94-36-0	10-25*	5MG-M3		5MG/M3	

All of the constituents of AT-6030 adhesive products are listed on the TSCA inventory of chemical substances maintained by the US EPA and the Canadian Domestic Substances List (DSL), or are exempt there from *Title III Section 313 Supplier Notification: This product contains toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40CFR372. This information must be included in all MSDS's that are copied and distributed for this material.

SECTION 3 – HAZARDS IDENTIFICATION

GHS CLASSIFICATION

Health		Environmental		Physical	
Acute Toxicity:	Category 4	Acute Toxicity:	Category III	Flammable Liquid:	Category 2
Skin Irritation:	Category 3	Chronic Toxicity:	Category IV		
Skin Sensitization:	YES				
Eye:	Category 2B				

WHMIS CLASSIFICATION: CLASS B, DIVISION 2
OR CONTROLLED PRODUCT CLASS D, DIVISION 2B

<u>Hazard Statements</u>	<u>Precautionary Statements</u>
Highly flammable liquid and vapor May cause irritation/allergic skin reaction	Do not breathe vapor Keep container closed Use in well-ventilated area

SECTION 4 – FIRST AID MEASURES

Contact with eyes: Flush eyes immediately with plenty of water for 15 minutes and seek medical advice
Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.
Inhalation: Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.
Ingestion: Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.

SECTION IX - Label Data

Protect Eye	NO
Protect Skin	NO
Protect Respiratory	NO
Chronic Indicator	UNKNOWN
Contact Code	SLIGHT
Fire Code	UNKNOWN
Health Code	UNKNOWN
React Code	UNKNOWN

SECTION X - Transportation Data

Container Quantity	1
Unit of Measure	QT

SECTION XI - Site Specific/Reporting Information

Volatile Organic Compounds (P/G)	0
Volatile Organic Compounds (G/L)	0

SECTION XII - Ingredients/Identity Information

Ingredient #	1
Ingredient Name	MINERAL OIL, PETROLEUM DISTILLATES, SOLVENT-DEWAXED HEAVY PARAFFINIC
CAS Number	64742650
NIOSH Number	PY8038500
Proprietary	NO
Percent	>85
OSHA PEL	NOT ESTABLISHED
ACGIH TLV	5 MG/M3 (OIL MIST)
Recommended Limit	NONE RECOMMENDED

Route of Entry: Skin	YES
Route of Entry: Ingestion	NO
Route of Entry: Inhalation	YES
Health Hazards - Acute and Chronic	ACUTE: MAY CAUSE IRRITATION OF SKIN AND EYES ON CONTACT. VAPORS MAY CAUSE RESPIRATORY IRRITATION IF INHALED. MAY CAUSE GI TRACT IRRITATION IF SWALLOWED
Carcinogenity: NTP	NO
Carcinogenity: IARC	NO
Carcinogenity: OSHA	NO
Explanation of Carcinogenity	NO INGREDIENT OF A CONCENTRATION OF 0.1% OR GREATER IS LISTED AS A CARCINOGEN OR SUSPECTED CARCINOGEN
Symptoms of Overexposure	EYES: REDNESS, TEARING, OR BLURRED VISION. SKIN: REDNESS, RASH, ITCHING. INHALED: COUGHING, WHEEZING, SHORTNESS OF BREATH. INGESTED: NAUSEA, VOMITING, DIARRHEA
Medical Cond. Aggravated by Exposure	NONE SPECIFIED BY MANUFACTURER
Emergency/First Aid Procedures	EYES: FLUSH WITH PLENTY OF WATER FOR 15 MINUTES. SEE DOCTOR. SKIN: WASH WITH SOAP AND WATER. INGESTED: GIVE 1-2 GLASSES OF WATER TO VICTIM, IF CONSCIOUS. DO NOT INDUCE VOMITING. GET MEDICAL ATTENTION. INHALATION: REMOVE TO FRESH AIR

SECTION VII - Precautions for Safe Handling and Use

Steps if Material Released/Spilled	ABSORB IN INERT MATERIAL AND PLACE IN A CONTAINER FOR LATER DISPOSAL. REPORT SPILLS INTO WATERWAYS TO US COAST GUARD AT 800-424-8802
Neutralizing Agent	NONE SPECIFIED BY MANUFACTURER
Waste Disposal Method	DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS
Handling and Storage Precautions	STORE AWAY FROM IGNITION SOURCES AND HIGH TEMPERATURES
Other Precautions	NONE SPECIFIED BY MANUFACTURER

SECTION VIII - Control Measures

Respiratory Protection	NONE NORMALLY REQUIRED
Ventilation	USE ADEQUATE MECHANICAL VENTILATION
Protective Gloves	NONE NORMALLY REQUIRED
Eye Protection	SAFETY GLASSES
Other Protective Equipment	NONE NORMALLY REQUIRED
Work Hygenic Practices	WASH HANDS AFTER USE AND BEFORE EATING, DRINKING, OR SMOKING. LAUNDRY CONTAMINATED CLOTHES BEFORE REUSE
Supplemental Health/Safety Data	NSN HAS BEEN CANCELLED WITHOUT REPLACEMENT AS OF 17 JUN 1985 (PER CTFD)

Vendor #5 CAGE BPFGN

SECTION III - Physical/Chemical Characteristics

Hazard Storage Compatibility Code	N1
Appearance/Odor	RED LIQUID WITH A MILD ODOR
Boiling Point	>425F, >218C
Melting Point	UNKNOWN
Vapor Pressure	N/A
Vapor Density	N/A
Specific Gravity	0.873
Decomposition Temperature	UNKNOWN
Evaporation Rate	<1 (ETHER=1)
Solubility in Water	NEGLIGIBLE
Percent Volatiles by Volume	N/K
Chemical pH	N/A
Corrosion Rate	UNKNOWN
Container Pressure Code	4
Temperature Code	8
Product State Code	U

SECTION IV - Fire and Explosion Hazard Data

Flash Point	365
Flash Point Method	COC
Lower Explosion Limit	1.0%
Upper Explosion Limit	UNKNOWN
Extinguishing Media	CARBON DIOXIDE, FOAM, OR DRY CHEMICAL
Special Fire Fighting Procedures	WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. PREVENT RUNOFF FROM FIREFIGHTING OR DILUTION FROM ENTERING SEWERS OR WATERWAYS
Unusual Fire/Explosion Hazards	NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT OR RESIDUE CAN IGNITE EXPLOSIVELY

SECTION V - Reactivity Data

Stability	YES
Stability Conditions to Avoid	EXTREME HEAT
Materials to Avoid	STRONG OXIDIZING AGENTS
Hazardous Decomposition Products	OXIDES OF CARBON
Hazardous Polymerization	NO
Polymerization Conditions to Avoid	NONE SPECIFIED BY MANUFACTURER
LD50 - LD50 Mixture	ORAL LD50 (RAT) IS UNKNOWN

SECTION VI - Health Hazard Data

Material Safety Data Sheet

SECTION I - Material Identity
 SECTION II - Manufacturer's Information
 SECTION III - Physical/Chemical Characteristics
 SECTION IV - Fire and Explosion Hazard Data
 SECTION V - Reactivity Data
 SECTION VI - Health Hazard Data
 SECTION VII - Precautions for Safe Handling and Use
 SECTION VIII - Control Measures
 SECTION IX - Label Data
 SECTION X - Transportation Data
 SECTION XI - Site Specific/Reporting Information
 SECTION XII - Ingredients/Identity Information

SECTION I - Material Identity

Item Name	
Part Number/Trade Name	DEXTRONII/MERCON
National Stock Number	9150010054859
CAGE Code	9T904
Part Number Indicator	A
MSDS Number	183046
HAZ Code	B

SECTION II - Manufacturer's Information

Manufacturer Name	ASHLAND OIL INC VALVOLINE DIV
P.O. Box	14000
Street	2900 PALUMBO DR
City	LEXINGTON
State	KY
Country	US
Zip Code	40509-1253
Emergency Phone	800-274-5263
Information Phone	606-268-7000/800-354-8957

MSDS Preparer's Information

Date MSDS Prepared/Revised	13OCT89
Date of Technical Review	31OCT92
Active Indicator	N
Item Manager	CX

Alternate Vendors

Respiratory Protection Indicator: N/P

Signal Word: N/P

Health Hazard:

Contact Hazard:

Fire Hazard:

Reactivity Hazard:

8/8/2002 8:22:00 AM

Section 12 - Ecological Information
MERCON ATF

Ecological Information:
N/P

Section 13 - Disposal Considerations
MERCON ATF

Waste Disposal Methods:
DISPOSE OF IN ACCORDANCE W/LOCAL, STATE, & FEDERAL REGULATIONS.

Section 14 - MSDS Transport Information
MERCON ATF

Transport Information:
N/P

Section 15 - Regulatory Information
MERCON ATF

SARA Title III Information:
N/P
Federal Regulatory Information:
N/P
State Regulatory Information:
N/P

Section 16 - Other Information
MERCON ATF

Other Information:
N/P

HAZCOM Label Information

Product Identification: MERCON ATF
CAGE: 81355
Assigned Individual: N
Company Name: ASHLAND INC
Company PO Box: 391
Company Street Address1: 1409 WINCHESTER AVE
Company Street Address2: ASHLAND, KY 41114 US
Health Emergency Telephone: (606) 329-3333
Label Required Indicator: Y
Date Label Reviewed: 12/16/1998
Status Code: C
Manufacturer's Label Number:
Date of Label: 12/16/1998
Year Procured: N/K
Organization Code: G
Chronic Hazard Indicator: N/P
Eye Protection Indicator: N/P
Skin Protection Indicator: N/P

OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED TO REDUCE EX POSURE.

Ventilation:

PROVIDE SUFFICIENT MECHANICAL/LOCAL EXHAUST VENTILATION TO KEEP **Protective**

Gloves:

RESISTANT SUCH AS NEOPRENE

Eye Protection: CHEMICAL SPLASH GOGGLES & SAFETY GLASSES

Other Protective Equipment: IMPERVIOUS CLOTHING & BOOTS

Work Hygenic Practices: REMOVE/LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.

Supplemental Health & Safety Information: N/K

Section 9 - Physical & Chemical Properties
MERCON ATF

HCC:

NRC/State License Number:

Net Property Weight for Ammo:

Boiling Point: Boiling Point Text: >425F

Melting/Freezing Point: Melting/Freezing Text: N/K

Decomposition Point: Decomposition Text: N/K

Vapor Pressure: N/R Vapor Density: N/R

Percent Volatile Organic Content:

Specific Gravity: 0.873

Volatile Organic Content Pounds per Gallon:

pH: N/K

Volatile Organic Content Grams per Liter:

Viscosity: N/P

Evaporation Weight and Reference: SLOWER THAN ETHER

Solubility in Water: N/K

Appearance and Odor: RED COLOR LIQUID, HOMOGENIOUS SOLUTION

Percent Volatiles by Volume: N/R

Corrosion Rate: N/K

Section 10 - Stability & Reactivity Data
MERCON ATF

Stability Indicator: YES

Materials to Avoid:

STRONG OXIDIZING AGENTS

Stability Condition to Avoid:

N/K

Hazardous Decomposition Products:

TOXIC MATERIALS SUCH AS CO & CO2

Hazardous Polymerization Indicator: NO

Conditions to Avoid Polymerization:

N/K

Section 11 - Toxicological Information
MERCON ATF

Toxicological Information:

N/P

First Aid:

SKIN: WASH THOROUGHLY W/SOAP & WATER. EYES: FLUSH THOROUGHLY W/LARGE AMOUNTS OF WATER. INHALATION: REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM & QUIET. INGESTION: DON'T INDUCE VOMITING. KEEP PERSON WARM & QUIET. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. OBTAIN MEDICAL ATTENTION IN ALL CASES.

**Section 5 - Fire Fighting Measures
MERCON ATF**

Fire Fighting Procedures:

WEAR SCBA W/FULL FACEPIECE OPERATED IN THE POSITIVE PRESSURE DEMAND MODE. WATER OR FOAM MAY CAUSE FROTHING IF SPRAYED INTO CONTAINERS OF HOT, BURNING LIQUID.

Unusual Fire or Explosion Hazard:

PRODUCT CAN IGNITE EXPLOSIVELY WHEN WELDING OR USING CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY OR JUST RESIDUE).

Extinguishing Media:

REGULAR FOAM, CO2, OR DRY CHEMICAL

Flash Point: **Flash Point Text:** >365F

Autoignition Temperature:

Autoignition Temperature Text: N/A

Lower Limit(s): 1%

Upper Limit(s): N/K

**Section 6 - Accidental Release Measures
MERCON ATF**

Spill Release Procedures:

ABSORB ON PAPER/VERMICULITE/FLOOR ABSORBENT/OTHER ABSORBENT MATERIAL. TRANSFER TO HOOD. PREVENT RUN-OFF TO SEWERS/STREAMS/BODIES OF WATER. EVACUATE AREA/WEAR PROTECTIVE EQUIPMENT. STOP SPILL AT SOURCE. DIKE TO PREVENT SPREADING. PUMP TO SALVAGE TANK.

**Section 7 - Handling and Storage
MERCON ATF**

Handling and Storage Precautions:**Other Precautions:**

**Section 8 - Exposure Controls & Personal Protection
MERCON ATF**

Respiratory Protection:

IF >TLV, WEAR NIOSH/MSHA APPROVED AIR SUPPLIED RESPIRATOR (NEGATIVE PRESSURE TYPE) IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. ENGINEERING

=WT: =WT Code:
=Volume: =Volume Code:
>WT: >WT Code:
>Volume: >Volume Code:
<WT: <WT Code:
<Volume: <Volume Code:
% Low WT: % Low WT Code:
% High WT: % High WT Code:
% Low Volume: % Low Volume Code:
% High Volume: % High Volume Code:
% Text: 85-100%
% Enviromental Weight:
Other REC Limits: 5 MG/CUM
OSHA PEL: 5 MG/CUM OSHA PEL Code: M
OSHA STEL: OSHA STEL Code:
ACGIH TLV: 5 MG/CUM ACGIH TLV Code: M
ACGIH STEL: N/P ACGIH STEL Code:
EPA Reporting Quantity:
DOT Reporting Quantity:
Ozone Depleting Chemical: N

Section 3 - Hazards Identification, Including Emergency Overview
MERCON ATF

Health Hazards Acute & Chronic: INHALATION: BREATHING DIFFICULTY.
SKIN/EYES/INGESTION: IRRITATION.

Signs & Symptoms of Overexposure:
INHALATION: BREATHING DIFFICULTY. EYES/SKIN/INGESTION: IRRITATION.

Medical Conditions Aggravated by Exposure:
N/K

LD50 LC50 Mixture: N/K

Route of Entry Indicators:
Inhalation: YES
Skin: YES
Ingestion: YES

Carcenogenicity Indicators
NTP: NO
IARC: NO
OSHA: NO

Carcinogenicity Explanation: NONE

Section 4 - First Aid Measures
MERCON ATF

Manufacturer's Information

Manufacturer's Name: ASHLAND OIL INC./VALVOLINE DIV.
Post Office Box: 14000
Manufacturer's Address1: 2900 PALUMBO DRIVE
Manufacturer's Address2: LEXINGTON, KY 40509-1253
Manufacturer's Country: NK
General Information Telephone: (606) 329-3333
Emergency Telephone: (606) 329-3333
Emergency Telephone: (606) 329-3333
MSDS Preparer's Name: N/P
Proprietary: N
Reviewed: Y
Published: Y
CAGE: 81355
Special Project Code: N

Preparer Information

Preparer's Name: ASHLAND INC
Post Office Box: 391
Preparer's Address1: 1409 WINCHESTER AVE
Preparer's Address2: ASHLAND, KY 41114
Preparer's CAGE: 81355
Assigned Individual: N

Contractor Information

Contractor's Name: ASHLAND INC
Post Office Box: 391
Contractor's Address1: 1409 WINCHESTER AVE
Contractor's Address2: ASHLAND, KY 41114
Contractor's Telephone: 800-622-6846
Contractor's CAGE: 81355

Contractor Information

Contractor's Name: ASHLAND INDUSTRIAL PRODUCTS INC
Post Office Box: 14000
Contractor's Address1: 3499 BLAZER PKY
Contractor's Address2: LEXINGTON, KY 40512
Contractor's Telephone: 859-357-7777
Contractor's CAGE: 9T904

Section 2 - Composition/Information on Ingredients MERCON ATF

Ingredient Name: OIL PETROLEUM DISTILLATES, SOLVENT-DEWAXED HEAVY
PARAFFINIC
Ingredient CAS Number: 64742-65-0 **Ingredient CAS Code:** M
RTECS Number: PY8038500 **RTECS Code:** M



CORNELL

**Material Safety
Data Sheets**

Division of Facilities Services

**DOD Hazardous Material Information (ANSI Format)
For Cornell University Convenience Only**

MERCON ATF

Section 1 - Product and Company Identification	Section 9 - Physical & Chemical Properties
Section 2 - Composition/Information on Ingredients	Section 10 - Stability & Reactivity Data
Section 3 - Hazards Identification Including Emergency Overview	Section 11 - Toxicological Information
Section 4 - First Aid Measures	Section 12 - Ecological Information
Section 5 - Fire Fighting Measures	Section 13 - Disposal Considerations
Section 6 - Accidental Release Measures	Section 14 - MSDS Transport Information
Section 7 - Handling and Storage	Section 15 - Regulatory Information
Section 8 - Exposure Controls & Personal Protection	Section 16 - Other Information

The information in this document is compiled from information maintained by the United States Department of Defense (DOD). Anyone using this information is solely responsible for the accuracy and applicability of this information to a particular use or situation.

Cornell University does not in any way warrant or imply the applicability, viability or use of this information to any person or for use in any situation.

**Section 1 - Product and Company Identification
MERCON ATF**

Product Identification: MERCON ATF

Date of MSDS: 02/19/1990 **Technical Review Date:** 04/01/1991

FSC: 9150 **NIIN:** LIIN: 00F015041

Submitter: F BT

Status Code: C

MFN: 01

Article: N

Kit Part: N

Material Safety Data Sheet

Material Name: Honda Marine Gear Oil 80W/90

ID: 2990-021A

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry. HMIS = Hazardous Material Information System. NFPA = National Fire Protection Association. OSHA = Occupational Safety and Health Administration. NTP = National Toxicology Program. NIOSH = National Institute of Occupational Safety and Health. ACGIH = American Conference of Governmental Industrial Hygienists.

Contact Teresa Williams

Contact Phone (812) 285-8277

Contact Email williams@apolloamerica.com

Material Safety Data Sheet

Material Name: Honda Marine Gear Oil 80W/90

ID: 2990-021A

Environmental Fate

No information available for the product. Do not allow this material to drain into sewers/water supplies.

Section 13 - Disposal Considerations

US EPA Waste Number & Descriptions

A: General Product Information

Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA. You must test your waste using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions

Recycling of this product is encouraged. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

Section 14 - Transportation Information

US DOT Information

Shipping Name: This product is not regulated as a hazardous material by the United States (DOT) or Canadian (TDG) transportation regulations.

International Transportation Regulations

NOTE: The data in this section (Section 14) is meant as a guide to the overall classification of the product. However, transportation classifications may be subject to change with changes in package size. Consult shipper requirements under I.M.O., I.C.A.O. (I.A.T.A.) and 49 CFR to assure regulatory compliance.

Section 15 - Regulatory Information

US Federal Regulations

A: General Product Information

This product is listed on the U.S. EPA TSCA Inventory.

B: Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

State Regulations

A: General Product Information

Other state regulations may apply. Check individual state requirements.

B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Isopropanolamine	78-96-6	No	No	Yes	No	No	Yes

Other Regulations

A: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Isopropanolamine	78-96-6	Yes	Yes	Yes

B: Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

Section 16 - Other Information

Other Information

The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

Material Safety Data Sheet

Material Name: Honda Marine Gear Oil 80W/90

ID: 2990-021A

Personal Protective Equipment: Skin

Wear impervious gloves for prolonged contact. Normal work clothing (long sleeved shirts and long pants) is recommended. Do not wear rings, watches, or similar apparel that could entrap the material and cause a skin reaction.

Personal Protective Equipment: Respiratory

If mist is generated (heating, spraying) and engineering controls are not sufficient, wear approved organic vapor respirator suitable for oil mist.

Personal Protective Equipment: General

Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2-1992). A written respiratory protection program, including provisions for medical certification, training, fit testing, exposure assessments, maintenance, inspection, cleaning, and convenient, sanitary storage must be implemented.

Section 9 - Physical & Chemical Properties

Appearance:	Clear Brown	Odor:	Mild Sulfur Odor
Physical State:	Oily Liquid	pH:	N/D
Vapor Pressure:	N/D	Vapor Density:	N/D
Boiling Point:	N/D	Melting Point:	N/A
Solubility (H2O):	Insoluble	Specific Gravity:	0.8909
Viscosity:	@ 40 cSt=175.6 @ 100 cSt=19.56		

Physical Properties: Additional Information

No additional information available.

Section 10 - Chemical Stability & Reactivity Information

Chemical Stability

Stable under normal conditions.

Chemical Stability: Conditions to Avoid

Keep away from heat, sparks, or open flame.

Incompatibility

This product may react with strong oxidizing agents.

Hazardous Decomposition

Hazardous combustion products may include carbon monoxide, carbon dioxide and hydrocarbon fragments.

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information

General Toxicity

A: General Product Information

No additional information available.

B: Component Analysis - LD50/LC50

Isopropanolamine (78-96-6)
Oral LD50 Rat: 1715 mg/kg; Dermal LD50 Rabbit: 1640 µL/kg

Carcinogenicity

A: General Product Information

Not listed by ACGIH, IARC, NIOSH, NTP OR OSHA.

B: Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Section 12 - Ecological Information

Ecotoxicity

A: General Product Information

No information available.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Isopropanolamine (78-96-6)
24 Hr LC50 goldfish: >5000 mg/L; 96 Hr LC50 fathead minnow: 2520 mg/L (flow-through)

Material Safety Data Sheet

Material Name: Honda Marine Gear Oil 80W/90

ID: 2990-021A

Section 5 - Fire Fighting Measures

Flash Point: 216 C
Upper Flammable Limit (UFL): N/D
Auto Ignition: N/D
Rate of Burning: N/D

Method Used: COC
Lower Flammable Limit (LFL): N/D
Flammability Classification: N/D

General Fire Hazards

This product is combustible at high temperatures. Shut off the source of fuel, if possible. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition.

Hazardous Combustion Products

Irritating and toxic gases or fumes may be released during a fire. Carbon monoxide, carbon dioxide and other hydrocarbon fragments.

Extinguishing Media

Dry chemical, foam, carbon dioxide.

Fire Fighting Equipment/Instructions

Firefighters should wear full-face, self contained breathing apparatus and impervious protective clothing. Firefighters should avoid inhaling any combustion products. Do not direct a solid stream of water or foam into hot, burning pools; this may result in frothing and increase fire intensity.

NFPA Ratings: Health: 2 Fire: 1 Reactivity: 0 Other: B
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Section 6 - Accidental Release Measures

Containment Procedures

Stop the flow of material, if this is without risk. Eliminate all sources of ignition or flammables that may come into contact with a spill of this material. Absorb the spilled material with an inert absorbent (nonflammable) material. Do not allow the spilled product to enter public drainage system or open water courses.

Clean-Up Procedures

Ventilate the contaminated area. Sweep up or gather material and place in appropriate container for disposal. Wash spill area thoroughly. Wear appropriate protective equipment during cleanup. Follow all Local, State, Federal and Provincial regulations for disposal.

Evacuation Procedures

Evacuate the area promptly and keep upwind of the spilled material. Isolate the spill area to prevent people from entering.

Special Procedures

Have emergency equipment readily available.

Section 7 - Handling and Storage

Handling Procedures

When using this material, do not eat, drink or smoke. Avoid prolonged or repeated skin contact with this material. Wash thoroughly after handling.

Storage Procedures

Store in a cool, dry, well-ventilated area. Do not handle or store near an open flame, heat or other sources of ignition. Do not store this material in open or unlabeled containers.

Section 8 - Exposure Controls / Personal Protection

Exposure Guidelines

A: General Product Information

Eye wash fountain and emergency showers are recommended.

B: Component Exposure Limits

ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

Engineering Controls

Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear chemical goggles; face shield (if splashing is possible).

Material Safety Data Sheet

Material Name: Honda Marine Gear Oil 80W/90

ID: 2990-021A

Honda Marine Gear Oil 80W/90

Section 1 - Chemical Product and Company Identification

Part Number: Honda Marine Gear Oil 80W/90

Chemical Name: Mixture

Product Use: Transmission Fluid

Supplier Information

Apollo America

701 Port Road

Jeffersonville, IN 47130

Mfg Contact: Teresa Williams

Phone: (812) 284-3300

Fax: (812) 284-6840

Emergency # 1-800-424-9300 (CHEMTREC)

Section 2 - Composition / Information on Ingredients

CAS #	Component	Percent
Proprietary	Petroleum distillates, heavy paraffinic, neutral oil	70-80
78-96-6	Isopropanolamine	<0.1

Component Information/Information on Non-Hazardous Components

Section 3 - Hazards Identification

Emergency Overview

Toxic fumes may be released in case of fire. Firefighters should wear full protective clothing and self contained breathing apparatus. If heated above its flashpoint in the presence of air, product can support combustion.

Label Information

WARNING: Never use welding or cutting torch on or near container because product can ignite. Combustible liquid. Launder or discard soiled clothes. Avoid prolonged contact.

Potential Health Effects: Eyes

This product may cause irritation to the eyes.

Potential Health Effects: Skin

Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.

Potential Health Effects: Ingestion

Will have a laxative effect if swallowed. Low toxicity.

Potential Health Effects: Inhalation

If sprayed or misted may cause chemical pneumonitis. Exposure may cause irritation to eyes, nose, and throat.

Section 4 - First Aid Measures

First Aid: Eyes

Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.

First Aid: Skin

For skin contact, flush with large amounts of water. If irritation persists, get medical attention. Wash contaminated clothing before reuse.

First Aid: Ingestion

If material is ingested, immediately contact a physician or poison control center. Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration.

First Aid: Inhalation

Move person to non-contaminated air. If the affected person is not breathing, apply artificial respiration. Seek medical attention.

First Aid: Notes to Physician

Provide general supportive measures and treat symptomatically.

HMIS Rating		MATERIAL SAFETY DATA SHEET (Complies with OSHA Communication Standard 29 CFR 1910.1200 Dept. of Labor) Form approved OMB No. 1218-0072 OSHA 174 - Sept. 1985	NFPA Rating	
Health			Health	
Flammability			Flammability	
Reactivity			Reactivity	
Personal Protection			Special	

Section I - Product Identification

Cut off Wheels & Grinding Wheels

Marketer's Name Must Appear Below Bates Abrasives, Inc.	DOT Shipping and Hazard Classification
Manufactured For: IBS, Incorporated	Emergency Telephone Number 800-231-5725
Address: 740 Clay Street NW Auburn, WA 98001	Telephone Number for Information (253) 804-8666
	Date Prepared November 15, 2000

Section II - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity)	OSHA PEL	ACGIH TLV	CAS Number	Carcinogen (Y/N)
Alpha-Alumina (Aluminum)	10mg/m ²	10mg/m ²	1344-28-1	N
Silicon Carbide	10mg/m ²	10 mg/m ²	409-21-1	N
Zirconia Alumina	5mg/m ²	5mg/m ²	NAIF	N

The grinding Wheel may be comprised of one or more of the above abrasives. The chemicals listed below may be a part of the bond system.

Fluorides (as F)	2.5mg/m ²	2.5mg/m ²	NA	N
Calcium Oxide	5mg/m ²	2mg/m ²	1305-78-8	N
Glass, Fibrous, or Dust	NAIF	NAIF	NAIF	N
Iron Dioxide	0.1mg/m ²	0.1mg/m ²	14808-60-7	Y

Chemical compounds marked with an Asterisk () are toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372. You must notify each person to whom this mixture or trade name is sold. This statement must remain a part of this Material Safety Data Sheet.*

Section III - Physical/Chemical Characteristics

Boiling Point: NAIF	Specific Gravity (H ₂ O=1): 2-4	Melting Point: NAIF
Vapor Pressure PSIG @ 70°F: NAIF	Vapor Density (Air=1): NAIF	Evaporation Rate (Butyl Acetate=1): NAIF
Solubility in Water: SLIGHT	Appearance: SOLID SUBSTANCE	Odor: May give off odor in use

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used): NAIF	Flammable Limits: LEL UEL N/A N/A
Extinguishing Media: WATER	
Special Fire Fighting Procedures: NONE	
Unusual Fire and Explosion Hazards: NONE	

Information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in this MSDS. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

Section V - Reactivity Data

STABILITY: Unstable Conditions to Avoid:
 Stable **NAIF**

Compatibility (Materials To Avoid): Avoid acids of all types with a PH \leq 4.0

Hazardous Decomposition or By-products:

Dusts and odors are generated in use. Coolants may produce other decomposition products.

Hazardous May Occur Conditions to Avoid: None known
Polymerization Will Not Occur

Section VI - Health Hazard Data

Routes of Entry: Inhalation Yes Ingestion Yes Skin Absorption Yes Eye Yes - All during grinding

Carcinogenicity: NTP? IARC Monograph? OSHA Regulated? Yes

Health Hazards (Acute and Chronic): INHALATION /Acute: Coughing Shortness of Breath Chronic: May affect breathing capacity. INGESTION- no known adverse effects. Ingestion not recommended. SKIN CONTACT - some individuals may experience irritation from dust. EYE CONTACT - Dust may irritate eyes. OTHER POTENTIAL RISKS: Grinding may create elevated sound levels which may affect hearing and may aggravate pre-existing medical conditions.

Signs and Symptoms of Exposure

Inhalation: Difficulty in breathing

Ingestion: Nausea & vomiting.

Skin Contact: Redness.

Eye Contact: Irritation.

Medical Conditions Aggravated by Exposure: Respiratory Disorders.

Emergency First Aid Procedures

Inhalation: Remove to fresh air. Give oxygen. Resuscitate if necessary. Get medical help.

Ingestion: OBTAIN MEDICAL ASSISTANCE.

Skin Contact: Wash with soap and water. Obtain medical assistance.

Eye Contact: Flush with large amounts of water. Obtain medical assistance.

Section VII - Precautions for Safe Handling and Use

Steps to be Taken in Case

Material is Released or Spilled: Normal clean up procedures.

Waste Disposal Method: Standard landfill methods consistent with applicable Federal, State & local laws.

Precautions to be Taken in

Handling and Storing: Discard dropped or damaged items.

Other Precautions: Product should be used only by personnel familiar with ANSI B7.1 and recommended rules for safe use.

Section VIII - Control Measures

Protective Equipment Types

Eyes: MANDATORY. See OSHA 29 CFR 1910.133

Respiratory: As needed. Approved dust respirators. See OSHA CFR 1910.

Gloves: Recommended

Other: Hearing protection as needed. See OSHA 29 CFR 1910.215

Ventilation: General Mechanical Yes Local Exhaust Yes Other N/A

Work/Hygienic Practises:



MATERIAL SAFETY DATA SHEET

SECTION I PRODUCT AND COMPANY INFORMATION

Manufacturer's Name: **Bates Abrasives** Emergency Phone: (800) 231-5725
 Address: 13120 State Avenue Revised Date: 11/29/05
 Marysville, WA 98271

Trade Name, Common Name: **Resinoid Bonded Grinding Wheels**

SECTION II COMPOSITION/HAZARDOUS INGREDIENTS

<u>Chemical Name</u>	<u>Common Name:</u>	<u>Cas #</u>	<u>OSHA PEL</u>	<u>TLV</u>
Alpha-Alumina	Alumdum, Seeded Gel	1344-28-1	15mg/m ³	10mg/m ³
Silicon Carbide	Crystolon	409-21-2	15mg/m ³	10mg/m ³
Zirconia Alumina	NZ, ZF, NT, NA, 7NA	1314-23-4	5mg/m	5mg/cum
Fluorides (as F)	Fluorine	7789-75-5	2.5mg/m ³	2.5mg/m ³
Calcium Oxide	Lime	1305-78-8	5mg/m ³	2mg/m ³ ; 9596
Glass, Fibrous or Dust	Fiberglass	65997-17-3	15mg/m ³ ,Dust	10mg/m ³ ,Dust; 9596
Silicon Dioxide	Crystalline Silica	7631-86-9		0.1mg/m ³ ,Rdust;9596

Explanation of Carcinogenicity: Crystalline Silica is IARC-2A;NTP-A

Listed as Carcinogen by - ACGIH, IARC, NTP, Cal. Prop. 65

SECTION III PHYSICAL DATA

Appearance & Odor: Solid Article, Possible nuisance odor Boiling Point: N/A Melting Point: N/A
 Vapor Pressure: N/A % Volatile by Volume: 0% Vapor Density: N/A Evaporation Rate: N/A
 Specific Gravity: 2-4 Solubility in Water: SLIGHT Solubility in Alcohol: N/A Solubility in other Solvents: N/A

SECTION IV FIRE & EXPLOSION HAZARD DATA

Flash Point: None
 Extinguishing Media: Use any media that is appropriate for the surrounding fire.
 Fire fighters should wear goggles and self-contained breathing apparatus to avoid inhalation of smoke or vapors.
 Unusual Fire / Explosion Hazard: None from this product. Consideration should be given to potential hazards from materials being processed. Many materials create flammable/explosive dust when ground.

SECTION V HAZARD IDENTIFICATION

Primary Route(s) of Entry (during grinding)	Acute and Chronic Health Effects and Effects of Overexposure	First Aid and Medical Info.
Inhalation	ACUTE: coughing, shortness of breath. CHRONIC: may affect breathing capacity. Medical conditions aggravated by exposure: Respiratory Disorders	Move to fresh air, Artificial Respiration as needed. Obtain medical assistance if required.
Ingestion	Nausea and vomiting, ingestion not recommended.	Obtain medical assistance.
Skin - Contact & Absorption	Excessive contact with dust may cause irritation and/or redness.	Remove contaminated clothing, Wash with soap & water. Get medical attention if irritation persists.
Eye	Dust generated during grinding may irritate eyes.	Irrigate with large amounts of water. Obtain first aid and medical assistance if required.
Other Potential Health Risks	Grinding may create elevated sound levels which may affect hearing. Dust may aggravate preexisting respiratory conditions. May cause diminished lung capacity.	Use hearing protection, limit exposure. Locate to fresh air. Give oxygen or artificial respiration if needed. Medical attention if required.

MATERIAL SAFETY DATA SHEET

Manufacturer's Name: **Bates Abrasives**
Address: 13120 State Avenue
Marysville, WA 98271

Phone (360) 757-4010
Fax (360) 757-0785

www.batesabrasives.com

SECTION VI REACTIVITY DATA

Stability Indicator: Yes

Stability Condition to Avoid: This is a stable material. Avoid overspeed and unsafe use conditions.

Materials to Avoid; None Specified by Manufacturer.

Hazardous Decomposition Products: In Use, Dust and Decomposing Odors are Generated. Coolants or other liquids may produce other decomposition products.

Hazardous Polymerization Indicator: None

Incompatibility (Materials to Avoid): Avoid acids of all types with a pH \leq 4.0

SECTION VII CONTROL MEASURES

Respiratory Protection Recommended: Use NIOSH /MSHA approved dust respirators, see OSHA 29CFR 1910.134.

Ventilation: Local ventilation in dust removal at the worksite; mechanical (general) ventilation to maintain TLV / PEL.

Protective Gloves: Anti-vibration gloves recommended depending upon application.

Eye Protection: Protective glasses &/or full face shield.

Other Protective Equipment: Hearing Protection, Protective clothing, Limit exposure time and Provide a local eye wash station.

Work Hygienic Practices: Wash hands. Separate work clothes from street clothes. Launder work clothes before reuse. Keep food away from the work area.

SECTION VIII SAFE HANDLING, DISPOSAL & USE

Spill Release Procedures: Use normal cleanup procedures.

Neutralizing Agent: Not applicable.

Waste Disposal Methods: Dispose of in accordance with federal, state and local regulations.

Handling and storage Precautions: Store in a cool, well - ventilated place. Keep enclosed when not in use.

Other Precautions: Ensure that grinding wheels are used at proper RPM and with adequate guarding.

Refer to A.N.S.I. B7.1.

Other Precautions: Visually inspect all wheels before mounting for possible damage. Do not use a wheel that has been dropped. Do not operate above maximum operating speed. Always use proper machine or tool guarding. Refer to ANSI B7.1 for the "Safety Requirements for the Use, Care and Protection of Abrasive Wheels."

The information and recommendations set forth are taken from sources believed to be accurate. Bates Abrasives, Inc. makes no warranty with respect to the accuracy of this information or the suitability of these recommendations, assumes no liability to any user thereof. It is the responsibility of the user to investigate and understand pertinent sources of information to comply with all laws and procedures applicable to the safe use and handling of the product and to determine the suitability of the product for its intended use.

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SECTION 4 - FIRST AID MEASURES

Eye Contact: Flush eyes for 15 minutes with large amounts of water, while keeping the eyelids open. Seek medical attention if irritation persists.

Skin Contact: Wash skin thoroughly with mild soap and water. Flush with luke-warm water for 15 minutes. Seek medical attention if irritation persists.

Inhalation: Remove victim from contaminated area. Optional: Give mouth-to-mouth breathing and/or CPR, if needed. Oxygen can be given under a doctor's orders.

Ingestion: If ingested in significant amount, DO NOT induce vomiting; call a physician immediately.

Note to Physician: Treat symptomatically.

Medical Conditions

Aggravated by Exposure: None known.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point: 417 F PMCC.

Lower Flammable Limit: Not determined.

Lower Flammable Limit: Not determined.

Auto Ignition Temperature: Not determined.

Extinguishing Media: Foam, carbon dioxide(CO2), dry chemical, or water fog.

Unusual Fire Hazards: None.

Firefighting Procedures: Use self-contained breathing apparatus (SCBA). Do not enter fire area without proper protection. Fight fire from safe distance.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Releases: In case of a spill, vacuum, scoop or shovel up spilled material. Place spilled material into covered container for disposal. Dispose of according to applicable local, state and federal regulations.

SECTION 7 - HANDLING AND STORAGE

Use the recommended personal protective equipment. Do not eat, drink, smoke or apply make-up when using this material. Wash hands after using this material and before entering non-work areas or handling food or applying cosmetics. Do not use tobacco products in the immediate area.

Product Number: 7293 TERMALENE 699 GREASE #2

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Store in a cool area, keeping material packaged in original containers. Protect from overheating, sparks and flames.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ACGIH Threshold Limit Value
(8 hr. time weighted average): Not determined.

OSHA Permissible Exposure Limit:
(8 hr. time weighted average): Not determined.

Bel-Ray Recommended Exposure Limit:
(8 hr. time weighted average): 5 mg/m³ (for oil mist in air).

Engineering controls:
Ventilation requirements: Not necessary under normal conditions of use.

Personal Protective Equipment:
Respiratory Protection: None required under normal use conditions.
Enclosed areas or large quantities may require respiratory protection.

Eye and Face Protection: ANSI Z-87 approved safety glasses with side shields or equivalent chemical splash goggles.

Skin Protection: Oil proof or oil resistant gloves.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Dark blue grease.

Odor: Mild petroleum.

Boiling Point: Not determined.

Specific Gravity: 0.890.

Solubility in Water: Negligible.

Vapor Pressure: Not determined.

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SECTION 10 - STABILITY AND REACTIVITY

Stability: This material is stable.

Reactivity: This material is not reactive.

Conditions to Avoid: Avoid contact with heat, flames and sources of ignition.

Incompatibility/:

Materials to Avoid: Strong oxidizing agents: liquid chlorine, hydrogen peroxide, concentrated oxygen, sodium hypochlorite, calcium hypochlorite.

Hazardous

Decomposition Products: Carbon monoxide, carbon dioxide, and other harmful products.

SECTION 11 - TOXICOLOGY INFORMATION

No toxicology data is available for this material. However, similar materials have not exhibited acute toxicological effects.

Carcinogenicity: Not listed by OSHA, NTP or IARC.

SECTION 12 - ECOTOXICOLOGY INFORMATION

No ecotoxicological information is available for this material.

SECTION 13 - DISPOSAL INFORMATION

Waste Disposal: Material, as supplied, is not a U.S. EPA hazardous waste. Some states may regulate the disposal of petroleum and petroleum products. Material can be incinerated (DO NOT incinerate aerosol cans). Processing, use or contamination may make this information inaccurate or incomplete.

SECTION 14 - TRANSPORTATION INFORMATION

Shipping Class: Not Regulated.

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SECTION 15 - REGULATORY INFORMATION

TSCA Status: All components of this mixture are listed on the Toxic Substances Control Act (TSCA) Section 8 (b) Chemical Inventory.

SARA Section 313: None listed.

SARA Section 311/312:

Acute: No.
Chronic: No.
Fire: No.
Reactivity: No.
Sudden Release of Pressure: No.

NFPA Ratings

Health: 1
Fire: 1
Reactivity: 0

Guide to NFPA Ratings

0 = Insignificant
1 = Slight
2 = Moderate
3 = High
4 = Extreme

Food Grade Rating: Not a USDA Food Grade Product.

Kosher Certification: Certified Kosher by Tablet K.



Customers are reminded to check their state list of hazardous chemicals for proper disclosure and reporting of chemical substances.

Product Number: 7293

TERMALENE 699 GREASE #2

508297
508298

SECTION 16 - OTHER

Original Issue: 09/25/98
Date Revised: 03/27/00
Revision Number: 1
Reason for Revision: Changes in Sections 2, 5, 9, 16.

Prepared By: Christine Yosco.
File Reference: /PWW/DATA/MSHEET/7293.
MSDS Number: 4812.00.

The above information is accurate to the best of our knowledge. However, since data, safety standards and governmental regulations are subject to change, and the conditions of handling and use or misuse are beyond our control, BEL-RAY COMPANY, INC. makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. Users should satisfy themselves that they have all the current data relevant to a particular use.

- LAST PAGE -

Product Number: 7293

TERMALENE 699 GREASE #2



1. Product and company identification

Product name	Castrol HD Motor Oil 30
MSDS #	466158
Code	466158-US12 US13
Product use	Engine oils. For specific application advice see appropriate Technical Data Sheet or consult our company representative.
Manufacturer	BP Lubricants USA Inc. 1500 Valley Road Wayne, NJ 07470 Telephone: (973) 633-2200 Telecopier: (973) 633-7475
EMERGENCY HEALTH INFORMATION:	1 (800) 447-8735 Outside the US: +1 703-527-3887 (CHEMTREC)
EMERGENCY SPILL INFORMATION:	1 (800) 424-9300 CHEMTREC (USA)
OTHER PRODUCT INFORMATION	1 (866) 4 BP - MSDS (866-427-6737 Toll Free - North America) email: bpcares@bp.com

2. Hazards identification

Physical state	Liquid.
Color	Clear.
Emergency overview	CAUTION ! MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis. In accordance with good industrial hygiene and safety work practices, airborne exposures should be controlled to the lowest extent practicable. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.
Routes of entry	Dermal contact. Eye contact. Inhalation. Ingestion.
Potential health effects	
Eyes	May cause eye irritation.
Skin	May cause skin irritation. Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
Inhalation	May cause respiratory tract irritation.
Ingestion	Ingestion may cause gastrointestinal irritation and diarrhea.
See toxicological information (section 11)	

3. Composition/information on ingredients

Ingredient name	CAS #	%
Base oil - highly refined	Varies	90 - 95
Zinc alkyl dithiophosphate	68649-42-3	1 - 5

4. First aid measures

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
Skin contact	Immediately wash exposed skin with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If potentially dangerous quantities of this material have been swallowed, call a physician immediately. Get medical attention if symptoms occur.

5. Fire-fighting measures

Fire/explosion hazards	In a fire or if heated, a pressure increase will occur and the container may burst.
Extinguishing media	
Suitable	Use an extinguishing agent suitable for the surrounding fire.
Not suitable	Do not use water jet.
Fire-fighting procedures	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Hazardous combustion products	Combustion products may include the following: phosphorus oxides metal oxide/oxides carbon oxides (CO, CO ₂) (carbon monoxide, carbon dioxide) sulfur oxides (SO ₂ , SO ₃ etc.) nitrogen oxides (NO, NO ₂ etc.)
Protective clothing (fire)	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. In accordance with good industrial hygiene and safety work practices, airborne exposures should be controlled to the lowest extent practicable. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods for cleaning up	
Large spill	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.
Small spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Product name Castrol HD Motor Oil 30	Product code 466158-US12 US13	Page: 2/6	
Version 1	Date of issue 11/19/2009.	Format US	Language ENGLISH.
		(US)	(ENGLISH)

7. Handling and storage

Handling	Put on appropriate personal protective equipment (see section 8). Workers should wash hands and face before eating, drinking and smoking. Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate.
Storage	Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10). Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
Not suitable	Prolonged exposure to elevated temperature
Other information	Sulfur compounds in this material may decompose when heated to release hydrogen sulfide gas which may accumulate to potentially lethal concentrations in enclosed air spaces. Vapor concentrations of hydrogen sulfide above 50 ppm, or prolonged exposure at lower concentrations, may saturate human odor perceptions so that the smell of gas may not be apparent. Exposure to concentrations of hydrogen sulfide vapor above 500 ppm may cause rapid death. Do not rely on the sense of smell to detect hydrogen sulfide.

8. Exposure controls/personal protection

Occupational exposure limits

Ingredient name

Base oil - highly refined

Occupational exposure limits

ACGIH (United States).

STEL: 10 mg/m³ 15 minute(s). Form: Mineral oil, mist

TWA: 5 mg/m³ 8 hour(s). Form: Mineral oil, mist

OSHA (United States).

TWA: 5 mg/m³ 8 hour(s). Form: Mineral oil, mist

While specific OELs for certain components may be shown in this section, other components may be present in any mist, vapor or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Some states may enforce more stringent exposure limits.

Control Measures

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

Personal protection

Eyes

Avoid contact with eyes. Safety glasses with side shields or chemical goggles.

Skin and body

Avoid contact with skin and clothing. Wear suitable protective clothing.

Respiratory

Use adequate ventilation. In accordance with good industrial hygiene and safety work practices, airborne exposures should be controlled to the lowest extent practicable.

Hands

The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Consult your supervisor or S.O.P. for special handling instructions.

Product name Castrol HD Motor Oil 30

Product code 466158-US12 US13 Page: 3/6

Version 1 Date of issue 11/19/2009.

Format US

Language ENGLISH.

(US)

(ENGLISH)

9. Physical and chemical properties

Physical state	Liquid.
Color	Clear.
Density	875 to 889 kg/m ³ (0.875 to 0.889 g/cm ³) at 15°C
Viscosity	Kinematic: 10.5 to 12.5 mm ² /s (10.5 to 12.5 cSt) at 100°C
Solubility	insoluble in water.

10. Stability and reactivity

Stability and reactivity	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Avoid all possible sources of ignition (spark or flame).
Incompatibility with various substances	Reactive or incompatible with the following materials: oxidizing materials.
Hazardous decomposition products	Hydrogen Sulfide (H ₂ S)
Hazardous polymerization	Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Other information	<p>USED ENGINE OILS</p> <p>Combustion products resulting from the operation of internal combustion engines contaminate engine oils during use. Used engine oil may contain hazardous components which have the potential to cause skin cancer. Frequent or prolonged contact with all types and makes of used engine oil must therefore be avoided and a high standard of personal hygiene maintained.</p> <p>Contains low concentration of zinc alkyl dithiophosphate (ZDDP). Concentration is not expected to cause eye or skin irritation.</p>
Potential chronic health effects	
Carcinogenicity	No known significant effects or critical hazards.

12. Ecological information

Ecotoxicity

No testing has been performed by the manufacturer.

13. Disposal considerations

Waste information	The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
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NOTE: The generator of waste has the responsibility for proper waste identification (based on characteristic(s) or listing), transportation and disposal

Product name	Castrol HD Motor Oil 30	Product code	466158-US12 US13	Page:	4/6		
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4. Transport information

Not classified as hazardous for transport (DOT, TDG, IMO/IMDG, IATA/ICAO)

5. Regulatory information

U.S. Federal Regulations

United States inventory (TSCA 8b)

All components are listed or exempted.

TSCA 12(b) one-time export: Diphenylamine

TSCA 12(b) annual export notification: Alkylated phenol (P-00-346)

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: No products were found.

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Castrol HD Motor Oil 30: Immediate (acute) health hazard

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	Zinc alkyl dithiophosphate	68649-42-3	0.72 - 1.4328
Supplier notification	Zinc alkyl dithiophosphate	68649-42-3	0.72 - 1.4328
CERCLA Sections 102a/103 Hazardous Substances (40 CFR Part 302.4):	CERCLA: Hazardous substances.: Arsenic: 1 lb. (0.454 kg); Cadmium: 10 lbs. (4.54 kg); lead: 10 lbs. (4.54 kg); Zinc alkyl dithiophosphate; Zinc alkyl dithiophosphate: 1 lb. (0.454 kg);		

State regulations

Massachusetts Substances

None of the components are listed.

New Jersey Hazardous Substances

The following components are listed: Calcium long chain alkaryl sulphonate; ZINC compounds

Pennsylvania RTK Hazardous Substances

The following components are listed: ZINC COMPOUNDS

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer. white mineral oil; Arsenic

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. Cadmium; lead

Inventories

Canada inventory

All components are listed or exempted.

Europe inventory

Not determined.

Australia inventory (AICS)

Not determined.

China inventory (IECSC)

Not determined.

Japan inventory (ENCS)

At least one component is not listed.

Korea inventory (KECI)

Not determined.

Philippines inventory (PICCS)

At least one component is not listed.

Product name Castrol HD Motor Oil 30

Product code 466158-US12 US13 Page: 5/6

Version 1 Date of issue 11/19/2009.

Format US

Language ENGLISH.

(US)

(ENGLISH)

16. Other information

Label requirements

CAUTION !

MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.

HMIS® Rating :

Health 1
Flammability 1
Physical Hazard 0
Personal protection X

National Fire
Protection
Association (U.S.A.)



History

Personal protection 11/19/2009.

Date of previous issue 11/19/2009.

Prepared by Product Stewardship

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from us.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken.

Product name Castrol HD Motor Oil 30

Product code 466158-US12 US13 Page: 6/6

Version 1 Date of issue 11/19/2009.

Format US
(US)

Language ENGLISH.
(ENGLISH)



1. Product and company identification

Product name	Castrol HD Motor Oil 40
MSDS #	466156
Code	466156-US13 US88
Product use	Engine oils. For specific application advice see appropriate Technical Data Sheet or consult our company representative.
Manufacturer	BP Lubricants USA Inc. 1500 Valley Road Wayne, NJ 07470 Telephone: (973) 633-2200 Telecopier: (973) 633-7475
EMERGENCY HEALTH INFORMATION:	1 (800) 447-8735 Outside the US: +1 703-527-3887 (CHEMTREC)
EMERGENCY SPILL INFORMATION:	1 (800) 424-9300 CHEMTREC (USA)
OTHER PRODUCT INFORMATION	1 (866) 4 BP - MSDS (866-427-6737 Toll Free - North America) email: bpcares@bp.com

2. Hazards identification

Physical state	Liquid.
Color	Clear.
Emergency overview	CAUTION ! MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis. In accordance with good industrial hygiene and safety work practices, airborne exposures should be controlled to the lowest extent practicable. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.
Routes of entry	Dermal contact. Eye contact. Inhalation. Ingestion.
Potential health effects	
Eyes	May cause eye irritation.
Skin	May cause skin irritation. Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
Inhalation	May cause respiratory tract irritation.
Ingestion	Ingestion may cause gastrointestinal irritation and diarrhea.
See toxicological information (section 11)	

3. Composition/information on ingredients

Ingredient name	CAS #	%
Base oil - highly refined	Varies	95 - 100

4. First aid measures

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
Skin contact	Immediately wash exposed skin with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If potentially dangerous quantities of this material have been swallowed, call a physician immediately. Get medical attention if symptoms occur.

5. Fire-fighting measures

Flash point	Closed cup: >200°C (>392°F) [Pensky-Martens.]
Fire/explosion hazards	In a fire or if heated, a pressure increase will occur and the container may burst.
Extinguishing media	
Suitable	Use an extinguishing agent suitable for the surrounding fire.
Not suitable	Do not use water jet.
Fire-fighting procedures	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Hazardous combustion products	Combustion products may include the following: metal oxide/oxides carbon oxides (CO, CO ₂) (carbon monoxide, carbon dioxide) sulfur oxides (SO ₂ , SO ₃ etc.) nitrogen oxides (NO, NO ₂ etc.)
Protective clothing (fire)	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. In accordance with good industrial hygiene and safety work practices, airborne exposures should be controlled to the lowest extent practicable. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods for cleaning up	
Large spill	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.
Small spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Product name Castrol HD Motor Oil 40	Product code 466156-US13 US88	Page: 2/6	
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7. Handling and storage

Handling	Put on appropriate personal protective equipment (see section 8). Workers should wash hands and face before eating, drinking and smoking. Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate.
Storage	Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10). Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Occupational exposure limits

Ingredient name

Base oil - highly refined

Occupational exposure limits

ACGIH (United States).

STEL: 10 mg/m³ 15 minute(s). Form: Mineral oil, mist

TWA: 5 mg/m³ 8 hour(s). Form: Mineral oil, mist

OSHA (United States).

TWA: 5 mg/m³ 8 hour(s). Form: Mineral oil, mist

While specific OELs for certain components may be shown in this section, other components may be present in any mist, vapor or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Some states may enforce more stringent exposure limits.

Control Measures

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

Personal protection

Eyes

Avoid contact with eyes. Safety glasses with side shields or chemical goggles.

Skin and body

Avoid contact with skin and clothing. Wear suitable protective clothing.

Respiratory

Use adequate ventilation. In accordance with good industrial hygiene and safety work practices, airborne exposures should be controlled to the lowest extent practicable.

Hands

The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Consult your supervisor or S.O.P. for special handling instructions.

9. Physical and chemical properties

Physical state	Liquid.
Color	Clear.
Flash point	Closed cup: >200°C (>392°F) [Pensky-Martens.]
Specific gravity	0.892
Viscosity	Kinematic: 13.68 mm ² /s (13.68 cSt) at 100°C
Solubility	insoluble in water.

Product name Castrol HD Motor Oil 40

Product code 466156-US13 US88 Page: 3/6

Version 2 Date of issue 02/08/2010.

Format US
(US)

Language ENGLISH.
(ENGLISH)

10. Stability and reactivity

Stability and reactivity	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Avoid all possible sources of ignition (spark or flame).
Incompatibility with various substances	Reactive or incompatible with the following materials: oxidizing materials.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Other Toxicity Data	USED ENGINE OILS Combustion products resulting from the operation of internal combustion engines contaminate engine oils during use. Used engine oil may contain hazardous components which have the potential to cause skin cancer. Frequent or prolonged contact with all types and makes of used engine oil must therefore be avoided and a high standard of personal hygiene maintained.
Other information	
Potential chronic health effects	
Carcinogenicity	No known significant effects or critical hazards.

12. Ecological information

Ecotoxicity	No testing has been performed by the manufacturer.
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13. Disposal considerations

Waste information	The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
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NOTE: The generator of waste has the responsibility for proper waste identification (based on characteristic(s) or listing), transportation and disposal

14. Transport information

Not classified as hazardous for transport (DOT, TDG, IMO/IMDG, IATA/ICAO)

15. Regulatory information

U.S. Federal Regulations

United States inventory (TSCA 8b)	All components are listed or exempted.
	TSCA 12(b) one-time export: Diphenylamine
	TSCA 12(b) annual export notification: Alkylated phenol (P-00-346)

Product name Castrol HD Motor Oil 40

Product code : 466156-US13 US88 Page: 4/6

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Language ENGLISH.

(US)

(ENGLISH)

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Castrol HD Motor Oil 40: Immediate (acute) health hazard

ARA 313

Form R - Reporting requirements

This product does not contain any hazardous ingredients at or above regulated thresholds.

Supplier notification

This product does not contain any hazardous ingredients at or above regulated thresholds.

CERCLA Sections 102a/103 Hazardous Substances (40 CFR Part 302.4):

CERCLA: Hazardous substances.: Ethylene oxide: 10 lbs. (4.54 kg); Zinc alkyl dithiophosphate: 1 lb. (0.454 kg); Arsenic: 1 lb. (0.454 kg); Cadmium: 10 lbs. (4.54 kg); lead: 10 lbs. (4.54 kg); Zinc alkyl dithiophosphate;

State regulations

Massachusetts Substances

The following components are listed: MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED LIGHT PARAFFINIC

New Jersey Hazardous Substances

None of the components are listed.

Pennsylvania RTK Hazardous Substances

None of the components are listed.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer. Arsenic

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. Cadmium; lead; Ethylene oxide

Inventories

Canada inventory	All components are listed or exempted.
Europe inventory	Not determined.
Australia inventory (AICS)	All components are listed or exempted.
China inventory (IECSC)	At least one component is not listed.
Japan inventory (ENCS)	All components are listed or exempted.
Korea inventory (KECI)	All components are listed or exempted.
Philippines inventory (PICCS)	All components are listed or exempted.

16. Other information

Label requirements

CAUTION !
MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.

HMIS® Rating :

Health 1
Flammability 1
Physical Hazard 0
Personal protection X

National Fire Protection Association (U.S.A.)



History

Date of issue 02/08/2010.
Date of previous issue 07/31/2009.

Prepared by Product Stewardship

Notice to reader

Product name	Castrol HD Motor Oil 40	Product code	466156-US13 US88	Page: 5/6
Version 2	Date of issue 02/08/2010.	Format US (US)	Language ENGLISH. (ENGLISH)	

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from us.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken.

Product name Castrol HD Motor Oil 40	Product code 466156-US13 US88	Page: 6/6	
Version 2	Date of issue 02/08/2010.	Format US	Language ENGLISH.
		(US)	(ENGLISH)



Product and company identification

Product name	Castrol HD Motor Oil 50
MSDS #	466266
Code	466266-US88
Product use	Engine oils. For specific application advice see appropriate Technical Data Sheet or consult our company representative.
Manufacturer	BP Lubricants USA Inc. 1500 Valley Road Wayne, NJ 07470 Telephone: (973) 633-2200 Telecopier: (973) 633-7475
EMERGENCY HEALTH INFORMATION:	1 (800) 447-8735 Outside the US: +1 703-527-3887 (CHEMTREC)
EMERGENCY SPILL INFORMATION:	1 (800) 424-9300 CHEMTREC (USA)
OTHER PRODUCT INFORMATION	1 (866) 4 BP - MSDS (866-427-6737 Toll Free - North America) email: bpcares@bp.com

2. Hazards identification

Physical state	Liquid.
Color	Clear.
Emergency overview	CAUTION! MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis. In accordance with good industrial hygiene and safety work practices, airborne exposures should be controlled to the lowest extent practicable. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.
Routes of entry	Dermal contact. Eye contact. Inhalation. Ingestion.
Potential health effects	
Eyes	May cause eye irritation.
Skin	May cause skin irritation. Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
Inhalation	May cause respiratory tract irritation.
Ingestion	Ingestion may cause gastrointestinal irritation and diarrhea.
See toxicological information (section 11)	

3. Composition/information on ingredients

Ingredient name	CAS #	%
Base oil - highly refined	Varies	95 - 100

4. First aid measures

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
Skin contact	Immediately wash exposed skin with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If potentially dangerous quantities of this material have been swallowed, call a physician immediately. Get medical attention if symptoms occur.

5. Fire-fighting measures

Flash point	Closed cup: >200°C (>392°F) [Pensky-Martens.]
Fire/explosion hazards	In a fire or if heated, a pressure increase will occur and the container may burst.
Extinguishing media	
Suitable	Use an extinguishing agent suitable for the surrounding fire.
Not suitable	Do not use water jet.
Fire-fighting procedures	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Hazardous combustion products	Combustion products may include the following: carbon oxides (CO, CO ₂) (carbon monoxide, carbon dioxide)
Protective clothing (fire)	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. In accordance with good industrial hygiene and safety work practices, airborne exposures should be controlled to the lowest extent practicable. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods for cleaning up	
Large spill	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.
Small spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Product name Castrol HD Motor Oil 50

Product code 466266-US88

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Format US
(US)

Language ENGLISH.
(ENGLISH)

7. Handling and storage

Handling	Put on appropriate personal protective equipment (see section 8). Workers should wash hands and face before eating, drinking and smoking. Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate.
Storage	Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10). Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Occupational exposure limits

Ingredient name	Occupational exposure limits
Base oil - highly refined	ACGIH (United States). STEL: 10 mg/m ³ 15 minute(s). Form: Mineral oil, mist TWA: 5 mg/m ³ 8 hour(s). Form: Mineral oil, mist OSHA (United States). TWA: 5 mg/m ³ 8 hour(s). Form: Mineral oil, mist

While specific OELs for certain components may be shown in this section, other components may be present in any mist, vapor or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Some states may enforce more stringent exposure limits.

Control Measures	Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.
Personal protection	
Eyes	Avoid contact with eyes. Safety glasses with side shields or chemical goggles.
Skin and body	Avoid contact with skin and clothing. Wear suitable protective clothing.
Respiratory	Use adequate ventilation. In accordance with good industrial hygiene and safety work practices, airborne exposures should be controlled to the lowest extent practicable.
Hands	The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions. Consult your supervisor or S.O.P. for special handling instructions.

9. Physical and chemical properties

Physical state	Liquid.
Color	Clear.
Flash point	Closed cup: >200°C (>392°F) [Pensky-Martens.]
Specific gravity	0.892
Viscosity	Kinematic: 16.5 mm ² /s (16.5 cSt) at 100°C
Solubility	insoluble in water.

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10. Stability and reactivity

Stability and reactivity	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Avoid all possible sources of ignition (spark or flame).
Incompatibility with various substances	Reactive or incompatible with the following materials: oxidizing materials.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Other Toxicity Data	USED ENGINE OILS Combustion products resulting from the operation of internal combustion engines contaminate engine oils during use. Used engine oil may contain hazardous components which have the potential to cause skin cancer. Frequent or prolonged contact with all types and makes of used engine oil must therefore be avoided and a high standard of personal hygiene maintained.
Other information	
Potential chronic health effects	
Carcinogenicity	No known significant effects or critical hazards.

12. Ecological information

Ecotoxicity

No testing has been performed by the manufacturer.

13. Disposal considerations

Waste information	The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
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NOTE: The generator of waste has the responsibility for proper waste identification (based on characteristic(s) or listing), transportation and disposal

14. Transport information

Not classified as hazardous for transport (DOT, TDG, IMO/IMDG, IATA/ICAO)

15. Regulatory information

U.S. Federal Regulations

United States inventory (TSCA 8b)	All components are listed or exempted.
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				Language	ENGLISH. (ENGLISH)

SARA 302/304/311/312 extremely hazardous substances: No products were found.
 SARA 302/304 emergency planning and notification: No products were found.
 SARA 302/304/311/312 hazardous chemicals: No products were found.
 SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Castrol HD Motor Oil 50: Immediate (acute) health hazard

SARA 313

Form R - Reporting requirements

This product does not contain any hazardous ingredients at or above regulated thresholds.

Supplier notification

This product does not contain any hazardous ingredients at or above regulated thresholds.

CERCLA Sections 102a/103 Hazardous Substances (40 CFR Part 302.4):

CERCLA: Hazardous substances.: Ethylene oxide: 10 lbs. (4.54 kg); Zinc alkyl dithiophosphate: 1 lb. (0.454 kg);

State regulations

Massachusetts Substances

None of the components are listed.

New Jersey Hazardous Substances

None of the components are listed.

Pennsylvania RTK Hazardous Substances

None of the components are listed.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.
 Ethylene oxide

Inventories

Canada inventory

All components are listed or exempted.

Europe inventory

At least one component is not listed in EINECS but all such components are listed in ELINCS. Please contact your supplier for information on the inventory status of this material.

Australia inventory (AICS)

All components are listed or exempted.

China inventory (IECSC)

All components are listed or exempted.

Japan inventory (ENCS)

All components are listed or exempted.

Korea inventory (KECI)

All components are listed or exempted.

Philippines inventory (PICCS)

All components are listed or exempted.

16. Other information

Label requirements

CAUTION !
 MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.

HMIS® Rating :

Health 1
 Flammability 1
 Physical Hazard 0
 Personal protection X

National Fire Protection Association (U.S.A.)



History

Personal protection

07/31/2009.

Date of previous issue

No previous validation.

Prepared by

Product Stewardship

Notice to reader

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NOTICE : This Material Safety Data Sheet is based upon data considered to be accurate at the time of its preparation. Despite our efforts, it may not be up to date or applicable to the circumstances of any particular case. We are not responsible for any damage or injury resulting from abnormal use, from any failure to follow appropriate practices or from hazards inherent in the nature of the product.

Product name Castrol HD Motor Oil 50

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(US)

(ENGLISH)

MATERIAL SAFETY DATA SHEET

RV ANTIFREEZE

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1 Gal Easy Going -50

PRODUCT NAME: 1 Gal Easy Going -50

NFPA CODES: Health 0
Flammability 1
Reactivity 0

Note - NFPA ratings are based on a 0-4 rating scale with 0 representing minimal hazards or risks and 4 representing extreme hazards or risks.

PRODUCT CODE: 30757

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: Camco Manufacturing, Inc.
ADDRESS: 121 Landmark Drive
Greensboro, NC 27409

EMERGENCY PHONE : 1-800-535-5053 DATE REVISED: 10/22/2004
INFORMATION PHONE : 336-668-7661
NAME OF PREPARER : CAMCO MANUFACTURING INC.
121 LANDMARK DR.
GREENSBORO, NC 27409
1-800-334-2004

SECTION II - COMPOSITION / INFORMATION ON MATERIALS

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
PROPYLENE GLYCOL	57-55-6	0.08 68 F	<30

This chemical component is considered non-hazardous according to OSHA (1910.1200)

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE: 212 - 370 F
VAPOR DENSITY: NOT DETERMINED
SOLUBILITY IN WATER: Completely Soluble

MATERIAL SAFETY DATA SHEET

RV ANTIFREEZE

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1 Gal Easy Going -50

APPEARANCE AND ODOR: Clear, red liquid - slight odor
SPECIFIC GRAVITY (H₂O=1): 1.015 - 1.025 @ 70°F
EVAPORATION RATE: NOT DETERMINED

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: > 218 F METHOD USED: PMCC
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 2.6% UPPER: 12.5%

EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, water spray or foam. Use water spray to cool fire-exposed containers. Water or foam may cause frothing.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS: No special equipment or procedures required.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known

===== SECTION V - REACTIVITY DATA =====

STABILITY: Stable

CONDITIONS TO AVOID: Excessive heat and strong oxidizers.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizing agents.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Carbon monoxide and other oxides of carbon.

HAZARDOUS POLYMERIZATION: Do not occur

===== SECTION VI - HEALTH HAZARD DATA =====

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Not expected to have any adverse effects.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE
EYE CONTACT: Slight irritant

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
SKIN ABSORPTION: No evidence of harmful effects from available information.

MATERIAL SAFETY DATA SHEET

RV ANTIFREEZE

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1 Gal Easy Going -50

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

INGESTION: No hazard identified from data found.

HEALTH HAZARDS (ACUTE AND CHRONIC): None known.

CARCINOGENICITY: No

NTP CARCINOGEN: No

IARC MONOGRAPHS: No

OSHA REGULATED: No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

None known

EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Not expected to have any adverse effects.

EYE CONTACT: Flush with large quantities of water for 15 minutes.

SKIN: Remove contaminated clothing and wash contaminated skin with large amounts of soap and water. If irritation persists, get medical attention. Launder clothing before reuse.

INGESTION: Dilute by drinking water. Never give an unconscious person anything by mouth.

Ingestion of small quantities, pose no hazardous threat. If more than several mouthfuls are swallowed, abdominal discomfort, nausea, and diarrhea may occur. If large quantities are consumed, obtain medical attention.

===== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE =====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Contain spill if possible, contain with absorbent materials such as clay or soil, and shovel up. Avoid skin and eye contact.

WASTE DISPOSAL METHOD: Propylene Glycol has been evaluated for RCRA characteristics and does not meet the criteria of a hazardous waste if discarded in its purchased form. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. It should be disposed of in accordance with federal, state and local regulations.

MATERIAL SAFETY DATA SHEET

RV ANTIFREEZE

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1 Gal Easy Going -50

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Store in a cool, dry, well ventilated area.

OTHER PRECAUTIONS

Store in closed containers in a cool, dry, well ventilated area. Keep away from sparks and open flame.

===== **SECTION VIII - CONTROL MEASURES** =====

RESPIRATORY PROTECTION

No special respiratory equipment is recommended under normal use.

VENTILATION: General ventilation is sufficient.

PROTECTIVE GLOVES: Wear appropriate impermeable gloves

EYE PROTECTION:

Use chemical safety glasses, goggles, or faceshields for eye protection.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: It is the responsibility of the user to determine the proper protective equipment that is needed based on how the product will be used.

WORK/HYGIENIC PRACTICES:

Wash thoroughly after handling.

===== **SECTION IX - DISCLAIMER** =====

To the best of our knowledge, the information contained herein is accurate, obtained from sources believed by Camco Manufacturing, Inc., to be accurate. However, the information is provided without any representation or warranty, expressed or implied, regarding its accuracy or correctness.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. It is the responsibility of

MATERIAL SAFETY DATA SHEET

RV ANTIFREEZE

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1 Gal Easy Going -50

the user to determine the safety, toxicity and suitability of his own use, handling and disposal of this product.

DATE: 5/17/99

MATERIAL SAFETY DATA SHEET

CAMPBELL HAUSER A/C COMPRESSOR OIL

SECTION 1 -- CHEMICAL PRODUCT & COMPANY IDENTIFICATION

PRODUCT NAME: H-D Plus® Compressor Oil ISO 32, 68, 100

SUPPLIER INFORMATION:
Moraine Packaging/Liqua-Tek, Inc.
1212 W. Second St.
Oconomowoc, WI 53066

MANUFACTURER INFORMATION:
Moraine Packaging, Inc./Liqua-Tek, Inc.
1212 W. Second St.
Oconomowoc, WI 53066

EMERGENCY TELEPHONE: 800-851-0403 Moraine Packaging, Inc.

PREPARER: Steven Zimmerman PHONE: (414)567-7523 PREPARE DATE: 5/10/96

SECTION 2 -- COMPOSITION / INFORMATION ON INGREDIENTS

MATERIAL	CAS #	% BY WEIGHT
Petroleum Lubricating Mineral Oil	64742650	95.0 - 99.0
Additive	Proprietary	1.00 - 5.00

This material does not contain any chemical listed as a carcinogen or potential carcinogen by OSHA, IARC Monographs, or National Toxicology Program.

SECTION 3 -- HAZARDS IDENTIFICATION

ORAL TOXICITY: Greater than 5000 mg/kg in rats. Based on data from components.

EYE IRRITATION: Not expected to cause eye irritation. Based on data from components.

SKIN IRRITATION: Not expected to cause skin irritation. Based on data from components.

TLV: None established. Oil mist = 5mg/m³.

SECTION 4 -- FIRST AID MEASURES

SKIN: Wash with soap and water.

EYES: Flush with water for 15 minutes.

SECTION 4 -- FIRST AID MEASURES

INHALATION: Remove to fresh air. See physician if irritation persists.

ORAL: Call a physician. Do not induce vomiting.

SECTION 5 -- FIRE FIGHTING MEASURES

FLASH POINT: 330 - 360°
(CLEVELAND OPEN CUP)

LOWER EXPLOSIVE LIMIT: Not determined.
UPPER EXPLOSIVE LIMIT: Not determined.

EXTINGUISHING MEDIA: CO2, dry chemical, foam, water spray, water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus with full face piece.

SECTION 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Avoid runoff into storm sewers and ditches which lead to waterways. Wear a self-contained breathing apparatus and appropriate personal protective equipment. Follow all government regulations.

SECTION 7 -- HANDLING & STORAGE

HANDLING: Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing.

SECTION 8 -- EXPOSURE CONTROLS / PERSONAL PROTECTION

VENTILATION: Mechanical ventilation recommended.

EYE PROTECTION: Safety glasses.

GLOVES: Neoprene or nitrile rubber gloves recommended.

SECTION 9 -- PHYSICAL & CHEMICAL PROPERTIES

VAPOR PRESSURE: Not Determined.
SPECIFIC GRAVITY: .875 Approximately.
PERCENT VOLATILE: Not Determined.
EVAPORATION RATE: Not Determined.
APPEARANCE: Amber Liquid.
pH: Not Determined.
WATER SOLUBILITY: Insoluble.
VAPOR DENSITY: Not Determined.
ODOR: Mild.

SECTION 10 -- STABILITY & REACTIVITY

STABILITY: Stable.

INCOMPATIBILITY: Oxidizing agents.

POLYMERIZATION: Will not occur.

THERMAL DECOMPOSITION: Oxides of carbon.

Compressor Oils

SECTION 11 -- TOXICOLOGICAL PROPERTIES

No information is available.

SECTION 12 -- ECOLOGICAL INFORMATION

No information is available.

SECTION 13 -- DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Follow all federal, state, and local regulations. Incinerate in an approved facility.

SECTION 14 -- TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Not Applicable.

DOT TECHNICAL NAME: Not Applicable.

SECTION 15 -- REGULATORY INFORMATION

No information is available.

SECTION 16 -- OTHER INFORMATION

NFPA RATINGS - HEALTH: 0 FLAMMABILITY: 1 REACTIVITY: 0
PREVIOUS MSDS REVISION DATE:

The information presented herein has been compiled from sources considered to be dependable & is accurate to the best of Moraine Packaging, Inc. knowledge; however, Moraine Packaging, Inc. makes no warranty whatsoever, expressed or implied, of MERCHANTABILITY or FITNESS FOR THE PARTICULAR PURPOSE, regarding the accuracy of such data or the results to be obtained from the use thereof. Moraine Packaging, Inc. assumes no responsibility for the injury to recipient or to third persons or for any damage to any property & recipient assumes all such risks.

Material Safety Data Sheet



HMIS Ratings
Health 2
Flammability 3
Reactivity 0
Protection X

Chemical Product and Company Identification

Manufacturer Information Car Brite, Inc.
1910 South State Avenue
Indianapolis, IN 46203

Phone (317) 788-9925

Emergency Phone CHEMTREC
1-800-424-9300
FOR INTERNATIONAL
CALLS
703-527-3887

Date Prepared 2004-Mar-05

Supercedes 2002-Apr-16

Product Identity GLASS CLEANER CONCENTRATE

Product Code Number E008C

Product Use Automotive Reconditioning Product

Version # 1.0

CAS # Mixture

Composition / Information on Ingredients

Ingredient Name	CAS Number	Wgt. %	PEL-OSHA	Exposure Limits		Carcinogen
				TLV-ACGIH		
2-PROPANOL	67-63-0	30 - 60	400 ppm TWA; 980 mg/m ³ TWA	200 ppm TWA		No
ETHANOL, 2-BUTOXY-	111-76-2	15 - 40	25 ppm TWA; 120 mg/m ³ TWA	20 ppm TWA		No
Non-hazardous and other ingredients below reportable levels	Proprietary	27.5	N/AP	N/AP		N/AP

3 Hazards Identification

Potential Health Effects

Skin Prolonged and/or repeated skin contact may result in mild irritation or redness.

Eyes Contact can cause moderate to severe irritation and possible injury to the eyes.

Inhalation Inhalation of vapors or mists of the product may be irritating to the respiratory system.

Ingestion This product may be harmful or fatal if swallowed.

Hazard Statements

CAUTION: EYE AND SKIN IRRITANT.

4 First Aid Measures

First Aid

Skin	For skin contact, flush with large amounts of water. If irritation persists, get medical attention
Eyes	Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.
Inhalation	If mist or vapor of this product is inhaled, remove person immediately to fresh air. Seek medical attention if symptoms develop or persist.
Ingestion	If ingested, get immediate medical attention. Do not induce vomiting unless instructed to do so by medical personnel.

5 Fire Fighting Measures

Hazardous Combustion Products

Carbon monoxide and carbon dioxide.

Extinguishing Media

Carbon dioxide, dry chemical or water.

General Fire Hazards

Vapors are heavier than air and may travel along the ground to some distant source of ignition and flash back.

Fire Fighting Equipment/Instructions

Firefighters should wear full protective clothing including self contained breathing apparatus.

Flash Point 97 F

Flammability Limits in Air, Lower, % by Volume N/AV

Flammability Limits in Air, Upper, % by Volume N/AV

6 Accidental Release Measures

Containment Procedures

Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.

Clean-Up Procedures

Absorb spill with inert material. Shovel material into appropriate container for disposal.

7 Handling and Storage

Storage Procedures

Do not handle or store near an open flame, heat or other sources of ignition. Keep the container tightly closed and in a cool, well-ventilated place.

8 Exposure Controls / Personal Protection

Engineering Controls

Use local exhaust ventilation.

Personal Protective Equipment

Eyes/Face

Wear safety glasses with side shields.

Skin

Use impervious gloves.

Respiratory

None required where adequate ventilation conditions exist. If airborne concentrations are above the applicable exposure limits, use NIOSH approved organic vapor respiratory protection.

General

Use good industrial hygiene practices in handling this material. Eye wash fountain is recommended.

9 Physical & Chemical Properties

Specific Gravity	0.9
Vapor Pressure	< 20 mm/Hg
Evaporation Rate	Slower than ether
Vapor Density	> 1
Solubility (H ₂ O)	Soluble

10 Chemical Stability & Reactivity Information

Chemical Stability

Stable under normal conditions.

Hazardous Polymerization

Will not occur.

Incompatibility

Strong oxidizing agents (peroxides, chlorine, strong acids).

11 Toxicological Information

Toxicological Information

No data available for this product.

12 Ecological Information

Ecological Information

No data available for this product.

13 Disposal Considerations

Disposal Instructions

All wastes must be handled in accordance with local, state and federal regulations.

14 Transportation Information

US DOT HMR Information

Proper Shipping Name	Flammable liquids, n.o.s. (Isopropanol)		
Identification Number	UN1993	Packaging Group	III
Hazard Class	3		

15 Regulatory Information**US Federal Regulations****CERCLA/SARA - Section 313 - Emission Reporting**

2-PROPANOL

ETHANOL, 2-BUTOXY-

16 Other Information**Disclaimer**

NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However, MSDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.

Prepared By	Technical Department
Issue Date	05-Mar-2004

MATERIAL SAFETY DATA SHEET

SECTION I: IDENTITY

Product/Material Name: **Castrol Heavy Duty Motor Oil (All SAE Grades) 30, 40, 50**
 Chemical Name: Mixture
 Chemical Family/Classification: Petroleum hydrocarbon
 Molecular Weight: NA
 Material Use: Motor Oil

Chemical Formula: NA

HMS HAZARD RATING:

[0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe]
 Health: 1
 Flammability: 1
 Reactivity: 0

WARNING STATEMENTS (If Applicable):

WARNING! AVOID SKIN CONTACT WITH USED MOTOR OILS.

MANUFACTURER'S/ SUPPLIER NAME & ADDRESS:

In the US:
 BP Lubricants USA Inc.
 1500 Valley Road
 Wayne, NJ USA 07474
 Telephone: (973) 633-2200
 Telecopier: (973) 633-7475

In Canada:
 Castrol Canada Inc.
 3660 Lakeshore Blvd
 Toronto, Ontario M8W 1P2
 Telephone: (416) 252-5511
 Telecopier: (416) 252-1774

In Latin America:
 Castrol Latin America Lubricants
 3750 NW 87th Avenue Suite 600
 Miami, FL USA 33178
 Telephone: (305) 714-2640
 Telecopier: (786) 437-6380

IN THE EVENT OF AN EMERGENCY PLEASE CALL: BP Emergency Response Center 1-800-321-8642

Date Prepared/Updated: 12/10/2004

Preparer: Regulatory, Environmental, Safety Department
 Telephone: (973) 633-2200

SECTION II: PRODUCT/HAZARDOUS INGREDIENT INFORMATION

INGREDIENTS - CHEMICAL/COMMON NAME	EXPOSURE LIMITS - TLV	LD ₅₀	LC ₀₁	%
Severely refined petroleum base stocks. May contain one or more of the following CASRN, 64742-41-2; 64741-88-4; 84742-01-4; 64742-41-2; 64742-46-7; 64742-54-7; 64742-56-9; 64742-57-0; 84742-62-7; 64742-65-0; 72623-83-7; 72623-84-8; 72623-85-9; 72623-86-0; 72623-87-1	PEL/TWA: 5 mg/m ³ , mlsl (OSHA, ACGIH) STEL: 10 mg/m ³ , mlsl (ACGIH)	Oral, rat: > 5 g/kg.	Inhalation, 4 hr., rat: > 5000 mg/m ³	60-100
Multi-functional additive mixture composed of organo-metallic compounds, typically containing zinc dialkyl dithiophosphate, calcium salts of alkylated phenol sulfides, alkylated diphenyl amines (CASRN NA, mixture)	ND	ND	ND	5-20
Methacrylate polymer and/or ethylene-propylene copolymer with a nitrogen functional group blend (CASRN NA, mixture)	ND	ND	ND	1-5

NOTE: Product contains no materials currently classified as carcinogenic per the Annual Report of the National Toxicology Program (NTP), OSHA Hazard Communication Standard or the International Agency for Research on Cancer (IARC, Groups 1, 2A or 2B).

SECTION III: FIRST AID MEASURES

Signs/Symptoms: Transient eye irritation, redness, tearing.

Eye contact: Flush with clear water for at least 15 minutes or until any irritation subsides. If irritation persists, seek medical attention.

Skin contact: Remove contaminated clothing and wash before reuse. Wipe excess material from skin. Wash exposed area with soap and water.

Inhalation: If irritation or drowsiness occur, move the person to fresh air. Administer respiratory assistance if breathing is difficult or stops; Consult a physician.

Ingestion: Give plenty of water or other mild drinkable fluids and call a physician immediately. Do not induce vomiting without express consent of medical personnel.

SECTION IV: HEALTH HAZARD DATA

Exposure Limits:

See Section II, Product/Ingredient Information.

(For product) - Recommend using 5 mg/m³ for mineral oil mist averaged over an 8 hour daily exposure, based on established OSHA and ACGIH limits.

PRIMARY ROUTES OF ENTRY:

- Eye Contact
- Skin Contact
- Skin Absorption
- Inhalation (Acute)
- Inhalation (Chronic)
- Ingestion

EFFECTS OF EXPOSURE**Acute - (Evaluation based on components and/or similar products)**

Eyes: Not expected to cause prolonged or significant eye irritation.

Skin: Not expected to cause prolonged or significant skin irritation.

Respiratory system: Harmful concentrations of mists/vapors are unlikely through customary handling or use of this product.

Ingestion: Low order of toxicity, but may cause gastrointestinal disturbances, diarrhea. Ingestion of large amounts may cause headache, drowsiness, nausea, vomiting or diarrhea.

Chronic -

Prolonged or repeated skin contact may cause skin drying, cracking, irritation, defatting and dermatitis.

WARNING! AVOID SKIN CONTACT WITH USED MOTOR OILS. Used motor oils have caused skin cancer in laboratory animals when repeatedly applied and left in place between applications.

The product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils require a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Medical Conditions Generally Aggravated by Exposure: Pre-existing skin disorders.

TOXICOLOGY DATA (Product)**Acute Data (Median Lethal Dose - species)**

Oral LD₅₀ - rat: ND

Dermal LD₅₀ - rabbit: ND

Inhalation LC₅₀ - rat: ND

Irritancy Data

Eye irritation - rabbit: ND

Skin irritation - rabbit: ND

Sensitization - guinea pig: ND

Other: No data regarding presence of carcinogenicity, tetragenicity, mutagenicity, respiratory toxicity, sensitizing ability or synergistic substances.

SECTION V: EMPLOYEE PROTECTION

Ventilation:

No special ventilation is usually necessary. However, if operating conditions may create high airborne concentrations of this material, special or local ventilation may be needed.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: None required under normal use. If exposure is expected to exceed occupational exposure limits, use a NIOSH-approved respirator to prevent overexposure. In accordance with 29 CFR 1910.134, use either an atmosphere supplying respirator or an air-purifying respirator for organic vapors and particulates.

Eye: Safety goggles or glasses.

Gloves (specify): Wear oil impervious type, such as neoprene, nitrile, polyvinylchloride, to minimize skin contact.

Clothing: No special requirement; Normal work clothing. A coverall or apron may be used to minimize skin contact.

Footwear: No special requirement.

Other: NA

Work/Hygienic Practices: Avoid prolonged and repeated skin contact. Do not wear contaminated clothing; Launder before reuse or discard. Wash thoroughly with soap and water after handling.

Storage/Handling: Keep containers closed when not in use. Do not store near heat, sparks, flame or strong oxidants. Avoid breathing mist. Maintain adequate ventilation. Avoid prolonged or repeated contact with skin.

SECTION VI: PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: > 500° F (> 260° C)

Specific Gravity (Water=1): 0.87

Vapor Pressure (mm.Hg. @ 25° C): < 0.01

Vapor Density (Air=1): > 1

Percent Volatiles: Negligible

Evaporation Rate (BuAc=1): < 0.1

Solubility in Water: Negligible

Freezing Point: -16° F to -40° F (-21° C to -40° C)

pH-Value: NA

Viscosity Range @ 100° C, cSt.:

30	9.3 to 12.5
40	12.5 to 16.3
50	16.3 to 21.0

Odor Threshold: NA

Appearance, Odor & Physical State: Clear, amber liquid; mild petroleum odor **Coefficient of Water/Oil Distribution:** ND

SECTION VII: FIRE AND EXPLOSION DATA

FLAMMABILITY Yes No NFPA Class III B material - Combustible liquid

Flash Point (COC): 400° F (204° C) min.

Fire Point (COC): 430° F (221° C) min.

Autoignition Temperature: ND

Flammability limits in Air, % Vol.: Upper - ND Lower - ND

Extinguishing Media:

CO₂, dry chemical, foam and water fog, Do not use water jets.

Special Firefighting Procedures/Unusual and Explosion Hazards:

Material must be preheated to burn. Do not enter confined areas without full protective equipment, including a positive pressure NIOSH approved self-contained breathing apparatus. Cool fire exposed containers with water.

EXPLOSION DATA

Sensitivity to Mechanical Impact: NA

Sensitivity to Static Discharge: NA

PAGE 4

PRODUCT NAME: Castrol Heavy Duty Motor Oil (All SAE Grades) 30, 40, 50

SECTION VIII: REACTIVITY

Stability: Stable at ambient temperatures

Hazardous Polymerization: Will not occur.

Conditions and Materials to Avoid (Incompatibilities):
Heat, open flame and oxidizing materials.

Hazardous Combustion or Decomposition Products:
Smoke, fumes, oxides of carbon

SECTION IX: ENVIRONMENTAL PROTECTION

CHEMTREC EMERGENCY PHONE NUMBER: (800) 424-9300, 24 hrs. for U.S. transportation related spills, leaks, fire, exposure, or accident.

CANUTEC EMERGENCY PHONE NUMBER: (613) 995-6666, 24 hrs. for Canadian transportation related spills, leaks, fire, exposure, or accident.

Spill or Leak Procedures:

Product may burn but is not readily ignitable. Use best engineering practices when attempting cleanup of a large spill.

Large spills - Wear respirator and protective clothing as appropriate. Stop source of leak if possible. Prevent entry into water sources. Dike and contain spill. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an inert absorbent such as clay, sand or other suitable materials; Store and dispose of properly. Where feasible and appropriate, remove contaminated soil.

Small spills - Soak up spill with an inert absorbent such as clay, sand or other suitable materials; Store in a closed container and dispose of properly.

Regulatory spill reporting requirements may apply; Contact governmental agency or legal counsel for advice.

Waste Disposal Method:

If discarded as supplied, material does not meet RCRA characteristic definition of ignitability, corrosivity or reactivity and is not listed in 40 CFR 261.33. The toxicity characteristic has not been evaluated. Under RCRA, the applicable hazardous waste classification must be evaluated prior to disposal of the material. Use of the product, processing or contamination may render the resulting material hazardous.

All recovered material should be packaged, labeled, transported and disposed of or reclaimed in accordance with governmental regulations regarding air pollution, water pollution or health.

Don't pollute - Conserve Resources. Dispose of used oil properly.

CAUTION: Improper disposal or reuse of the empty container may be hazardous and illegal. Cutting or welding of empty containers may cause fire, explosion or toxic fumes from residues. Do not pressurize or expose to open flame or heat. Keep container closed and drum bungs in place. Refer to applicable governmental regulations.

NA - Not Applicable; ND - No Data Available

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PRODUCT NAME: Castrol Heavy Duty Motor Oil (All SAE Grades) 30, 40, 50

SECTION X: REGULATORY INFORMATION

TRANSPORTATION

Special Shipping Information/DOT Proper Shipping Name: Not regulated.

CHEMICAL CONTROL REGULATIONS:

TSCA Status: All components of this material appear on the Toxic Substance Control Act Chemical Substances Inventory.

This product contains trace amounts of Diphenylamine (CAS #122-39-4) which will require notification prior to export.

CEPA Status: All components of this material appear on the Canadian Domestic Substances List.

Canadian Workplace Hazardous Material Identification System (WHMIS) Classification: Material is not a "controlled product".

EPCRA (SARA Title III):

Section 302/304 Extremely Hazardous Substance: NA

CERCLA Section 102(a) Hazardous Substance: NA

Section 311 Hazard Category

- Acute (Immediate)
- Chronic (delayed)
- Fire
- Sudden Release of Pressure
- Reactive
- Not applicable

Section 313 Toxic Release Inventory Chemical/Category:

Zinc compounds, 2.5% (wt.) max.

U.S. STATE RIGHT TO KNOW LAWS

New Jersey Worker and Community Right to Know Act, N.J.A.C. 8:59-5 Labelling Information: Motor Oil

NOTICE:

The information presented herein is compiled from sources considered to be dependable, believed to be accurate to the best of BP Lubricants USA Inc knowledge, and offered in good faith for the purpose of hazard communication. Because product use is beyond our control, no warranty is given, expressed or implied. BP Lubricants USA Inc, cannot assume any liability for the use of information contained herein. To determine applicability or effect of any law or regulation with respect to the product, users should consult a legal advisor or appropriate governmental agency.

REC'D MAY 5 1992

SECTION I - PRODUCT IDENTIFICATION

Manufacturer: CATO OIL PRODUCTS
(BLACK & DEER)

Information Phone: 405-270-6200
Emergency Phone: 800-424-9300
CHEMTREC Phone: 800-424-9300

Trade Name : PLEWS MOLY EP MULTI-PURPOSE GREASE
Product Class: GREASE

! Hazard Ratings: Health - 1
! none -> extreme Fire - 1
! 0 ---> 4 Reactivity - 0
! Personal Protection - B

Product Code : 5318B-191
C.A.S. Number: COMPLEX MIXTURE 30-154

SECTION II - HAZARDOUS INGREDIENTS

Ingredients	CAS #	Weight %	Exposure Limits		VP mm HG
			ACGIH/TLV	OSHA/PEL	
PETROLEUM HYDROCARBON	64741-95-3	5-20	5 mg/M3	5	mg/M30
		STEL= 10		10	
PETROLEUM HYDROCARBON	64742-52-5	50-75	5 mg/M3	5	mg/M30
		STEL= 10		10	
PETROLEUM HYDROCARBON	COMPLEX MIXTU	1-5	5 mg/M3	5	mg/M30
		STEL= 10		10	
LITHIUM TALLOWATE	64755-02-08	5-20	Undetermined		N/AV
		STEL= NONE		NONE	

*** ALL Ingredients in this product are listed in the T.S.C.A. Inventory.

SARA 313 - NOT APPLICABLE.

INGREDIENTS ARE PROPRIETARY. POTENTIAL HAZARDS HAVE BEEN EVALUATED AND PERTINENT INFORMATION HAS BEEN INCLUDED IN SECTIONS III-IX. EACH PROPRIETARY MATERIAL IS EITHER: 1. HELD A TRADE SECRET FROM CATO, 2. OSHA-NON-HAZARDOUS OR BELOW 1% IF OSHA HAZARDOUS AND 3. BELOW 0.1% IF POTENTIALLY CARCINOGENIC.

SUMMARY OF HAZARDS - WARNING: CONTAINS PETROLEUM HYDROCARBON LUBRICANT. MAY BE HARMFUL IF INHALED OR SWALLOWED. USE ONLY WITH ADEQUATE VENTILATION. IF INGESTED, DO NOT INDUCE VOMITING; CONTACT A PHYSICIAN.

KEEP OUT OF REACH OF CHILDREN

* -> These items are listed on the SARA TITLE III Section 313 inventory

CATO OIL AND GREASE CO.
M S D S for: PLEWS MOLY EP MULTI-PURPOSE GREASE

SECTION V - HEALTH HAZARD DATA (cont.)

-FIRST AID:

INHALATION: IF RESPIRATORY DISCOMFORT OF IRRITATION OCCURES
MOVE PERSON TO FRESH AIR. IF BREATHING HAS STOPPED, GIVE
ARTIFICIAL RESPIRATION AND GET MEDICAL ATTENTION IMMEDIATELY.

SKIN: WASH EXPOSED PORTION WITH SOAP AND WATER. LAUNDRER
SOILED CLOTHES BEFORE REUSE. IF INJECTED UNDER SKIN GET
MEDICAL ATTENTION IMMEDIATELY.

EYES: IMMEDIATELY FLUSH EYES WITH WATER FOR A MINIMUM OF 15
MINUTES OCCASIONALLY LIFTING THE LOWER AND UPPER LIDS. IF FILM
OR IRRITATION PERSISTS, SEEK MEDICAL ATTENTION.

SWALLOWING/ INGESTION: DO NOT INDUCE VOMITING; CONTACT
A PHYSICIAN.

SECTION VI - REACTIVITY DATA

STABILITY: [] Unstable [x] Stable
HAZARDOUS POLYMERIZATION: [] May occur [x] Will not occur

-INCOMPATIBILITY

STRONG OXIDIZERS.

-CONDITIONS TO AVOID:

AVOID CONDITIONS THAT COULD GENERATE AN OIL MIST. DO NOT
EXPOSE THE PRODUCT TO STRONG OXIDIZERS OR EXCESSIVE HEAT.

-HAZARDOUS DECOMPOSITION PRODUCTS:

INCOMPLETE COMBUSTION CAN YIELD CARBON (SMOKE), CARBON
MONOXIDE, VARIOUS HYDROCARBONS AND EVOLVE OTHER TOXIC
GASES, VAPORS AND SOLID RESIDUE.

SECTION VII - SPILL OR LEAK PROCEDURES

-STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
PICK UP AND PLACE IN CONTAINER FOR DISPOSAL,

-WASTE DISPOSAL METHOD:

EPA HAZARDOUS WASTE? NO
EPA HAZARDOUS WASTE CODE NUMBER--NOT APPLICABLE
EPA WASTE CHARACTERISTIC OR HAZARD CODE--NOT APPLICABLE

UTILIZE LICENSED WASTE DISPOSAL COMPANY. CONSIDER RECYCLING
OR CONTROLLED INCINERATION. UTILIZE PERMITTED INDUSTRIAL
WASTE DISPOSAL SITE. FOLLOW ALL LOCAL, STATE AND FEDERAL
GUIDELINES.

SECTION VIII - SPECIAL PROTECTION INFORMATION:

-RESPIRATORY PROTECTION:

UP TO 25 MG/M3, HALF-MASK ORGANIC VAPOR RESPIRATOR. UP TO
50 MG/M3, FULL-FACE ORGANIC VAPOR RESPIRATOR OR FULL-FACE
SELF-CONTAINED RESPIRATOR. GREATER THAN 50 MG/M3, FIRE
FIGHTING OR UNKNOWN CONCENTRATION, USE SELF CONTAINED
BREATHING APPARATUS WITH POSITIVE PRESSURE.

SECTION VIII - SPECIAL PROTECTION INFORMATION: (cont.)

- VENTILATION:
MAINTAIN LOCAL OR DILUTION VENTILATION TO KEEP AIR CONCENTRATION BELOW TLV/PEL. REQUEST ASSISTANCE OF SAFETY AND INDUSTRIAL HYGIENE PERSONNEL TO DETERMINE AIR CONCENTRATION.
- PROTECTIVE GLOVES:
FOR PROLONGED OR REPEATED CONTACT USE NITRILE OR NEOPRENE GLOVES OR OTHER MATERIAL RESISTANT TO PETROLEUM OILS.
- EYE PROTECTION:
SAFETY GLASSES, CHEMICAL GOGGLES OR FACE SHIELD AS APPROPRIATE FOR EXPOSURE.
- OTHER PROTECTIVE EQUIPMENT:
NONE NORMALLY REQUIRED.

SECTION IX - SPECIAL PRECAUTIONS

- PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
STORE CLEAN, DRY, BELOW 120°F (50°C) TO PRESERVE FOR INTENDED USE. DO NOT STORE WITH STRONG OXIDIZERS.
- OTHER PRECAUTIONS:
DOT HAZARDOUS MATERIAL? NO
DOT SHIPPING NAME AND NUMBER - NOT APPLICABLE
DOT HAZARD CLASS - NOT APPLICABLE

DISCLAIMER

THE INFORMATION AND RECOMMENDATIONS CONTAINED IN THIS PUBLICATION HAVE BEEN COMPILED FROM SOURCES BELIEVED TO BE RELIABLE AND TO REPRESENT THE BEST CURRENT OPINION ON THE SUBJECT AT THE TIME OF PUBLICATION. SINCE WE CANNOT ANTICIPATE OR CONTROL THE MANY DIFFERENT CONDITIONS UNDER WHICH THIS INFORMATION OR OUR PRODUCTS MAY BE USED, WE MAKE NO GUARANTEE THAT THE RECOMMENDATIONS WILL BE ADEQUATE FOR ALL INDIVIDUALS OR SITUATIONS. EACH USER OF THE PRODUCT DESCRIBED HEREIN SHOULD DETERMINE THE SUITABILITY OF THE DESCRIBED PRODUCT FOR HIS PARTICULAR PURPOSE AND SHOULD COMPLY WITH ALL FEDERAL, STATE AND LOCAL RULES AND REGULATIONS CONCERNING THE DESCRIBED PRODUCT.

ABBREVIATIONS:

N/A	NOT APPLICABLE	PEL	PERMISSIBLE EXPOSURE LIMIT
N/R	NOT KNOWN	TWA	TIME WEIGHTED AVERAGE
N/AV	NOT AVAILABLE	TLV	THRESHOLD LIMIT VALUE
COC	CLEVELAND OPEN CUP	STEL	SHORT TERM EXPOSURE LIMIT
PMCC	PENSKI-MARTENS CLOSED CUP		
G	GRAM	DOT	DEPARTMENT OF TRANSPORTATION
MG	MILLIGRAM	OSHA	OCCUPATIONAL SAFETY & HEALTH ADMIN.
M3	CUBIC METER	SARA	SUPERFUND AMEND. & REAUTHORIZ. ACT
LD 50	LETHAL DOSE 50%		
LC 50	LETHAL CONCENTRATION 50%		
EPA	ENVIRONMENTAL PROTECTION AGENCY		

(cont.)

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CATO OIL AND GREASE CO.

M S D S for: PLEWS MOLY EP MULTI-PURPOSE GREASE

SECTION IX - SPECIAL PRECAUTIONS (cont.)

-OTHER PRECAUTIONS: (cont.)

SAE SOCIETY OF AUTOMOTIVE ENGINEERS
ISO INTERNATIONAL STANDARDS ORGANIZATION



Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Chevron Delo® 400

Product Number(s): CPS235101, CPS235109, CPS235117, CPS235118, CPS235119, CPS235120, CPS235200

Synonyms: Chevron Delo® 400 Multigrade SAE 15W-40, Chevron Delo® 400 SAE 10W, Chevron Delo® 400 SAE 10W-30, Chevron Delo® 400 SAE 20, Chevron Delo® 400 SAE 30, Chevron Delo® 400 SAE 40, Chevron Delo® 400 SAE 50

Company Identification

ChevronTexaco Global Lubricants
6001 Bollinger Canyon Rd.
San Ramon, CA 94583
United States of America
www.chevron-lubricants.com

Transportation Emergency Response

CHEMTREC: (800) 424-9300 or (703) 527-3887

Health Emergency

ChevronTexaco Emergency Information Center: Located in the USA. International collect calls accepted.
(800) 231-0623 or (510) 231-0623

Product Information

email : lubemsds@chevrontexaco.com
Product Information: (800) LUBE TEK
MSDS Requests: (800) 414-6737

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	70 - 95 %weight
Zinc alkyl dithiophosphate	68649-42-3	1 - 5 %weight

SECTION 3 HAZARDS IDENTIFICATION

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Not expected to be harmful if swallowed.

Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and

flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

SECTION 5 FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

FLAMMABLE PROPERTIES:

Flashpoint: (Cleveland Open Cup) 200 °C (392 °F) (Min)

Autoignition: No Data Available

Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion. Combustion may form oxides of Nitrogen, Phosphorus, Sulfur .

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: Keep out of the reach of children.

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling

this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Special note: Do not use in breathing air apparatus or medical equipment.
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:

Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.

Respiratory Protection: No respiratory protection is normally required.

If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Highly refined mineral oil (C15 - C50)	ACGIH	5 mg/m3	10 mg/m3	--	--
Highly refined mineral oil (C15 - C50)	OSHA Z-1	5 mg/m3	--	--	--

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Brown
Physical State: Liquid
Odor: Petroleum odor
pH: Not Applicable
Vapor Pressure: <0.01 mmHg @ 37.8 °C (100 °F)
Vapor Density (Air = 1): >1
Boiling Point: >315.6°C (600°F)
Solubility: Soluble in hydrocarbons; insoluble in water
Freezing Point: Not Applicable
Melting Point: Not Applicable
Specific Gravity: 0.87 - 0.9 @ 15.6°C (60.1°F) / 15.6°C (60.1°F)
Volatile Organic Compounds (VOC): 1.1 %weight
Viscosity: 6.6 cSt - 18 cSt @ 100°C (212°F) (Min)

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous Decomposition Products: Hydrogen Sulfide (Elevated temperatures)
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.
Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.
Skin Sensitization: No product toxicology data available.
Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.
Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.
Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

During use in engines, contamination of oil with low levels of cancer-causing combustion products occurs. Used motor oils have been shown to cause skin cancer in mice following repeated application and

continuous exposure. Brief or intermittent skin contact with used motor oil is not expected to have serious effects in humans if the oil is thoroughly removed by washing with soap and water.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.

ENVIRONMENTAL FATE

This material is not expected to be readily biodegradable.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: PETROLEUM LUBRICATING OIL

IMO/IMDG Shipping Description: PETROLEUM LUBRICATING OIL

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:	1. Immediate (Acute) Health Effects:	NO
	2. Delayed (Chronic) Health Effects:	NO
	3. Fire Hazard:	NO
	4. Sudden Release of Pressure Hazard:	NO
	5. Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

The following components of this material are found on the regulatory lists indicated.
Zinc alkyl dithiophosphate 03, 06

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: ENCS (Japan), IECSC (China), PICCS (Philippines), TSCA (United States).

One or more components has been notified but may not be listed in the following chemical inventories: DSL (Canada). Secondary notification by the importer may be required.

One or more components is listed on ELINCS (European Union). Secondary notification by the importer may be required.

One or more components does not comply with the following chemical inventory requirements: AICS (Australia), KECI (Korea).

NEW JERSEY RTK CLASSIFICATION:

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Motor oil)

WHMIS CLASSIFICATION:

This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 1 Flammability: 1 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

REVISION STATEMENT: This revision updates the following sections of this Material Safety Data Sheet: 1-16

Revision Date: 06/22/2004

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - ChevronTexaco	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the ChevronTexaco Energy Research & Technology Company, 100 Chevron Way, Richmond, California 94802.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control

and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

MSDS

Chevron Hydraulic Oils AW

MSDS: 6863 Revision #: 3 Revision Date: 03/24/00

[Click here to search the product data sheet database.](#)

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEVRON Hydraulic Oil AW (EHL)

PRODUCT NUMBER(S): CPS226465 CPS232997 CPS233893 CPS233894

CPS255673E CPS255674E CPS255675E

SYNONYM: CHEVRON Hydraulic Oil AW ISO 10

CHEVRON Hydraulic Oil AW ISO 100

CHEVRON Hydraulic Oil AW ISO 15

CHEVRON Hydraulic Oil AW ISO 22

CHEVRON Hydraulic Oil AW ISO 32

CHEVRON Hydraulic Oil AW ISO 46

CHEVRON Hydraulic Oil AW ISO 68

COMPANY IDENTIFICATION EMERGENCY TELEPHONE NUMBERS

CHEVRON PRODUCTS COMPANY HEALTH (24 hr): (800)231-0623 or
First Floor, 43/45 The Promenade (510)231-0623 (International)

Cheltenham TRANSPORTATION (24 hr): CHEMTREC
Gloucestershire, GL50 1LE (800)424-9300 or (703)527-3887

United Kingdom Emergency Information Centers

TELEPHONE: +44 (0) 1242 266700 are located in U.S.A.

Int'l collect calls accepted

PRODUCT INFORMATION: CONTACT YOUR LOCAL SALES REPRESENTATIVE FOR TECHNICAL
INFORMATION OR ADDITIONAL MSDS REQUESTS.

2. COMPOSITION/INFORMATION ON INGREDIENTS

100.0 % CHEVRON Hydraulic Oil AW (EHL)

CONTAINING

COMPONENTS AMOUNT LIMIT/QTY AGENCY/TYPE

BASE OIL, PARAFFINIC

Chemical Name: BASE OIL, PARAFFINIC

CAS93572431 5 mg/m3 (mist) ACGIH TWA

10 mg/m3 (mist) ACGIH STEL

5 mg/m3 (mist) OSHA PEL

ADDITIVES

COMPOSITION COMMENT:

All the components of this material are on the Toxic Substances Control
Act Chemical Substances Inventory.

This product fits the ACGIH definition for mineral oil mist. The ACGIH
TLV is 5 mg/m3, the OSHA PEL is 5 mg/m3.

3. HAZARDS IDENTIFICATION

IMMEDIATE HEALTH EFFECTS

EYE:

Not expected to cause prolonged or significant eye irritation.

SKIN:

Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin. High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but, if left untreated, could result in disfigurement or amputation of the affected part.

INGESTION:

Not expected to be harmful if swallowed.

INHALATION:

Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit.

4. FIRST AID MEASURES

EYE:

No specific first aid measures are required because this material is not expected to cause eye irritation. As a precaution remove contact lenses, if worn, and flush eyes with water.

SKIN:

No specific first aid measures are required because this material is not expected to be harmful if it contacts the skin. As a precaution, remove clothing and shoes if contaminated. Use a waterless hand cleaner, mineral oil, or petroleum jelly to remove the material. Then wash skin with soap and water. Wash or clean contaminated clothing and shoes before reuse.

INGESTION:

No specific first aid measures are required because this material is not expected to be harmful if swallowed. Do not induce vomiting. As a precaution, give the person a glass of water or milk to drink and get medical advice. Never give anything by mouth to an unconscious person.

INHALATION:

If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

NOTE TO PHYSICIANS:

In an accident involving high-pressure equipment, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

5. FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:

Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

FIRE COMMENT:

Leaks/ruptures in high pressure systems using materials of this type can create a fire hazard when in the vicinity of ignition sources (eg. open flame, pilot lights, sparks, or electric arcs).

FLAMMABLE PROPERTIES:

FLASH POINT: (COC) 327F (164C) Min.

AUTOIGNITION: NDA

FLAMMABILITY LIMITS (% by volume in air): Lower: NA Upper: NA

EXTINGUISHING MEDIA:

CO2, Dry Chemical, Foam, Water Fog. Do not use direct water jet. Use mist to keep exposed container cool.

NFPA RATINGS: Health 0; Flammability 1; Reactivity 0.

FIRE FIGHTING INSTRUCTIONS:

This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

COMBUSTION PRODUCTS:

Normal combustion forms carbon dioxide and water vapor; incomplete combustion can produce carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

CHEMTREC EMERGENCY NUMBER (24 hr): (800)424-9300 or (703)527-3887

International Collect Calls Accepted

ACCIDENTAL RELEASE MEASURES:

Stop the source of the leak or release. Clean up releases as soon as possible, observing precautions in Exposure Controls/Personal Protection. Contain liquid to prevent further contamination of soil, surface water or groundwater. Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases.

7. HANDLING AND STORAGE

DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner, or properly disposed of. Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3),

applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS

Use in a well-ventilated area. If user operations generate an oil mist, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended mineral oil mist exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION:

No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

SKIN PROTECTION:

No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances. Suggested materials for protective gloves include: <Viton> <Nitrile> <Silver Shield>

RESPIRATORY PROTECTION:

No respiratory protection is normally required. If user operations generate an oil mist, determine if airborne concentrations are below the recommended mineral oil mist exposure limits. If not wear a NIOSH approved respirator that provides adequate protection from measured concentrations of this material. Use the following elements for air-purifying respirators: particulate.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION:

Light amber liquid.

pH: NDA

VAPOR PRESSURE: NA

VAPOR DENSITY

(AIR=1): NA

BOILING POINT: NA

FREEZING POINT: NDA

MELTING POINT: NA

SOLUBILITY: Soluble in hydrocarbon solvents; insoluble in water.

SPECIFIC GRAVITY: 0.87 - 0.88

EVAPORATION RATE: NA

VISCOSITY: 9.9 cSt @ 40C (Min.)

PERCENT VOLATILE

(VOL): NA

POUR POINT: -21C Max.

10. STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS:

No data available.

CHEMICAL STABILITY:

Stable.

CONDITIONS TO AVOID:

No data available.

INCOMPATIBILITY WITH OTHER MATERIALS:

May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

HAZARDOUS POLYMERIZATION:

Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS:

The eye irritation hazard is based on data for a similar material.

SKIN EFFECTS:

The skin irritation hazard is based on data for a similar material.

ACUTE ORAL EFFECTS:

The acute oral toxicity is based on data for a similar material.

ACUTE INHALATION EFFECTS:

The acute respiratory toxicity is based on data for a similar material.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B).

12. ECOLOGICAL INFORMATION

ECOTOXICITY:

No data available.

ENVIRONMENTAL FATE:

This material is not expected to be readily biodegradable.

13. DISPOSAL CONSIDERATIONS

Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

14. TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT SHIPPING NAME: NONE

DOT HAZARD CLASS: NONE

DOT IDENTIFICATION NUMBER: NONE

DOT PACKING GROUP: N/A

ADDITIONAL INFO: Petroleum Lubricating Oil - Not Hazardous by U.S. DOT.

ADR/RID Hazard class - Not applicable.

15. REGULATORY INFORMATION

SARA 311 CATEGORIES: 1. Immediate (Acute) Health Effects: NO
2. Delayed (Chronic) Health Effects: NO
3. Fire Hazard: NO
4. Sudden Release of Pressure Hazard: NO
5. Reactivity Hazard: NO

REGULATORY LISTS SEARCHED:

01=SARA 313 11=NJ RTK 22=TSCA Sect 5(a)(2)
02=MASS RTK 12=CERCLA 302.4 23=TSCA Sect 6
03=NTP Carcinogen 13=MN RTK 24=TSCA Sect 12(b)
04=CA Prop 65-Carcin 14=ACGIH TWA 25=TSCA Sect 8(a)
05=CA Prop 65-Repro Tox 15=ACGIH STEL 26=TSCA Sect 8(d)
06=IARC Group 1 16=ACGIH Calc TLV 27=TSCA Sect 4(a)
07=IARC Group 2A 17=OSHA PEL 28=Canadian WHMIS
08=IARC Group 2B 18=DOT Marine Pollutant 29=OSHA CEILING
09=SARA 302/304 19=Chevron TWA 30=Chevron STEL
10=PA RTK 20=EPA Carcinogen

The following components of this material are found on the regulatory lists indicated.

BASE OIL, PARAFFINIC
is found on lists: 14,15,17,

EU RISK AND SAFETY LABEL PHRASES:

R53: May cause long-term adverse effects in the aquatic environment.

WHMIS CLASSIFICATION:

This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

16. OTHER INFORMATION

NFPA RATINGS: Health 0; Flammability 1; Reactivity 0;
HMIS RATINGS: Health 1; Flammability 1; Reactivity 0;
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

REVISION STATEMENT:

This revision updates information in Sections 1, 5, 9, 15, and 16.

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value TWA - Time Weighted Average
STEL - Short-term Exposure Limit TPQ - Threshold Planning Quantity
RQ - Reportable Quantity PEL - Permissible Exposure Limit
C - Ceiling Limit CAS - Chemical Abstract Service Number
A1-5 - Appendix A Categories () - Change Has Been Proposed
NDA - No Data Available NA - Not Applicable

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Toxicology and Health Risk Assessment Unit, CRTC, P.O. Box 1627, Richmond, CA 94804

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modification of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

THIS IS THE LAST PAGE OF THIS MSDS

ATTN: CHARL



Yamalube Marine Gearcase Lube

Material Safety Data Sheet

CITGO Petroleum Corporation
P.O. Box 3758
Tulsa, OK 74102-3758

MSDS No. 631260324
Revision Date 06/16/2003

IMPORTANT: Read this MSDS before handling or disposing of this product and pass this information on to employees, customers and users of this product.

Hazard Rankings		
	HMIS	NFPA
Health Hazard	1	0
Fire Hazard	1	1
Reactivity	0	0

* = Chronic Health Hazard

Emergency Overview	
Physical State	Liquid.
Color	Amber to dark amber
Odor	Petroleum.
Protect eyes from misting or spraying material.	
Protect exposed skin from repeated or prolonged exposure.	
Do not store material in open or unmarked containers.	
Spills may create a slipping hazard.	

Protective Equipment
Minimum Recommended See Section 8 for Details
  

SECTION 1. PRODUCT IDENTIFICATION

Trade Name	Yamalube Marine Gearcase Lube	Technical Contact	(800) 248-4684
Product Number	631260324	Medical Emergency	(918) 495-4700
CAS Number	Mixture.	CHEMTREC Emergency (United States Only)	(800) 424-9300
Product Family	Gear Oil		
Synonyms	Gear Oil; Lubricating oil; CITGO Material Code No.: 631260324		

SECTION 2. COMPOSITION

Component Name(s)	CAS Registry No.	Concentration (%)
Distillates, petroleum, solvent-refined heavy paraffinic	64741-88-4	50 - 70
Residual oils, petroleum, solvent-refined	64742-01-4	30 - 50
Distillates, petroleum, hydrotreated heavy paraffinic	64742-54-7	0 - 2
Proprietary Ingredients	Proprietary Mixture	0 - 2

Yamalube Marine Gearcase Lube

SECTION 3. HAZARDS IDENTIFICATION

Also see Emergency Overview and Hazard Ratings on the top of Page 1 of this MSDS.

Major Route(s) of Entry Skin contact.

Signs and Symptoms of Acute Exposure

- Inhalation** No significant adverse health effects are expected to occur upon short-term exposure.
- Eye Contact** This product can cause transient mild eye irritation with short-term contact with liquid sprays or mists.
- Skin Contact** Skin irritation is not expected from short-term exposure. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation (dermatitis).
- Ingestion** If swallowed, large volumes of material can cause generalized depression, headache, drowsiness, nausea, vomiting and diarrhea. Smaller doses can cause a laxative effect.

Chronic Health Effects Summary This product contains a petroleum-based mineral oil. Prolonged or repeated skin contact can cause mild irritation and inflammation characterized by drying, cracking, (dermatitis) or oil acne. Repeated or prolonged inhalation of petroleum-based mineral oil mists at concentrations above applicable workplace exposure levels can cause respiratory irritation or other pulmonary effects.

Conditions Aggravated by Exposure Medical conditions aggravated by exposure to this material may include pre-existing skin disorders.

Target Organs This material may cause damage to the following organs: skin.

Carcinogenic Potential This product does not contain any components at concentrations above 0.1% which are considered carcinogenic by OSHA, IARC or NTP.

OSHA Hazard Classification is indicated by an "X" in the box adjacent to the hazard title. If no "X" is present, the product does not exhibit the hazard as defined in the OSHA Hazard Communication Standard (29 CFR 1910.1200).

OSHA Health Hazard Classification				OSHA Physical Hazard Classification			
Irritant	<input type="checkbox"/>	Sensitizer	<input type="checkbox"/>	Combustible	<input type="checkbox"/>	Explosive	<input type="checkbox"/>
Toxic	<input type="checkbox"/>	Highly Toxic	<input type="checkbox"/>	Flammable	<input type="checkbox"/>	Oxidizer	<input type="checkbox"/>
Corrosive	<input type="checkbox"/>	Carcinogenic	<input type="checkbox"/>	Compressed Gas	<input type="checkbox"/>	Organic Peroxide	<input type="checkbox"/>
						Pyrophoric	<input type="checkbox"/>
						Water-reactive	<input type="checkbox"/>
						Unstable	<input type="checkbox"/>

SECTION 4. FIRST AID MEASURES

Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid. For more specific information, refer to Exposure Controls and Personal Protection in Section 8 of this MSDS.

Inhalation Vaporization is not expected at ambient temperatures. This material is not expected to cause inhalation-related disorders under anticipated conditions of use. In case of overexposure, move the person to fresh air.

Eye Contact Check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water while occasionally lifting and lowering eyelids. Seek medical attention if excessive tearing, redness, or pain persists.

Yamalube Marine Gearcase Lube

Skin Contact	If burned by hot material, cool skin by quenching with large amounts of cool water. For contact with product at ambient temperatures, remove contaminated shoes and clothing. Wipe off excess material. Wash exposed skin with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists. Thoroughly clean contaminated clothing before reuse. Discard contaminated leather goods. If material is injected under the skin, seek medical attention immediately.
Ingestion	Do not induce vomiting unless directed to by a physician. Do not give anything to drink unless directed to by a physician. Never give anything by mouth to a person who is not fully conscious. If significant amounts are swallowed or irritation or discomfort occurs, seek medical attention immediately.
Notes to Physician	The viscosity range of the product(s) represented by this MSDS is greater than 400 SUS at 100°F. Accordingly, upon ingestion there is a low risk of aspiration. Careful gastric lavage or emesis may be considered to evacuate large quantities of material. Subcutaneous or intramuscular injection requires prompt surgical debridement.

SECTION 5. FIRE FIGHTING MEASURES

NFPA Flammability Classification	NFPA Class-IIIB combustible material.		
Flash Point	Open cup: 234°C (453°F) (Cleveland.).		
Lower Flammable Limit	No data.	Upper Flammable Limit	No data.
Autoignition Temperature	Not available.		
Hazardous Combustion Products	Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and trace oxides of sulfur and/or nitrogen.		
Special Properties	This material will release vapors when heated above the flash point temperature that can ignite when exposed to a source of ignition. In enclosed spaces, vapors can ignite with explosive force. Mists or sprays may burn at temperatures below the flash point.		
Extinguishing Media	Use dry chemical, foam, Carbon Dioxide or water fog.		
Protection of Fire Fighters	Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.		

SECTION 6. ACCIDENTAL RELEASE MEASURES

Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this MSDS.

Do not touch damaged containers or spilled material unless wearing appropriate protective equipment. Slipping hazard; do not walk through spilled material. Stop leak if you can do so without risk. For small spills, absorb or cover with dry earth, sand, or other inert non-combustible absorbent material and place into waste containers for later disposal. Contain large spills to maximize product recovery or disposal. Prevent entry into waterways or sewers. In urban area, cleanup spill as soon as possible. In natural environments, seek cleanup advice from specialists to minimize physical habitat damage. This material will float on water. Absorbent pads and similar materials can be used. Comply with all laws and regulations.

SECTION 7. HANDLING AND STORAGE

- Handling** Avoid contamination and extreme temperatures to minimize product degradation. Empty containers may contain product residues that can ignite with explosive force. Do not pressurize, cut, weld, braze solder, drill, grind or expose containers to flames, sparks, heat or other potential ignition sources. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.
- Storage** Keep container closed. Do not store with strong oxidizing agents. Do not store at elevated temperatures. Avoid storing product in direct sunlight for extended periods of time. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers or waste residues of this product.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

- Engineering Controls** Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits (see below). An eye wash station and safety shower should be located near the work-station.
- Personal Protective Equipment** Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional PPE may be required.



- Eye Protection** Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Wear goggles and/or face shield if splashing or spraying is anticipated. Wear goggles and face shield if material is heated above 125°F (51°C). Have suitable eye wash water available.
- Hand Protection** Use gloves constructed of chemical resistant materials such as neoprene or heavy nitrile rubber if frequent or prolonged contact is expected. Use heat-protective gloves when handling product at elevated temperatures.
- Body Protection** Use clean and impervious protective clothing (e.g., neoprene or Tyvek®) if splashing or spraying conditions are present. Protective clothing may include long-sleeve outer garment, apron, or lab coat. If significant contact occurs, remove oil-contaminated clothing as soon as possible and promptly shower. Launder contaminated before reuse or discard. Wear heat protective boots and protective clothing when handling material at elevated temperatures.
- Respiratory Protection** Vaporization is not expected at ambient temperatures. Therefore, the need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134).

Yamalube Marine Gearcase Lube

General Comments Use good personal hygiene practices. Wash hands and other exposed skin areas with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities, or leaving work. DO NOT use gasoline, kerosene, solvents or harsh abrasives as skin cleaners. Since specific exposure standards/control limits have not been established for this product, the "Oil Mist, Mineral" exposure limits shown below are suggested as minimum control guidelines.

Occupational Exposure Guidelines

Substance	Applicable Workplace Exposure Levels
Oil Mist, Mineral	ACGIH (United States). TWA: 5 mg/m ³ 8 hour(s). STEL: 10 mg/m ³ 15 minute(s).
	OSHA (United States). TWA: 5 mg/m ³ 8 hour(s).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL)

Physical State	Liquid.	Color	Amber to dark amber	Odor	Petroleum.
Specific Gravity	0.89 (Water = 1)	pH	Not Applicable.	Vapor Density	>1 (Air = 1)
Boiling Range	Not available			Melting/Freezing Point	Not available.
Vapor Pressure	<0.001 kPa (<0.01 mmHg) (at 20°C)			Volatility	Negligible volatility.
Solubility in Water	Insoluble in cold water.			Viscosity (cSt @ 40°C)	148
Additional Properties	Gravity, °API (ASTM D287) = 28.1 @ 60° F Density = 7.38 Lbs/gal. Viscosity (ASTM D2161) = 776 SUS @ 100° F				

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable.	Hazardous Polymerization	Not expected to occur.
Conditions to Avoid	Keep away from extreme heat, sparks, open flame, and strongly oxidizing conditions.		
Materials Incompatibility	Oxidizing materials.		
Hazardous Decomposition Products	No additional hazardous decomposition products were identified other than the combustion products identified in Section 5 of this MSDS.		

SECTION 11. TOXICOLOGICAL INFORMATION

For other health-related information, refer to the Emergency Overview on Page 1 and the Hazards Identification in Section 3 of this MSDS.

Yamalube Marine Gearcase Lube

Toxicity Data

Distillates, petroleum, solvent-refined heavy paraffinic:

ORAL (LD50): Acute: >5000 mg/kg [Rat].
DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].

Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects. In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested. Analyses conducted by method IP 346 indicate that the polycyclic aromatic concentration of this mineral oil is below 3.0 weight percent.

Residual oils, petroleum, solvent-refined:

ORAL (LD50): Acute: >5000 mg/kg [Rat].
DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].

Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects. In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Analysis for ecological effects has not been conducted on this product. However, if spilled, this product and any contaminated soil or water may be harmful to human, animal, and aquatic life. Also, the coating action associated with petroleum and petroleum products can be harmful or fatal to aquatic life and waterfowl.

Environmental Fate

An environmental fate analysis has not been conducted on this specific product. Plants and animals may experience harmful or fatal effects when coated with petroleum-based products. Petroleum-based (mineral) lube oils will normally float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway may be sufficient to cause a fish kill or create an anaerobic environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition.

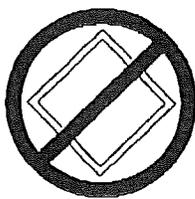
Conditions of use may cause this material to become a "hazardous waste", as defined by federal or state regulations. It is the responsibility of the user to determine if the material is a "hazardous waste" at the time of disposal. Transportation, treatment, storage, and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR 260 through 40 CFR 271). State and/or local regulations may be more restrictive. Contact the RCRA/Superfund Hotline at (800) 424-9346 or your regional US EPA office for guidance concerning case specific disposal issues. Empty drums and pails retain residue. DO NOT

Yamalube Marine Gearcase Lube

pressurize, cut, weld, braze, solder, drill, grind, or expose this product's empty container to heat, flame, or other ignition sources. DO NOT attempt to clean it. Empty drums and pails should be drained completely, properly bunged or sealed, and promptly sent to a reconditioner.

SECTION 14. TRANSPORT INFORMATION

The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside of the United States.

US DOT Status	Not regulated by the U.S. Department of Transportation as a hazardous material.		
Proper Shipping Name	Not regulated.		
Hazard Class	Not regulated.	Packing Group(s)	Not applicable.
		UN/NA Number	Not regulated.
Reportable Quantity	A Reportable Quantity (RQ) has not been established for this material.		
Placard(s)		Emergency Response Guide No.	Not applicable.
		HAZMAT STCC No.	2911415
		MARPOL III Status	Not a DOT "Marine Pollutant" per 49 CFR 171.8.

SECTION 15. REGULATORY INFORMATION

TSCA Inventory	This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.
SARA 302/304 Emergency Planning and Notification	The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.
SARA 311/312 Hazard Identification	The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories: No SARA 311/312 hazard categories identified.
SARA 313 Toxic Chemical Notification and Release Reporting	This product contains the following components in concentrations above de minimis levels that are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA: No components were identified.
CERCLA	The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. This product or refinery stream is not known to contain chemical substances subject to this statute. However, it is recommended that you contact state and local authorities to determine if there are any other reporting requirements in the event of a spill.

Yamalube Marine Gearcase Lube

Clean Water Act (CWA)

This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.

California Proposition 65

This material may contain the following components which are known to the State of California to cause cancer, birth defects or other reproductive harm, and may be subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):
Toluene: 0.0007%

New Jersey Right-to-Know Label

Additional Regulatory Remarks No additional regulatory remarks.

SECTION 16. OTHER INFORMATION

Refer to the top of Page 1 for the HMIS and NFPA Hazard Ratings for this product.

REVISION INFORMATION

Version Number 2.0
Revision Date 06/16/2003
Print Date Printed on 06/16/2003.

ABBREVIATIONS

AP: Approximately	EQ: Equal	>: Greater Than	<: Less Than	NA: Not Applicable	ND: No Data	NE: Not Established
ACGIH: American Conference of Governmental Industrial Hygienists				AIHA: American Industrial Hygiene Association		
IARC: International Agency for Research on Cancer				NTP: National Toxicology Program		
NIOSH: National Institute of Occupational Safety and Health				OSHA: Occupational Safety and Health Administration		
NPCA: National Paint and Coating Manufacturers Association				HMIS: Hazardous Materials Information System		
NFPA: National Fire Protection Association				EPA: US Environmental Protection Agency		

DISCLAIMER OF LIABILITY

THE INFORMATION IN THIS MSDS WAS OBTAINED FROM SOURCES WHICH WE BELIEVE ARE RELIABLE. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESSED OR IMPLIED REGARDING ITS CORRECTNESS. SOME INFORMATION PRESENTED AND CONCLUSIONS DRAWN HEREIN ARE FROM SOURCES OTHER THAN DIRECT TEST DATA ON THE SUBSTANCE ITSELF. THIS MSDS WAS PREPARED AND IS TO BE USED ONLY FOR THIS PRODUCT. IF THE PRODUCT IS USED AS A COMPONENT IN ANOTHER PRODUCT, THIS MSDS INFORMATION MAY NOT BE APPLICABLE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION OR PRODUCTS FOR THEIR PARTICULAR PURPOSE.

THE CONDITIONS OR METHODS OF HANDLING, STORAGE, USE, AND DISPOSAL OF THE PRODUCT ARE BEYOND OUR CONTROL AND MAY BE BEYOND OUR KNOWLEDGE. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.

***** END OF MSDS *****

Click Bond - CB200 Adhesive - Material Safety Data Sheet

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **CB200**
CLICK BOND, INC.
2151 LOCKHEED WAY
CARSON CITY, NV 89706

Product Use/Class: **ADHESIVE**
INFORMATION TELEPHONE #: (775) 885-8000
EMERGENCY TELEPHONE #: (800) 255-3924 (CHEM•TEL)
OUTSIDE NORTH AMERICA #: (813) 248-0585 CALL COLLECT

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Component	Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-Ceiling	Skin
B	Methyl methacrylate	80-62-6	49%	50 ppm	100 ppm	410 mg/m3 100 ppm	N.E.	N.A.
B	Methacrylic acid	79-41-4	9%	20 ppm	N.E.	N.E.	N.E.	N.A.
B	Methacrylate phosphate ester	Proprietary	5%	N.E.	N.E.	N.E.	N.E.	N.A.
B	N,N-Dimethylaniline	121-69-7	5%	5 ppm	10 ppm	25 mg/m3 5 ppm	N.E.	S
B	Zinc compound	Proprietary	5%	2 mg/m3	10 mg/m3	5 mg/m3	N.E.	N.A.
B	Calcium molybdate	7789-82-4	5%	0.5 mg/m3	N.E.	5 mg/m3	N.E.	N.A.
B	Amine curative	Proprietary	5%	N.E.	N.E.	N.E.	N.E.	N.A.
A	Epoxy resin	Proprietary	6%	N.E.	N.E.	N.E.	N.E.	N.A.
A	Diisobutyl phthalate	84-69-5	4%	N.E.	N.E.	N.E.	N.E.	N.A.
A	Benzoyl peroxide	94-36-0	3%	5 mg/m3	N.E.	5 mg/m3	N.E.	N.A.

N.A. - Not Applicable, N.E. - Not Established, S - Skin Designation

SECTION 3 - HAZARDS IDENTIFICATION

*** **EMERGENCY OVERVIEW** ***: Off-white Liquid, with Sweet odor (Component B) and Yellow Paste, with No odor (Component A). Flammable liquid. Harmful if absorbed through skin. May cause allergic skin reaction. Causes skin and eye irritation. Causes respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May be absorbed through the skin in harmful amounts. Causes skin irritation. May cause skin sensitization. May cause dermatitis.

EFFECTS OF OVEREXPOSURE - INHALATION: Causes respiratory tract irritation. May cause headache and nausea.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed. Ingestion is not an expected route of entry in industrial or commercial uses.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: May cause liver or kidney damage. Chronic skin contact may cause dermatitis.

PRIMARY ROUTE (S) OF ENTRY: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

SECTION 4 - FIRST AID MEASURES

FIRST AID - EYE CONTACT: Flush eyes immediately with large amount of water for at least 15 minutes holding eyelids open while flushing. Get prompt medical attention.

FIRST AID - SKIN CONTACT: Flush contaminated skin with large amounts of water while removing contaminated clothing. Wash affected skin areas with soap and water. Get medical attention if symptoms occur.

FIRST AID - INHALATION: Move person to fresh air. Restore and support continued breathing. If breathing is difficult, give oxygen. Get immediate medical attention.

FIRST AID - INGESTION: If swallowed, do not induce vomiting. Give victim one or two glasses of water or milk. Call a physician or poison control center immediately for further instructions. Never give anything by mouth if victim is rapidly losing consciousness, unconscious or convulsing.

SECTION 5 - FIRE-FIGHTING MEASURES

Component A:

FLASH POINT: 201 Deg. F, 93 Deg. C (Setaflash Closed Cup)

AUTOIGNITION TEMPERATURE: N.D.

LOWER EXPLOSIVE LIMIT (%): Not Applicable

UPPER EXPLOSIVE LIMIT (%): Not Applicable

Component B:

FLASH POINT: 65 Deg. F, 18 Deg. C (Setaflash Closed Cup)

AUTOIGNITION TEMPERATURE: N.D.

LOWER EXPLOSIVE LIMIT (%): 1.0% (V)

UPPER EXPLOSIVE LIMIT (%): 8.8% (V)

SECTION 5 - FIRE-FIGHTING MEASURES (Cont.)

Components A and B:

EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: Flammable liquid and vapor. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, open flame, and other sources of ignition. Closed containers may rupture when exposed to extreme heat. Use water spray to keep fire exposed containers cool. During a fire, irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.

SPECIAL FIREFIGHTING PROCEDURES: Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA). If water is used, fog nozzles are preferable.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Keep non-essential personnel a safe distance away from the spill area. Remove all sources of ignition (flame, hot surfaces, and electrical, static, or frictional sparks). Avoid breathing vapors. Use self-contained breathing equipment. Notify appropriate authorities if necessary. Avoid contact. Using non-sparking tools, scoop the spilled material into an appropriate container for proper disposal. (If necessary, use inert absorbent material to aid in containing the spill.)

SECTION 7 - HANDLING AND STORAGE

HANDLING: Keep closure tight and container upright to prevent leakage. Ground and bond containers when transferring material. Avoid skin and eye contact. Wash thoroughly after handling. Avoid breathing of vapor or spray mists. Do not handle until all safety precautions have been read and understood. Use with adequate ventilation. Because empty containers may retain product residue and flammable vapors, keep away from heat, sparks, and flame; do not cut, puncture, or weld on or near the empty container. Empty containers should not be re-used. Do not smoke where this product is used or stored.

STORAGE: Refer to OSHA 29CFR Part 1910.106 "Flammable and Combustible Liquids" for specific storage requirements. Store only in well-ventilated areas. Keep container closed when not in use.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Sufficient ventilation in pattern and volume should be provided in order to maintain air contaminant levels below recommended exposure limits. Sufficient ventilation (using explosion-proof equipment) should be provided to prevent flammable vapor/air mixtures from accumulating.

RESPIRATORY PROTECTION: Contains a small amount of dimethylaniline (DMA) which has poor odor-warning properties. If the exposure limit for DMA is exceeded, an air-supplied respirator is recommended. Otherwise, a properly-fitted NIOSH approved air-purifying organic vapor respirator is recommended. For emergency situations, confined space use, or other conditions where exposure limits may be greatly exceeded, use an approved air-supplied respirator. Observe OSHA regulations (29CFR 1910.134) for respirator use.

SKIN PROTECTION: Use neoprene, nitrile, or rubber gloves to prevent skin contact.

EYE PROTECTION: Use safety eyewear including safety glasses with side shields and chemical goggles where splashing may occur.

OTHER PROTECTIVE EQUIPMENT: Use disposable or impervious clothing if work clothing contamination is likely. Remove and wash contaminated clothing before reuse.

HYGIENIC PRACTICES: Wash hands before eating, smoking, or using toilet facility. Food or beverages should not be consumed anywhere this product is handled or stored. Wash thoroughly after handling.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Component A:

BOILING RANGE	: 212 – 212 Deg. F	DENSITY, LB/GAL	: 10.0	APPEARANCE	: Yellow
FREEZE POINT	: N.D.	VOLATILE BY WEIGHT	: 5.49%	PHYSICAL STATE	: Paste
SOLUBILITY IN H₂O	: Insoluble	VOLATILE BY VOLUME	: 6.71%	ODOR	: No
VAPOR DENSITY	: Heavier than Air	VAPOR PRESSURE	: N.D.	ODOR THRESHOLD	: N.D.
EVAPORATION RATE	: N.A.			pH	: N.A.
COEFFICIENT OF WATER/OIL DISTRIBUTION:	N.D.				(See Section 16 for abbreviation legend.)

Component B:

BOILING RANGE	: 214 – 379 Deg. F	DENSITY, LB/GAL	: 8.69	APPEARANCE	: Off-white
FREEZE POINT	: N.D.	VOLATILE BY WEIGHT	: 0.0%	PHYSICAL STATE	: Liquid
SOLUBILITY IN H₂O	: Insoluble	VOLATILE BY VOLUME	: 0.0%	ODOR	: Sweet
VAPOR DENSITY	: Heavier than Air	VAPOR PRESSURE	: N.D.	ODOR THRESHOLD	: N.D.
EVAPORATION RATE	: Faster than n-butyl-acetate			pH	: N.A.
COEFFICIENT OF WATER/OIL DISTRIBUTION:	N.D.				(See Section 16 for abbreviation legend.)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Storage above 100 degrees F and below 32 degrees F. Exposure to sunlight, ultraviolet light irradiation. Avoid dropping or puncture of containers.

INCOMPATIBILITY: Inorganic acids, organic acids, caustics, amines, oxidizing agents, peroxides, water, hydroxyl, or active hydrogen compounds.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, oxides of nitrogen, aldehydes.

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur under normal conditions.

STABILITY: Product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL INFORMATION

PRODUCT LD50 (ORAL): No data **PRODUCT LD50 (DERMAL):** No data **PRODUCT LC50:** No data

SECTION 12 - ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No information

SECTION 13 - DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Disposal should be done in accordance with Federal (40CFR Part 261), state, and local environmental control regulations. If waste is determined to be hazardous, use licensed hazardous waste transporter and disposal facility.

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Adhesives **DOT HAZARD CLASS:** 3 **DOT UN/NA NUMBER:** 1133

EMERGENCY RESPONSE GUIDE NUMBER: 128 **PACKING GROUP:** II **SECONDARY HAZARD:** None

The listed transportation classification applies to US DOT non-bulk road shipments. It does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors. For the most accurate shipping information, refer to your transportation/compliance department.

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

This product is considered hazardous as defined by 29 CFR 1910.1200 (OSHA HazCom Standard).

SARA SECTION 313: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Weight % Less Than</u>
Methyl methacrylate	80-62-6	48.2%
N,N-Dimethylaniline	121-69-7	4.4%
Zinc compound	Proprietary	4.4%
Benzoyl peroxide	94-36-0	2.5%

TOXIC SUBSTANCES CONTROL ACT:

INVENTORY STATUS: The chemical substances in this product are on the TSCA Section 8 Inventory.

EXPORT NOTIFICATION: This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

NONE

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 2* **FLAMMABILITY:** 3 **PHYSICAL HAZARD:** 2

* - Indicates a chronic hazard; see Section 3.

VOLATILE ORGANIC COMPOUNDS

Calculated 0.0 lbs/gal, 0.0 grams/liter

LEGEND: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

DISCLAIMER: The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

MATERIAL SAFETY DATA SHEET

PREPARED 16DEC03

CLICK BOND --- CB200 (COMPONENT A) --- STRUCTURAL ADHESIVE ACCELERATOR

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **CB200 (COMPONENT A)**
CLICK BOND, INC.
2151 LOCKHEED WAY
CARSON CITY, NV 89706

PRODUCT USE/CLASS: **ACCELERATOR**
INFORMATION TELEPHONE #: (775) 885-8000
EMERGENCY TELEPHONE #: (800) 255-3924 (CHEM•TEL)
OUTSIDE NORTH AMERICA #: (813) 248-0585 CALL COLLECT

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-Ceiling	Skin
Epoxy resin	Proprietary	45.0%	N.E.	N.E.	N.E.	N.E.	N.A.
Diisobutyl phthalate	84-69-5	25.0%	N.E.	N.E.	N.E.	N.E.	N.A.
Benzoyl peroxide	94-36-0	20.0%	5 mg/m3	N.E.	5 mg/m3	N.E.	N.A.

N.A. - Not Applicable, N.E. - Not Established, S - Skin Designation

SECTION 3 - HAZARDS IDENTIFICATION

*** EMERGENCY OVERVIEW ***: Yellow Liquid, with No odor. May cause skin and eye irritation. May cause allergic skin reaction. May cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: May cause eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin irritation. May cause skin sensitization. May cause dermatitis.

EFFECTS OF OVEREXPOSURE - INHALATION: May cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed. Ingestion is not an expected route of entry in industrial or commercial uses.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Chronic skin contact may cause dermatitis.

PRIMARY ROUTE (S) OF ENTRY: Skin Contact, Inhalation, Ingestion, Eye Contact

SECTION 4 - FIRST AID MEASURES

FIRST AID - EYE CONTACT: Flush eyes immediately with large amount of water for at least 15 minutes holding eyelids open while flushing. Get prompt medical attention.

FIRST AID - SKIN CONTACT: Flush contaminated skin with large amounts of water while removing contaminated clothing. Wash affected skin areas with soap and water. Get medical attention if symptoms occur.

FIRST AID - INHALATION: Move person to fresh air. Restore and support continued breathing. If breathing is difficult, give oxygen. Get immediate medical attention.

FIRST AID - INGESTION: If swallowed, do not induce vomiting. Give victim one or two glasses of water or milk. Call a physician or poison control center immediately for further instructions. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: 201 DEG. F, 93 DEG. C (Setaflash Closed Cup)

LOWER EXPLOSIVE LIMIT (%): Not Applicable

AUTOIGNITION TEMPERATURE: N.D.

UPPER EXPLOSIVE LIMIT (%): Not Applicable

EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Closed containers may rupture when exposed to extreme heat. Use water spray to keep fire exposed containers cool. During a fire, irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.

SPECIAL FIREFIGHTING PROCEDURES: Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA). If water is used, fog nozzles are preferable.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Avoid breathing vapors. Notify appropriate authorities if necessary. Avoid contact. Use appropriate respiratory protection for large spills or spills in confined area. Keep non-essential personnel away from spill area. Scoop spilled material into an appropriate container for proper disposal. (If necessary, use inert absorbent material to aid in containing the spill.)

SECTION 7 - HANDLING AND STORAGE

HANDLING: Keep closure tight and container upright to prevent leakage. Avoid skin and eye contact. Wash thoroughly after handling. Do not handle until all safety precautions have been read and understood. Empty containers should not be re-used. Use with adequate ventilation.

STORAGE: Store only in well-ventilated areas. Keep container closed when not in use.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Sufficient ventilation in pattern and volume should be provided in order to maintain air contaminant levels below recommended exposure limits.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

RESPIRATORY PROTECTION: Use a NIOSH approved air-purifying organic vapor respirator if occupational limits are exceeded. For emergency situations, confined space use, or other conditions where exposure limits may be greatly exceeded, use an approved air-supplied respirator. Observe OSHA regulations (29CFR 1910.134) for respirator use.

SKIN PROTECTION: Use neoprene, nitrile, or rubber gloves to prevent skin contact.

EYE PROTECTION: Use safety eyewear including safety glasses with side shields and chemical goggles where splashing may occur.

OTHER PROTECTIVE EQUIPMENT: Use disposable or impervious clothing if work clothing contamination is likely. Remove and wash contaminated clothing before reuse.

HYGIENIC PRACTICES: Wash hands before eating, smoking, or using toilet facility. Food or beverages should not be consumed anywhere this product is handled or stored. Wash thoroughly after handling.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE	: 212 – 212 DEG. F	DENSITY, LB/GAL	: 10.0	APPEARANCE	: Yellow
FREEZE POINT	: N.D.	SPECIFIC GRAVITY	: 1.2 g/cm ³	ODOR THRESHOLD	: N.D.
VAPOR DENSITY	: Heavier than Air	VOLATILE BY WEIGHT	: 5.4%	PHYSICAL STATE	: Liquid
EVAPORATION RATE	: Not Applicable	VOLATILE BY VOLUME	: 6.7%	ODOR	: No
SOLUBILITY IN H₂O	: Insoluble	VAPOR PRESSURE	: N.D.	pH	: N.A.
COEFFICIENT OF WATER/OIL DISTRIBUTION: N.D. (See Section 16 for abbreviation legend.)					

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: High temperatures.

INCOMPATIBILITY: Amines, acids, water, hydroxyl, or active hydrogen compounds.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, aldehydes.

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur under normal conditions.

STABILITY: Product is stable under normal storage conditions

SECTION 11 - TOXICOLOGICAL PROPERTIES

PRODUCT LD50 (ORAL): No Data **PRODUCT LD50 (DERMAL):** No Data **PRODUCT LC50:** No Data

SECTION 12 - ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No information.

SECTION 13 - DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Disposal should be done in accordance with Federal (40CFR Part 261), state, and local environmental control regulations. If waste is determined to be hazardous, use licensed hazardous waste transporter and disposal facility.

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Organic peroxide type E, solid **DOT HAZARD CLASS:** 5.2 **DOT UN/NA NUMBER:** 3108

EMERGENCY RESPONSE GUIDE NUMBER: 145 **PACKING GROUP:** II **SECONDARY HAZARD:** None

The listed transportation classification applies to non-bulk road shipments. It does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors. For the most accurate shipping information, refer to your transportation/compliance department.

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS –

This product is considered hazardous as defined by 29 CFR 1910.1200 (OSHA HazCom Standard.)

SARA SECTION 313: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372:

<u>CHEMICAL NAME</u>	<u>CAS NUMBER</u>	<u>WT % LESS THAN</u>
Benzoyl peroxide	94-36-0	20.0%

TOXIC SUBSTANCES CONTROL ACT:

INVENTORY STATUS: The chemical substances in this product are on the TSCA Section 8 Inventory.

EXPORT NOTIFICATION: This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

<u>CHEMICAL NAME</u>	<u>CAS NUMBER</u>
Epoxy Resin	Proprietary

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 2 **FLAMMABILITY:** 1 **PHYSICAL HAZARD:** 2

* - Indicates a chronic hazard; see Section 3.

VOLATILE ORGANIC COMPOUNDS (Calculated): 0.0 lbs/gal, 0.0 grams/liter

LEGEND: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

DISCLAIMER: The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

MATERIAL SAFETY DATA SHEET PREPARED 2DEC03

CLICK BOND --- CB200 (COMPONENT B) --- STRUCTURAL ADHESIVE

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **CB200 (COMPONENT B)**
CLICK BOND, INC.
2151 LOCKHEED WAY
CARSON CITY, NV 89706

PRODUCT USE/CLASS: **ACRYLIC ADHESIVE, PART 1 OF 2**
INFORMATION TELEPHONE #: (775) 885-8000
EMERGENCY TELEPHONE #: (800) 255-3924 (CHEM•TEL)
OUTSIDE NORTH AMERICA #: (813) 248-0585 CALL COLLECT

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-Ceiling	Skin
N,N-Dimethylaniline	121-69-7	5.0%	5 ppm	10 ppm	25 mg/m3 5 ppm	N.E.	S
Zinc compound	Proprietary	5.0%	2 mg/m3	10 mg/m3	5 mg/m3	N.E.	N.A.
Methacrylic acid	79-41-4	10.0%	20 ppm	N.E.	N.E.	N.E.	N.A.
Methyl methacrylate	80-62-6	55.0%	50 ppm	100 ppm	410 mg/m3 100 ppm	N.E.	N.A.
Amine curative	Proprietary	5.0%	N.E.	N.E.	N.E.	N.E.	N.A.
Methacrylate phosphate ester	Proprietary	5.0%	N.E.	N.E.	N.E.	N.E.	N.A.

N.A. - Not Applicable, N.E. - Not Established, S - Skin Designation

SECTION 3 - HAZARDS IDENTIFICATION

*** **EMERGENCY OVERVIEW** ***: Off-white Liquid, with Sweet odor. Flammable liquid. Harmful if absorbed through skin. May cause allergic skin reaction. Causes skin and eye irritation. Causes respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May be absorbed through the skin in harmful amounts. Causes skin irritation. May cause skin sensitization. May cause dermatitis.

EFFECTS OF OVEREXPOSURE - INHALATION: Causes respiratory tract irritation. May cause headache and nausea.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed. Ingestion is not an expected route of entry in industrial or commercial uses.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: May cause liver or kidney damage. Chronic skin contact may cause dermatitis.

PRIMARY ROUTE (S) OF ENTRY: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

SECTION 4 - FIRST AID MEASURES

FIRST AID - EYE CONTACT: Flush eyes immediately with large amount of water for at least 15 minutes holding eyelids open while flushing. Get prompt medical attention.

FIRST AID - SKIN CONTACT: Flush contaminated skin with large amounts of water while removing contaminated clothing. Wash affected skin areas with soap and water. Get medical attention if symptoms occur.

FIRST AID - INHALATION: Move person to fresh air. Restore and support continued breathing. If breathing is difficult, give oxygen. Get immediate medical attention.

FIRST AID - INGESTION: If swallowed, do not induce vomiting. Give victim one or two glasses of water or milk. Call a physician or poison control center immediately for further instructions. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: 65 DEG. F, 18 DEG. C (Setaflash Closed Cup) **LOWER EXPLOSIVE LIMIT (%):** 1.0% (V)

AUTOIGNITION TEMPERATURE: N.D. **UPPER EXPLOSIVE LIMIT (%):** 8.8% (V)

EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: Flammable liquid and vapor. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, open flame, and other sources of ignition. Closed containers may rupture when exposed to extreme heat. Use water spray to keep fire exposed containers cool. During a fire, irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.

SPECIAL FIREFIGHTING PROCEDURES: Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA). If water is used, fog nozzles are preferable.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Keep non-essential personnel a safe distance away from the spill area. Remove all sources of ignition (flame, hot surfaces, and electrical, static, or frictional sparks). Avoid breathing vapors. Use self-contained breathing equipment. Notify appropriate authorities if necessary. Avoid contact. Using non-sparking tools, scoop the spilled material into a container for proper disposal. (If necessary, use inert absorbent material to aid in containing the spill.)

SECTION 7 - HANDLING AND STORAGE

HANDLING: Keep closure tight and container upright to prevent leakage. Ground and bond containers when transferring material. Avoid skin and eye contact. Wash thoroughly after handling. Avoid breathing of vapor or spray mists. Do not handle until all safety precautions have been read and understood. Use with adequate ventilation. Because empty containers may retain product residue and flammable vapors, keep away from heat, sparks, and flame; do not cut, puncture, or weld on or near the empty container. Do not smoke where this product is used or stored.

SECTION 7 - HANDLING AND STORAGE (CONTINUED)

STORAGE: Refer to OSHA 29CFR Part 1910.106 "Flammable and Combustible Liquids" for specific storage requirements. Store only in well-ventilated areas. Keep container closed when not in use.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Sufficient ventilation in pattern and volume should be provided in order to maintain air contaminant levels below recommended exposure limits. Sufficient ventilation (using explosion-proof equipment) should be provided to prevent flammable vapor/air mixtures from accumulating.

RESPIRATORY PROTECTION: Contains a small amount of dimethylaniline (DMA) which has poor odor-warning properties. If the exposure limit for DMA is exceeded, an air-supplied respirator is recommended. Otherwise, a properly-fitted organic vapor, air purifying respirator is recommended. For emergency situations, confined space use, or other conditions where exposure limits may be greatly exceeded, use an approved air-supplied respirator. Observe OSHA regulations (29CFR 1910.134) for respirator use.

SKIN PROTECTION: Use neoprene, nitrile, or rubber gloves to prevent skin contact.

EYE PROTECTION: Use safety eyewear including safety glasses with side shields and chemical goggles where splashing may occur.

OTHER PROTECTIVE EQUIPMENT: Use disposable or impervious clothing if work clothing contamination is likely. Remove and wash contaminated clothing before reuse.

HYGIENIC PRACTICES: Wash hands before eating, smoking, or using toilet facility. Food or beverages should not be consumed anywhere this product is handled or stored. Wash thoroughly after handling.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE	: 214 – 379 DEG. F	DENSITY, LB/GAL	: 8.69	APPEARANCE	: Off-white
FREEZE POINT	: N.D.	SPECIFIC GRAVITY	: 1.05 g/cm ³	ODOR THRESHOLD	: N.D.
VAPOR DENSITY	: Heavier than Air	VOLATILE BY WEIGHT	: 0.0%	PHYSICAL STATE	: Liquid
EVAPORATION RATE	: Faster than n-butyl-acetate	VOLATILE BY VOLUME	: 0.0%	ODOR	: Sweet
SOLUBILITY IN H₂O	: Insoluble	VAPOR PRESSURE	: N.D.	pH	: N.A.
COEFFICIENT OF WATER/OIL DISTRIBUTION: N.D. (See Section 16 for abbreviation legend.)					

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Storage above 100 degrees F and below 32 degrees F. Exposure to sunlight, ultraviolet light irradiation. Avoid dropping or puncture of containers.

INCOMPATIBILITY: Inorganic acids, organic acids, caustics, amines, peroxides, polymerization inhibitors.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, oxides of nitrogen.

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur under normal conditions.

STABILITY: Product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

PRODUCT LD₅₀ (ORAL): No Data

PRODUCT LD₅₀ (DERMAL): No Data

PRODUCT LC₅₀: No Data

SECTION 12 - ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No information.

SECTION 13 - DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Disposal should be done in accordance with Federal (40CFR Part 261), state, and local environmental control regulations. If waste is determined to be hazardous, use licensed hazardous waste transporter and disposal facility.

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Adhesives

DOT HAZARD CLASS: 3

DOT UN/NA NUMBER: 1133

EMERGENCY RESPONSE GUIDE NUMBER: 128

PACKING GROUP: II

SECONDARY HAZARD: None

The listed transportation classification applies to non-bulk road shipments. It does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors. For the most accurate shipping information, refer to your transportation/compliance department.

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

This product is considered hazardous as defined by 29 CFR 1910.1200 (OSHA HazCom Standard.)

SARA SECTION 313: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	WT % LESS THAN
Methyl methacrylate	80-62-6	55.0%
N,N-Dimethylaniline	121-69-7	5.0%
Zinc compound	Proprietary	5.0%

TOXIC SUBSTANCES CONTROL ACT:

INVENTORY STATUS: The chemical substances in this product are on the TSCA Section 8 Inventory.

EXPORT NOTIFICATION: This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States: NONE

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 2* **FLAMMABILITY:** 3 **PHYSICAL HAZARD:** 1 * - Indicates a chronic hazard; see Section 3.

VOLATILE ORGANIC COMPOUNDS (Calculated): 0.0 lbs/gal, 0.0 grams/liter

LEGEND: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

DISCLAIMER: The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

MATERIAL SAFETY DATA SHEET
CAT UR

MANUFACTURER'S NAME:
Clifton Adhesive, Inc.
Burgess Place
Wayne, N.J. 07470

INFORMATION AND EMERGENCY
PHONE NUMBER: 973-694-0845

IN CASE OF SPILL OR LEAK INVOLVING
THIS MATERIAL—CALL CHEMTREC 24
HOURS A DAY AT 800-424-9300

DATE OF PREPARATION: 06-13-96 DOT NAME & NO.: NON-REGULATED
MATERIAL N.O.S.,
NON-HAZARDOUS NO ID#

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: CAT UR HMIS RATINGS: H F R PP
2 0 1 H

SECTION II - HAZARDOUS INGREDIENTS

THE FOLLOWING * ARE REPORTABLE UNDER SARA TITLE III-SECTION 313:

TOP FIVE AND/OR HAZARDOUS INGREDIENTS:	CAS NUMBER	ACGIH TLV	OSHA PEL
Diphenylmethane diisocyanate (MDI) 40-50%	* 101-68-8	0.005 ppm	0.02 PPM
Polymethylene polyphenyl isocyanate 50-60%	* 9016-87-9	Unlisted	Unlisted

** Above exposure limits are for air levels only. When skin contact occurs,
overexposure may result though air levels are less than limits listed above.

SECTION III - PHYSICAL DATA

BOILING Point: 392 Deg F. 200 Deg. C. @ 5 mmHg VAPOR DENSITY: 8.6

VAPOR PRESSURE (mm Hg @ TEMP): $<1 \times 10^{-5}$ mm Hg @ 25 C
SPECIFIC GRAVITY: 1.2 @ 25 C WEIGHT/GAL: 10
APPEARANCE AND ODOR: Brown. Odor: Not available.
VOLATILE ORGANIC COMPOUND #/GAL.: 0
VOLATILE ORGANIC COMPOUND KG/LITER: 0

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: >400 Deg. F. METHOD USED: PMCC (ASTM D-93)
FLAMMABLE LIMITS IN AIR % LEL Unlisted UEL Unlisted
AUTO IGNITION TEMPERATURE: Not listed.

EXTINGUISH MEDIA: Carbon dioxide, dry chemical, foam, halon 1211. If water
is used, it should be used in very large quantity. The
reaction between water and hot isocyanate may be vigorous.

MATERIAL SAFETY DATA SHEET

CAT UR

SPECIAL FIRE FIGHTING PROCEDURE:

NIOSH/MSHA --approved self-contained breathing apparatus should be used when people are fighting isocyanate fires to be protected against nitrogen oxide fumes and isocyanate fumes. Full protective clothing should be worn also.

UNUSUAL FIRE AND EXPLOSION HAZARD:

Down-wind personnel must be evacuated. Do not reseal contaminated containers as pressure build-up may rupture them.

SECTION V - REACTIVITY DATA

STABILITY: Stable under recommended storage conditions.

INCOMPATIBILITY (MATERIALS TO AVOID):

Water, acid, base, (alkalies, ammonia, alcohols) metal compounds, surface active materials. Water reacts to form heat, CO₂ and insoluble urea. The combined effect of the CO₂ and heat can produce enough pressure to rupture a closed container. The reaction with water is slow at temperatures less than 49C (120F), but accelerated at higher temperatures and in the presence of the above mentioned materials. Some reactions are violent.

CONDITIONS TO AVOID:

Avoid heat, carbon dioxide, open flames, sparks, hot surfaces.

HAZARDOUS DECOMPOSITION PRODUCTS:

Isocyanate vapor and mist, carbon dioxide, carbon monoxide, nitrogen oxides and traces of hydrogen cyanide.

HAZARDOUS POLYMERIZATION: May occur with incompatible reactants, especially strong bases, water or temperature over 347 deg. F. Temperatures over 49C (120F) accelerate the reaction with water.

SECTION VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

ACUTE: Nausea and/or narcosis. May cause burns of the mouth and throat.

CHRONIC: May cause skin irritation.

TARGET ORGANS:

SIGNS AND SYMPTOMS OF EXPOSURE:

Irritation to eyes and skin. Can also cause skin dryness. Liquid ingestion may result in vomiting. May cause gastro-intestinal irritation or ulceration.

CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE:

Respiratory ailments and dermatitis may be aggravated.

CARCINOGENICITY Possible

PRIMARY ROUTE(S) OF ENTRY: Inhalation, Eyes, Skin, Ingestion.

EMERGENCY AND FIRST AID PROCEDURES:

Utilize the suggested methods below. In emergency situations notify a physician immediately.

SKIN: Wash with soap and water. Get medical attention.

MATERIAL SAFETY DATA SHEET

CAT UR

EYES: Flush eyes abundantly with clean water and refer to physician. Due to high viscosity, may be difficult to remove from the eyes.
INGESTION: DO NOT induce vomiting. Refer to physician and transport to medical facility immediately.
EXCESSIVE INHALATION: Remove patient to fresh air or give oxygen. Use CPR if patient is not breathing. Refer to physician.

SECTION VII - SPECIAL PRECAUTIONS

HANDLING & STORAGE:

Store in approved solvent storage area. Keep tightly closed. Keep away from heat open flames, sparks, hot surfaces and oxidizing agents.

OTHER PRECAUTIONS: Use and store with adequate exhaust ventilation. Protect from freezing. Store between 50-90 deg. F.

SECTION VIII - SPILL OR LEAK PROCEDURES

FOR SPILLS OR RELEASED MATERIAL:

Absorb spill in sand, earth, vermiculite, Oil-Dri, or Sol-Speed-Dri. Shovel absorbed material into steel container and cover. Evacuate and ventilate spill area. Dike spill to prevent entry into water system.

WASTE DISPOSAL METHOD:

Dispose of in accordance with federal, state, and local chemical and solvent waste disposal regulations. CLEAN-UP: Decontaminate floor using water/ammonia solution with 1-2% added detergent letting stand over affected area for at least 10 min. Cover mops and brooms used for this with plastic and dispose properly. (Often by incineration.)

SECTION IX - SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION:

Use NIOSH-approved atmosphere supplying or air purifying respirator for organic vapors as required to maintain exposure levels below recommended limits.

VENTILATION: As specified.

LOCAL EXHAUST: Remove vapors during processing.

MECHANICAL EXHAUST: Explosion-proof equipment.

SPECIAL: Reduce vapor concentrations below specified limits.

PROTECTIVE GLOVES: PVA gloves

EYE PROTECTION: Safety goggles.

OTHER PROTECTIVE EQUIPMENT:

Protective clothing as required to prevent skin contact.

HYGIENIC PRACTICES:

Keep area clean. Clean up spills immediately. Practice good personal hygiene.

DISCLAIMER LIABILITY: Since conditions or methods of use are beyond our

MATERIAL SAFETY DATA SHEET
CAT UR

Control - we do not assume any responsibility and expressly disclaim any liability for any use of this product. The information contained in this MSDS is believed to be true and accurate but all statements or suggestions are made without warranty - express or implied regarding the accuracy of the information - the hazards connected with the use of the product or the results to be obtained from the use thereof. Compliance with all federal state and local laws and regulations remains the responsibility of the user.

USER'S RESPONSIBILITY: This MSDS cannot cover all possible situations which the user may experience during processing. You should examine each aspect of your operation and determine if additional precautions should be taken. All health and safety information contained in this MSDS should be provided to your employees or customers. It is your responsibility to use this information to develop appropriate work practice guidelines and employee training programs for your operation.

MATERIAL SAFETY DATA SHEET

UR5208

MANUFACTURER'S NAME:
Clifton Adhesive, Inc.
Burgess Place
Wayne, N.J. 07470

INFORMATION AND EMERGENCY
PHONE NUMBER: 973-694-0845

IN CASE OF SPILL OR LEAK INVOLVING
THIS MATERIAL-CALL CHEMTREC 24
HOURS A DAY AT 800-424-9300

DATE OF PREPARATION: 03-12-07

DOT NAME & NO.:

ADHESIVES, UN1133

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: UR5208

HMIS RATINGS: H F R PP
2 3 0 B

SECTION II - HAZARDOUS INGREDIENTS

THE FOLLOWING * ARE REPORTABLE UNDER SARA TITLE III-SECTION 313:

TOP FIVE AND/OR

HAZARDOUS INGREDIENTS:

CAS NUMBER

ACGIH
TLV

OSHA PEL

Tetrahydrofuran 87 - 92 %

109-99-9

50ppm
(TWA-skin)

200ppm
(TWA)

TSR # 1397250002-5011P

TSR # 1397250002-5101P

TSR # 1397250002-5100P

Other Ingredients < 1%

** Above exposure limits are for air levels only. When skin contact occurs, overexposure may result though air levels are less than limits listed above.

SECTION III - PHYSICAL DATA

BOILING Point: 142 - 162 Deg F.

VAPOR DENSITY: 2.29 - 2.69

VAPOR PRESSURE (mm Hg @ TEMP): 140 - 146

SPECIFIC GRAVITY: 0.90 - 0.94

WEIGHT/GAL: 7.42 - 7.82

APPEARANCE AND ODOR: Neutral liquid. Characteristic solvent odor.

VOLATILE ORGANIC COMPOUND #/GAL.: 6.63 - 6.93

VOLATILE ORGANIC COMPOUND KG/LITER: 0.79 - 0.83

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 6 Deg. F.

METHOD USED: T.C.C.

FLAMMABLE LIMITS IN AIR % LEL 2.0

UEL 12.0

AUTO IGNITION TEMPERATURE: 610 Deg. F.

EXTINGUISH MEDIA: Co 2, foam, dry chemical

SPECIAL FIRE FIGHTING PROCEDURE:

NIOSH/MSHA -approved self-contained breathing apparatus should be worn. Use water spray to cool fire exposed structures and disperse vapor cloud if fire is not present.

UNUSUAL FIRE AND EXPLOSION HAZARD:

Vapor is heavier than air and may travel considerable distance to source of ignition and flashback.

=====
SECTION V - REACTIVITY DATA
=====

STABILITY: Stable

INCOMPATIBILITY (MATERIALS TO AVOID);

N/A

CONDITIONS TO AVOID:

Avoid heat, open flames, sparks, hot surfaces, and oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS:

Oxides of carbon, nitrogen.

HAZARDOUS POLYMERIZATION: Will not occur.

=====
SECTION VI - HEALTH HAZARD DATA
=====

EFFECTS OF OVEREXPOSURE:

ACUTE: Nausea and/or narcosis.

CHRONIC: May cause liver and kidney damage. Can damage nervous system. Weakness in hands and feet may occur.

TARGET ORGANS: -

SIGNS AND SYMPTOMS OF

OVEREXPOSURE:

Irritation to eyes and mucous membranes. Can also cause skin dryness. Liquid ingestion may result in vomiting. Can severely burn eyes. May cause injury to liver and kidneys when ingested or inhaled at high concentrations.

CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE:

Respiratory ailments. Liver and kidney ailments.

CARCINOGENICITY No

PRIMARY ROUTE(S) OF ENTRY: Inhalation, Eyes, Skin, Ingestion.

EMERGENCY AND FIRST AID PROCEDURES:

Utilize the suggested methods below. In emergency situations notify a physician immediately.

SKIN: Wash with soap and water. Get medical attention.

EYES: Flush eyes abundently with clean water and refer to physician.

INGESTION: DO NOT induce vomiting. Refer to physician.

EXCESSIVE INHALATION: Remove patient to fresh air or give oxygen. Use CPR if patient is not breathing. Refer to physician.

=====
SECTION VII - SPECIAL PRECAUTIONS
=====

HANDLING & STORAGE:

Store in approved solvent storage area. Keep tightly closed. Keep away from heat open flames, sparks, hot surfaces and oxidizing agents.

OTHER PRECAUTIONS: N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

FOR SPILLS OR RELEASED MATERIAL:

Absorb spill in sand, earth, vermiculite, or other absorbent material. Shovel absorbed material into steel container and cover.

WASTE DISPOSAL METHOD:

Dispose of in accordance with federal, state, and local chemical and solvent waste disposal regulations.

SECTION IX - SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION:

Use NIOSH-approved atmosphere supplying or air purifying respirator for organic vapors as required to maintain exposure levels below recommended limits.

VENTILATION: As specified.

LOCAL EXHAUST: Remove vapors during processing.

MECHANICAL EXHAUST: Explosion-proof equipment.

SPECIAL: Reduce vapor concentrations below specified limits.

PROTECTIVE GLOVES: PVA gloves

EYE PROTECTION: Safety glasses

OTHER PROTECTIVE EQUIPMENT:

Protective clothing as required to prevent skin contact.

HYGIENIC PRACTICES:

Keep area clean. Clean up spills immediately. Practice good personal hygiene.

DISCLAIMER LIABILITY: Since conditions or methods of use are beyond our control - we do not assume any responsibility and expressly disclaim any liability for any use of this product. The information contained in this MSDS is believed to be true and accurate but all statements or suggestions are made without warranty - express or implied regarding the accuracy of the information - the hazards connected with the use of the product or the results to be obtained from the use thereof. Compliance with all federal state and local laws and regulations remains the responsibility of the user.

USER'S RESPONSIBILITY: This MSDS cannot cover all possible situations which the user may experience during processing. You should examine each aspect of your operation and determine if additional precautions should be taken. All health and safety information contained in this MSDS should be provided to your employees or customers. It is your responsibility to use this information to develop appropriate work practice guidelines and employee training programs for your operation.

Fabuloso® All Purpose Cleaner

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

ACUTE HEALTH. 1
 FIRE. 0
 REACTIVITY. 0

COLGATE-PALMOLIVE COMPANY
Institutional Products Division
 191 East Hanover Avenue
 Morristown, NJ 07960-3151

HMIS HAZARD RATING				
Least=0	Slight=1	Moderate=2	High=3	Extreme= 4

For consumer information: Call (800) 432-8226

PRODUCT NAME: Fabuloso® All Purpose Cleaner
 LABEL CODE: 04307
 CAS NUMBER: Not applicable - product is a mixture
 GENERAL USE: A formulated general purpose cleaner.

EMERGENCY TELEPHONE NUMBER: For emergency involving spill, leak, fire, exposure or accident, call CHEMTREC: (800) 424-9300, day or night.

THE PITTSBURGH POISON CENTER HAS BEEN PROVIDED SPECIFIC INFORMATION FOR USE IN MEDICAL EMERGENCIES INVOLVING THIS PRODUCT: CALL COLLECT: (412) 692-5596.

2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA REGULATED COMPONENTS (present at a concentration > or = 1%):

The following components, present at a concentration > or = 0.1%, are listed as carcinogens or potential carcinogens by either the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC) or OSHA:

Component	CAS #	%	PEL	TLV
None – not applicable				

Component	CAS #	%	PEL	TLV
None – not applicable				

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

EYE CONTACT: May cause eye irritation on direct contact, but no permanent eye injury is expected.
 SKIN CONTACT: May cause skin irritation on prolonged or repeated contact.
 INGESTION: May be harmful if swallowed in large quantities.
 INHALATION: No adverse effects expected.

4. FIRST AID MEASURES

EYE CONTACT: Flush eye with large amounts of water for 15 minutes. Get medical attention if irritation persists.
 SKIN CONTACT: Rinse area with plenty of water. Get medical attention if irritation occurs.
 INGESTION: Drink 1-2 glasses of a clear liquid. Get medical attention.
 INHALATION: Not applicable.

5. FIRE FIGHTING MEASURES

Flash Point (Method): N/A
 Extinguishing Media: Water Spray, CO₂, All-Purpose Dry Chemical
 SPECIAL FIRE FIGHTING PROCEDURES: No known toxic combustion products or special fire fighting hazards. Self-contained breathing apparatus and protective clothing should be worn when fighting chemical fires.

6. ACCIDENTAL RELEASE MEASURES

Cover with inert, absorbent material and remove to disposal container. Spill area may be slippery. Flush with plenty of water.

7. HANDLING AND STORAGE:

Store in a tightly closed container in a cool, dry, well-ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONTROLS: Avoid eye contact.
 PROTECTIVE CLOTHING: The use of safety goggles and protective gloves is recommended.
 SPECIAL PRECAUTIONS: Keep out of the reach of children.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and odor: Clear lavender liquid. Lavender odor. pH: 6.7 +/- 0.5

10. STABILITY AND REACTIVITY

GENERAL: This product is stable. Hazardous polymerization will not occur.
INCOMPATIBLE MATERIALS: None known.
HAZARDOUS DECOMPOSITION: None known.

11. TOXICOLOGICAL INFORMATION

This product has not been tested as a whole. However, this formula was reviewed by expert toxicologists in the Product Safety Assurance Department of Colgate-Palmolive and is determined to be safe for its intended use. This review has taken into consideration available safety-related information including information on individual ingredients, similar ingredients, similar formulas and potential ingredient interactions. This review is a component of the hazard determination used to prepare the statements in Section 3 of the MSDS.

12. ECOLOGICAL INFORMATION

Not Available.

13. DISPOSAL CONSIDERATIONS

Any disposal practice must be in compliance with local, state, and federal laws and regulations (contact local or state government agency for specific rules). Do not dump into sewers, any body of water, or onto the ground.

14. TRANSPORTATION

This product is not regulated as a DOT hazardous material.

15. REGULATORY INFORMATION

RCRA (40 CFR 261, Subpart D): Not Applicable.

CLEAN WATER ACT:
Contains Sodium Dodecylbenzene Sulfonate which is a Section 311 material.

CLEAN AIR ACT:
Contains Butoxydiglycol which is a Section 111 material and Glycol Ethers which are Section 112 materials.

SARA:
Sections 301-304 (Threshold planning quantity – TPQ)
40 CFR 355: Not Applicable.

Section 313 (Toxic chemical release reporting)
40 CFR 372: The following chemicals must be reported under SARA 313: Butoxydiglycol

CERCLA:
Section 102 (Reportable Quantity – RQ)
40 CFR 302:
The RQ for this product to the environment is 79,923 lbs. based on the presence of sodium dodecylbenzene sulfonate (1.3%). Releases greater than or equal to 79,923 lbs. must be reported to The National Response Center (NRC) immediately: (800) 424-8802.

TSCA Section 8(b) INVENTORY STATUS:
All ingredients in this product are listed on the TSCA Inventory or are not required to be listed on the TSCA Inventory.

16. OTHER INFORMATION

Effective Date: January 31, 2002
Supersedes MSDS dated July 14, 1999
MSDS Status: Revised Sections 1, 3, 4, 5, 7, 8, 9, 10, 11, 13, 15

The information on this sheet is limited to the material identified and is believed by the Colgate-Palmolive Company to be correct based on its knowledge and information as of the date noted. Colgate-Palmolive makes no representation, guarantee or warranty, expressed or implied, as to the accuracy, reliability or completeness of the information and assumes no responsibility for injury, damage or loss resulting from the use of the material.

NEW JERSEY RIGHT TO KNOW HAZARDOUS SUBSTANCE LIST:

This product contains the following components subject to reporting requirements:
Glycol ethers, sodium dodecylbenzene sulfonate

PENNSYLVANIA HAZARDOUS SUBSTANCE LIST:

This product contains the following components subject to reporting requirements:
Glycol ethers, sodium dodecylbenzene sulfonate

MASSACHUSETTS SUBSTANCE LIST:

This product contains the following components subject to reporting requirements:
Sodium dodecylbenzene sulfonate

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65):

This product contains the following components subject to reporting requirements: None

CANADA:

Workplace Hazardous Materials Information System (WHMIS)-listed material.
This product contains the following components subject to reporting requirements:
Butoxydiglycol, sodium dodecylbenzene sulfonate

MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: Boat Trailer Wheel Bearing Grease
Product Number (s): SL3120-SL3129, SL3184

Manufactured By: CRC Industries, Inc. (215) 674-4300
885 Louis Drive, Warminster, PA 18974
24-Hour Emergency Information: CHEMTREC (800) 424-9300

Section 2: Composition/Information on Ingredients

Component	CAS NUMBER	ACGIH TLV	OSHA PEL	OTHER LIMITS	%
Petroleum Distillate	64742-53-6	NE	400 ppm	100 ppm	70-100
Residual Oils	64742-57-0	5 mg/m3	NE	NE	10-30

Section 3: Hazards Identification

Emergency Overview

Appearance & Odor: Blue, semi-solid to solid grease with a faint petroleum odor

Potential Health Effects:

Inhalation: NA
Eyes: Irritation
Skin: Irritation
Ingestion: Irritation to nose, throat or upper respiratory tract.

Carcinogenicity: OSHA: No IARC: No NTP: No
Chronic Overexposure: NA
Medical Conditions Aggravated by Exposure: Pre-existing skin and pre-respiratory conditions.

Section 4: First Aid Measures

Inhalation: Remove to fresh air. Give artificial respiration if necessary.
Eyes: Flush with large amounts of water for 15 minutes.
Skin: Remove contaminated clothing and wash area with soap and water.
Ingestion: Call a physician. Do not induce vomiting.

Section 5: Fire-Fighting Measures

Flashpoint: 450°F Method: TCC LEL: ND UEL: ND
Extinguishing Media: CO₂, dry chemical and foam
Hazardous Combustion Products: CO₂ and carbon monoxide
Fire-fighting Instructions: Remove containers from fire area if possible. Use self-contained breathing apparatus for fire fighting.

NFPA: Health: 1 Flammability: 1 Reactivity: 0
HMIS: Health: 1 Flammability: 1 Reactivity: 0 PPE: B

Section 6: Accidental Release Measures

Spill/Leak Procedures: Area should be ventilated. Absorbent should be used to pick up excess material. All used and unused product should be disposed of in accordance with federal, state and local regulations.

Section 7: Handling and Storage

Handling Procedures: Store in a cool, dry area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls: Adequate to prevent accumulation of vapors. Use mechanical means if necessary to maintain levels below the exposure limits. If working in a confined space, follow applicable OSHA regulations.

Respiratory: Use NIOSH/MSHA compliant respirators or self-contained breathing apparatus above exposure limits. Follow OSHA regulations 29 CFR 1910.134.

Protective Clothing/Equipment: Wear chemically protective gloves and safety glasses. Use a splash apron and boots if splashing occurs.

Section 9: Physical & Chemical Properties

Physical State:	Semi-solid to solid	Appearance & Odor:	Blue, semi-solid to solid grease w/ a faint petroleum odor
Specific Gravity:	0.90 @ 60 °F	Boiling Point:	> 450°F
Freezing Point:	ND	Vapor Pressure:	Neg.
Evaporation Rate:	Neg.	Vapor Density (air = 1)	> than air
pH:	NA	Solubility:	Neg.
Volatile Organic Compounds:%:	1.5	g/L: 14	lbs./gal: 0.12

Section 10: Stability and Reactivity

Stability: Stable Hazardous Polymerization: No
Chemical Incompatibilities: Strong oxidizers.
Materials to Avoid: Strong oxidizing agents
Hazardous Decomposition Products: None

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. See Section 3 of this MSDS for acute symptoms of overexposure and carcinogenicity information.

Section 12: Ecological Information

Ecotoxicity: No data available.
Environmental Fate: No data available for biodegradation.

Section 13: Disposal Considerations

Disposal: This material if discarded may be hazardous waste under U.S. EPA RCRA regulations. All disposal activities must comply with federal, state and local regulations. Contact your local or state environmental agency for specific rules. Do not dump into sewers, on the ground or into any body of water.

Section 14: Transportation Information

Shipping Name: Not Regulated
Hazard Class: NA UN Number: NA Packing Group: NA
Label: NA Placard: NA
Special Provisions: NA

Section 15: Regulatory Information

TSCA: All components are either listed under TSCA or are exempt.
SARA Title III: Section 311/312: NA Section 313*: None
CERCLA/Superfund (RQ): NA
Extremely Hazardous Substances: No
California Prop 65: This product contains chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.

* See section 2 for percentage

Section 16: Additional Information

Prepared By: Adam M. Selisker Date: March 6, 2002
Technical Information: (800) 521-3168 CRC #: NA
This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label.

CAS: Chemical Abstract Service NA: Not Applicable
ppm: Parts per Million ND: Not Determined
TCC: Tag Closed Cup NE: Not Established
LEL: Lower Explosive Limit g/L: grams per Liter
UEL: Upper Explosive Limit lbs./gal: pounds per gallon
PPE: Personal Protection Equipment RQ: Reportable Quantity
COC: Cleveland Closed Cup



MATERIAL SAFETY DATA SHEET



CRC Industries, Inc. • 885 Louis Drive • Warminster, PA 18974 • (215) 674-4300

FOR 24 HR. EMERGENCY INFORMATION CALL CHEMTREC 1-800-424-9300
PRODUCT NAME Moly-Graph Ext.Pres. M/P Greas #-MSDSSL3330
PRODUCT-SL3330

(Page 1 of 2)

1. INGREDIENTS	CAS #	ACGIH TLV	OSHA PEL	OTHER LIMITS	%
Petroleum Distillate	64741-89-5				1-2
Lithium Soap Complex				
Antimony Compound (as Sb)	7440-36-0				
Molybdenum Compound (as Mo)	7739-98-7				
Natural graphite	7782-42-5	2.5mg/3	15mppc		

2. PHYSICAL DATA :

Specific Gravity : .9-1.0

Boiling Point : > 600F

Freezing Point : ND

Appearance and Odor:

Dark or amber semi-solid to solid material with a faint odor.

Vapor Pressure : Neg.

% Volatile : Neg.

Evaporation Rate : Neg.

Vapor Density : Neg.

pH: NA

Solubility : Neg.

3. FIRE AND EXPLOSION DATA

Flashpoint : >400F Method : TCC

Flammable Limits : Neg. LEL: UEL:

Extinguishing Media : Carbon dioxide, dry chemical, foam.

Unusual Hazards : Can ignite and burn when heated above its flash point.

4. REACTIVITY AND STABILITY

Stability : Stable

Hazardous decomposition products : Carbon dioxide, carbon monoxide.

Materials to avoid : Strong oxidizing agents.

5. PROTECTION INFORMATION

Ventilation : Adequate ventilation to prevent the accumulation of vapors.

Respiratory : Use self-contained breathing apparatus if accumulation of vapors is suspected.

Gloves : Resistant

Eye & Face : Safety glasses

Other Protective Equipment: NA

MATERIAL SAFETY DATA SHEET

PRODUCT NAME : Holy-Graph Ext. Pres. M/P Greas #-MSDS6L3330
PRODUCTS-SL3330

MANUFACTURED BY : CRC INDUSTRIES, INC.
225 LOUIS DRIVE, WARMINSTER, PA. 18974

PHONE (215) 671-4300

(Page 2 of 2)

6. HEALTH HAZARD DATA

Primary Routes of Entry : Skin, Inhalation.

Signs and Symptoms of Exposure

1. Acute Overexposure:

May cause irritation of the eyes and skin. Exposure to oil mists or fumes which may be generated at high temperatures may irritate the nose, throat, and upper respiratory tract.

2. Chronic overexposure: NA

Medical Conditions Generally Aggravated by Exposure

: Pre-existing skin and pre-respiratory conditions.

Chemical Listed as Carcinogen : No National Toxicology Program
or Potential Carcinogen : No IARC Monographs
: No OSHA

Emergency and First Aid Procedures : (If symptoms persist, call a physician)

1. Inhalation : Remove to fresh air.
2. Eyes : Flush with large amounts of water for 15 minutes.
3. Skin : Wash area thoroughly with soap and water.
4. Ingestion : Do NOT induce vomiting.

7. SPILL OR LEAK PROCEDURES

Precautions to be taken : Store in a cool, dry area.
in Handling and Storage

Steps to be taken in case : Absorb spill with an absorbent material.
Material is released or
spilled

Waste Disposal : All used and unused Product should be disposed of in
conformance with local, state and federal regulations.

8. SPECIAL PRECAUTIONS AND USE DIRECTIONS :

Operations such as maintenance, cleaning, repair, or sampling increase the potential for exposure to this material. Personnel involved in these types of operations should wear protective equipment and clothing and exercise special precautions to avoid exposure.

9. NFPA HAZARD RATINGS Health:1 Flammability:1 Reactivity:0

10. SARA Information

This product contains NO chemicals that are subject to
release reporting under section 313 of SARA Title III.

PREPARED BY: Adam Selickar ORIGINAL DATE or DATE OF REVISION: 06/14/94



Material Safety Data Sheet

The Dow Chemical Company

Product Name: BETAPRIME (TM) 5404

Issue Date: 2006.05.05
Print Date: 09 May 2006

The Dow Chemical Company encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name
BETAPRIME (TM) 5404

COMPANY IDENTIFICATION
The Dow Chemical Company
2030 Willard H. Dow Center
Midland, MI 48674
USA

Prepared By: Prepared for use in Canada by EH&S, Product Regulatory
Management Department.
450-652-1029
Revision 2006.05.05
Print Date: 5/9/2006

Customer Information Number: 800-258-2436

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 989-636-4400
Local Emergency Contact: 519-339-3711

2. Hazards Identification

Emergency Overview
Color: Black
Physical State: Liquid
Odor: Characteristic
Hazards of product:

WARNING! Flammable liquid and vapor. May cause allergic skin and respiratory reaction. May be harmful if inhaled. May cause central nervous system effects; may cause respiratory tract irritation. May cause skin irritation. Causes eye irritation.

* Indicates a Trademark

Eye Contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.

Skin Contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. An MDI skin decontamination study demonstrated that cleaning very soon after exposure is important, and that a polyglycol-based skin cleanser or corn oil may be more effective than soap and water. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Notes to Physician: May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Maintain adequate ventilation and oxygenation of the patient. If you are sensitized to diisocyanates, consult your physician regarding working with other respiratory irritants or sensitizers. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Medical Conditions Aggravated by Exposure: Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome). Skin contact may aggravate preexisting dermatitis.

5. Fire Fighting Measures

Extinguishing Media: Dry chemical fire extinguishers. Water fog or fine spray. Foam.

Extinguishing Media to Avoid: Do not use direct water stream.

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves).

Unusual Fire and Explosion Hazards: None known.

Hazardous Combustion Products: Hazardous combustion by-products may include but are not limited to carbon dioxide and carbon monoxide.

See Section 9 for related Physical Properties

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Contain spilled material if possible. Absorb with materials such as: Cat litter. Sand. Sawdust.

Ignition Sources Removal: Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond all containers and handling equipment. Ignition sources can include and are not limited to pilot lights, flames, smoking, sparks, heaters, electrical equipment, and static discharges.

Dust Control: Not applicable.

Personal Precautions: Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Inhalation, Skin, Mucous and Eye Contact Prevention: Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

A BEI notation following the exposure guideline refers to a guidance value for assessing biological monitoring results as an indicator of the uptake of a substance from all routes of exposures.

Personal Protection

Eye/Face Protection: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator. Eye wash fountain should be located in immediate work area.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Chlorinated polyethylene. Viton. Neoprene. Natural rubber ("latex"). Nitrile/butadiene rubber ("nitrile" or "NBR"). Avoid gloves made of: Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Ventilation: Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. The odor and irritancy of this material are inadequate to warn of excessive exposure.

9. Physical and Chemical Properties

Physical State	Liquid
Color	Black
Odor	Characteristic
Flash Point - Closed Cup	-8 °C <i>Vendor</i>
Flammable Limits In Air	Lower: No test data available Upper: No test data available
Autoignition Temperature	No test data available
Vapor Pressure	No test data available
Boiling Point (760 mmHg)	No test data available.
Vapor Density (air = 1)	No test data available
Specific Gravity (H ₂ O = 1)	0.90 <i>Vendor</i>
Freezing Point	No test data available
Melting Point	No test data available
Solubility in Water (by weight)	No test data available

Component Toxicology - Methyl ethyl ketone

Inhalation	LC50, 4 h, Vapor, Rat 11,700 ppm
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Component Toxicology - Carbon black

Inhalation	LC50, 1 h, Aerosol, Rat 27 mg/l
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Component Toxicology - Methyl ethyl ketone

Ingestion	LD50, Rat 2,657 - 5,554 mg/kg
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Component Toxicology - Carbon black

Ingestion	LD50, Rat > 15,400 mg/kg
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12. Ecological Information

CHEMICAL FATEData for Component: **Methyl ethyl ketone****Movement & Partitioning**

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).

Henry's Law Constant (H): 2.44E-5 atm*m3/mole; 25 °C Measured

Partition coefficient, n-octanol/water (log Pow): 0.29 Measured

Partition coefficient, soil organic carbon/water (Koc): 3.8 Estimated

Persistence and Degradability

Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%).

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
1.33E-12 cm3/s	8 d	Estimated

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
71 - 76 %	71 - 82 %	71 - 89 %	

Theoretical Oxygen Demand: 2.44 mg/mg

Data for Component: **Carbon black****Movement & Partitioning**

Partitioning from water to n-octanol is not applicable.

Persistence and Degradability

Biodegradation is not applicable.

Data for Component: **Ethyl acetate****Movement & Partitioning**

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).

Henry's Law Constant (H): 1.2E-4 atm*m3/mole; 25 °C Measured

Partition coefficient, n-octanol/water (log Pow): 0.73 Measured

Partition coefficient, soil organic carbon/water (Koc): 3 Estimated

Bioconcentration Factor (BCF): 30; fish; Measured

Persistence and Degradability

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method
100 %	28 d	OECD 301D Test

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
65 - 71 %	67 - 77 %	77 - 90 %	

Theoretical Oxygen Demand: 1.82 mg/mg

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, fathead minnow (*Pimephales promelas*): 230 - 290 mg/l

LC50, guppy (*Poecilia reticulata*): 210 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, water flea *Daphnia pulex*, immobilization: 262 mg/l

Aquatic Plant Toxicity

EC50, green alga *Selenastrum capricornutum*, biomass growth inhibition: > 2,000 mg/l

Data for Component: **Diphenylmethane-4,4'-diisocyanate (MDI), isomers(1) and homologues(2), blending of (1) and (2)**

The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species. Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Toxicity to Soil Dwelling Organisms

LC50, Earthworm *Eisenia foetida*, adult, 14 d: > 1,000 mg/kg

Data for Component: **4,4' -Methylenediphenyl diisocyanate**

The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species. Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Toxicity to Soil Dwelling Organisms

LC50, Earthworm *Eisenia foetida*, adult, 14 d: > 1,000 mg/kg

Data for Component: **Aromatic hydrocarbons (mainly C10)**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, rainbow trout (*Oncorhynchus mykiss*), 96 h: 9.22 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, saltwater mysid *Mysidopsis bahia*, 96 h: 2.0 mg/l

Toxicity to Non-mammalian Terrestrial Species

dietary LC50, bobwhite (*Colinus virginianus*): > 6,500 ppm

oral LD50, bobwhite (*Colinus virginianus*): > 2,250 mg/kg

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. DOW HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Group at 1-800-258-2436 or 1-989-832-1556 (U.S.), or 1-800-331-6451 (Canada) for further details.

Treatment and disposal methods of used packaging: Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

Component	CAS #	Amount W/W
Methyl ethyl ketone	78-93-3	> 30.0 - < 60.0 %
Ethyl acetate	141-78-6	> 1.0 - < 10.0 %
4,4' -Methylenediphenyl diisocyanate	101-68-8	> 1.0 - < 5.0 %
Carbon black	1333-86-4	> 1.0 - < 10.0 %

16. Other Information

Recommended Uses and Restrictions

A primer -- For use in automotive applications.

Revision

Identification Number: 83283 / 1001 / Issue Date 2006.05.05 / Version: 1.1

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ DES	Hazard Designation
VOL/VOL	Volume/Volume

The Dow Chemical Company urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.



Material Safety Data Sheet

The Dow Chemical Company

Product Name: BETAPRIME (TM) 5404

Issue Date: 2006.05.05

Print Date: 09 May 2006

The Dow Chemical Company encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name

BETAPRIME (TM) 5404

COMPANY IDENTIFICATION

The Dow Chemical Company
2030 Willard H. Dow Center
Midland, MI 48674
USA

Prepared By:

Prepared for use in Canada by EH&S, Product Regulatory
Management Department.
450-652-1029

Revision

2006.05.05

Print Date:

5/9/2006

Customer Information Number:

800-258-2436

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact:

989-636-4400

Local Emergency Contact:

519-339-3711

2. Hazards Identification

Emergency Overview

Color: Black

Physical State: Liquid

Odor: Characteristic

Hazards of product:

WARNING! Flammable liquid and vapor. May cause allergic skin and respiratory reaction. May be harmful if inhaled. May cause central nervous system effects; may cause respiratory tract irritation. May cause skin irritation. Causes eye irritation.

* Indicates a Trademark

Eye Contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.

Skin Contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. An MDI skin decontamination study demonstrated that cleaning very soon after exposure is important, and that a polyglycol-based skin cleanser or corn oil may be more effective than soap and water. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Notes to Physician: May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Maintain adequate ventilation and oxygenation of the patient. If you are sensitized to diisocyanates, consult your physician regarding working with other respiratory irritants or sensitizers. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Medical Conditions Aggravated by Exposure: Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome). Skin contact may aggravate preexisting dermatitis.

5. Fire Fighting Measures

Extinguishing Media: Dry chemical fire extinguishers. Water fog or fine spray. Foam.

Extinguishing Media to Avoid: Do not use direct water stream.

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves).

Unusual Fire and Explosion Hazards: None known.

Hazardous Combustion Products: Hazardous combustion by-products may include but are not limited to carbon dioxide and carbon monoxide.

See Section 9 for related Physical Properties

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Contain spilled material if possible. Absorb with materials such as: Cat litter. Sand. Sawdust.

Ignition Sources Removal: Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond all containers and handling equipment. Ignition sources can include and are not limited to pilot lights, flames, smoking, sparks, heaters, electrical equipment, and static discharges.

Dust Control: Not applicable.

Personal Precautions: Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Inhalation, Skin, Mucous and Eye Contact Prevention: Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered. A BEI notation following the exposure guideline refers to a guidance value for assessing biological monitoring results as an indicator of the uptake of a substance from all routes of exposures.

Personal Protection

Eye/Face Protection: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator. Eye wash fountain should be located in immediate work area.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Chlorinated polyethylene. Viton. Neoprene. Natural rubber ("latex"). Nitrile/butadiene rubber ("nitrile" or "NBR"). Avoid gloves made of: Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Ventilation: Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. The odor and irritancy of this material are inadequate to warn of excessive exposure.

9. Physical and Chemical Properties

Physical State	Liquid
Color	Black
Odor	Characteristic
Flash Point - Closed Cup	-8 °C <i>Vendor</i>
Flammable Limits In Air	Lower: No test data available Upper: No test data available
Autoignition Temperature	No test data available
Vapor Pressure	No test data available
Boiling Point (760 mmHg)	No test data available.
Vapor Density (air = 1)	No test data available
Specific Gravity (H ₂ O = 1)	0.90 <i>Vendor</i>
Freezing Point	No test data available
Melting Point	No test data available
Solubility in Water (by weight)	No test data available

Component Toxicology - Methyl ethyl ketone	
Inhalation	LC50, 4 h, Vapor, Rat 11,700 ppm
Component Toxicology - Carbon black	
Inhalation	LC50, 1 h, Aerosol, Rat 27 mg/l
Component Toxicology - Methyl ethyl ketone	
Ingestion	LD50, Rat 2,657 - 5,554 mg/kg
Component Toxicology - Carbon black	
Ingestion	LD50, Rat > 15,400 mg/kg

12. Ecological Information

CHEMICAL FATE

Data for Component: **Methyl ethyl ketone**

Movement & Partitioning

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).

Henry's Law Constant (H): 2.44E-5 atm*m3/mole; 25 °C Measured

Partition coefficient, n-octanol/water (log Pow): 0.29 Measured

Partition coefficient, soil organic carbon/water (Koc): 3.8 Estimated

Persistence and Degradability

Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%).

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
1.33E-12 cm3/s	8 d	Estimated

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
71 - 76 %	71 - 82 %	71 - 89 %	

Theoretical Oxygen Demand: 2.44 mg/mg

Data for Component: **Carbon black**

Movement & Partitioning

Partitioning from water to n-octanol is not applicable.

Persistence and Degradability

Biodegradation is not applicable.

Data for Component: **Ethyl acetate**

Movement & Partitioning

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).

Henry's Law Constant (H): 1.2E-4 atm*m3/mole; 25 °C Measured

Partition coefficient, n-octanol/water (log Pow): 0.73 Measured

Partition coefficient, soil organic carbon/water (Koc): 3 Estimated

Bioconcentration Factor (BCF): 30; fish; Measured

Persistence and Degradability

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method
100 %	28 d	OECD 301D Test

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
65 - 71 %	67 - 77 %	77 - 90 %	

Theoretical Oxygen Demand: 1.82 mg/mg

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, fathead minnow (*Pimephales promelas*): 230 - 290 mg/l

LC50, guppy (*Poecilia reticulata*): 210 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, water flea *Daphnia pulex*, immobilization: 262 mg/l

Aquatic Plant Toxicity

EC50, green alga *Selenastrum capricornutum*, biomass growth inhibition: > 2,000 mg/l

Data for Component: Diphenylmethane-4,4'-diisocyanate (MDI), isomers(1) and homologues(2), blending of (1) and (2)

The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species. Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Toxicity to Soil Dwelling Organisms

LC50, Earthworm *Eisenia foetida*, adult, 14 d: > 1,000 mg/kg

Data for Component: 4,4' -Methylenediphenyl diisocyanate

The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species. Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Toxicity to Soil Dwelling Organisms

LC50, Earthworm *Eisenia foetida*, adult, 14 d: > 1,000 mg/kg

Data for Component: Aromatic hydrocarbons (mainly C10)

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, rainbow trout (*Oncorhynchus mykiss*), 96 h: 9.22 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, saltwater mysid *Mysidopsis bahia*, 96 h: 2.0 mg/l

Toxicity to Non-mammalian Terrestrial Species

dietary LC50, bobwhite (*Colinus virginianus*): > 6,500 ppm

oral LD50, bobwhite (*Colinus virginianus*): > 2,250 mg/kg

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. DOW HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Group at 1-800-258-2436 or 1-989-832-1556 (U.S.), or 1-800-331-6451 (Canada) for further details.

Treatment and disposal methods of used packaging: Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

Component	CAS #	Amount W/W
Methyl ethyl ketone	78-93-3	> 30.0 - < 60.0 %
Ethyl acetate	141-78-6	> 1.0 - < 10.0 %
4,4' -Methylenediphenyl diisocyanate	101-68-8	> 1.0 - < 5.0 %
Carbon black	1333-86-4	> 1.0 - < 10.0 %

16. Other Information

Recommended Uses and Restrictions

A primer -- For use in automotive applications.

Revision

Identification Number: 83283 / 1001 / Issue Date 2006.05.05 / Version: 1.1

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
VOL/VOL	Volume/Volume

The Dow Chemical Company urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: **Sta-Plex™ Premium Red Grease**
Product Number (s): **SL3190-SL3199**

Manufactured By: **CRC Industries, Inc.** (215) 674-4300
885 Louis Drive, Warminster, PA 18974
24-Hour Emergency Information: **CHEMTREC** (800) 424-9300

Section 2: Composition/Information on Ingredients

Component	CAS NUMBER	ACGIH TLV	OSHA PEL	OTHER LIMITS	%
Petroleum Distillate	64742-52-5	5 mg/m ³	5 mg/m ³	(mist)	5-10
Residual Oils	64742-57-0	5 mg/m ³	NE	NE	10-20
Paraffinic Oil	64741-88-4	NE	NE	NE	30-50

Section 3: Hazards Identification

Emergency Overview

Appearance & Odor: Red, semi-solid to solid grease with a faint petroleum odor.

Potential Health Effects:

Inhalation: NA
Eyes: Irritation
Skin: Irritation
Ingestion: Irritation to nose, throat or upper respiratory tract.

Carcinogenicity: OSHA: No IARC: No NTP: No
Chronic Overexposure: NA
Medical Conditions Aggravated by Exposure: Pre-existing skin and pre-respiratory conditions.

Section 4: First Aid Measures

Inhalation: Remove to fresh air. Give artificial respiration if necessary.
Eyes: Flush with large amounts of water for 15 minutes.
Skin: Remove contaminated clothing and wash area with soap and water.
Ingestion: Call a physician. Do not induce vomiting.

Section 5: Fire-Fighting Measures

Flashpoint: >400°F Method: TCC LEL: ND UEL: ND
 Extinguishing Media: CO₂, dry chemical, foam
 Hazardous Combustion Products: CO₂ and carbon monoxide
 Fire-fighting Instructions: Remove containers from fire area if possible. Use self-contained breathing apparatus for fire fighting.

NFPA: Health: 1 Flammability: 1 Reactivity: 0
 HMIS: Health: 1 Flammability: 1 Reactivity: 0 PPE: B

Section 6: Accidental Release Measures

Spill/Leak Procedures: Area should be ventilated. Absorbent should be used to pick up excess material. All used and unused product should be disposed of in accordance with federal, state and local regulations.

Section 7: Handling and Storage

Handling Procedures: Store in a cool, dry area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls: Adequate to prevent accumulation of vapors. Use mechanical means if necessary to maintain levels below the exposure limits. If working in a confined space, follow applicable OSHA regulations.

Respiratory: Use NIOSH/MSHA compliant respirators or self-contained breathing apparatus above exposure limits. Follow OSHA regulations 29 CFR 1910.134.

Protective Clothing/Equipment: Wear chemically protective gloves and safety glasses. Use a splash apron and boots if splashing occurs.

Section 9: Physical & Chemical Properties

Physical State:	Semi-solid	Appearance & Odor:	Red, semi-solid to solid grease with a faint petroleum odor
Specific Gravity:	0.90 @ 60°F	Boiling Point:	ND
Freezing Point:	ND	Vapor Pressure:	Neg.
Evaporation Rate:	Neg.	Vapor Density (air = 1)	> than air
pH:	NA	Solubility:	Neg.
Volatile Organic Compounds:%:	1.5	g/L: 14	lbs./gal: 0.12

Section 10: Stability and Reactivity

Stability: Stable Hazardous Polymerization: No
 Chemical Incompatibilities: Strong oxidizers.
 Materials to Avoid: Strong oxidizing agents
 Hazardous Decomposition Products: None

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. See Section 3 of this MSDS for acute symptoms of overexposure and carcinogenicity information.

Section 12: Ecological Information

Ecotoxicity: No data available.
 Environmental Fate: No data available for biodegradation.

Section 13: Disposal Considerations

Disposal: This material if discarded may be hazardous waste under U.S. EPA RCRA regulations. All disposal activities must comply with federal, state and local regulations. Contact your local or state environmental agency for specific rules. Do not dump into sewers, on the ground or into any body of water.

Section 14: Transportation Information

Shipping Name:	Not Regulated	UN Number:	NA	Packing Group:	NA
Hazard Class:	NA	Placard:	NA		
Label:	NA				
Special Provisions:	NA				

Section 15: Regulatory Information

TSCA:	All components are either listed under TSCA or are exempt.		
SARA Title III:	Section 311/312:	NA	Section 313*: None
CERCLA/Superfund (RQ):		NA	
Extremely Hazardous Substances:		No	
California Prop 65:		This product contains chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.	

* See section 2 for percentage

Section 16: Additional Information

Prepared By:	Adam M. Selisker	Date:	October 28, 2002
Technical Information:	(800) 521-3168	CRC #:	SL3190

This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label.

CAS:	Chemical Abstract Service	NA:	Not Applicable
ppm:	Parts per Million	ND:	Not Determined
TCC:	Tag Closed Cup	NE:	Not Established
LEL:	Lower Explosive Limit	g/L:	grams per Liter
UEL:	Upper Explosive Limit	lbs./gal:	pounds per gallon
PPE:	Personal Protection Equipment	RQ:	Reportable Quantity
COC:	Cleveland Closed Cup		

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : LANDMARK TOP & TRIM ADHESIVE *Weldwood* **DAP**
UPC NUMBER : 00233, 00234, 00235, 00237, 00238, 04069
PRODUCT USE/CLASS : Spray Contact Cement

MANUFACTURER: **DAP INC.**
P.O. BOX 277
DAYTON, OH 45401-0277

24 HOUR EMERGENCY:
INFO TRAC: 1-800-535-5053
DAP INC.: 1-800-543-3840

PREPARE DATE : 05/06/96
REVISION NO. : 7
REVISION DATE: 02/01/97

GENERAL INFORMATION:
DAP INC.: 1-800-543-3840

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % RANGE
01	Toluene	108-88-3	15.0-20.0 %
02	N-Hexane	110-54-3	10.0-15.0 %
03	Aliphatic Petroleum Distillate	64742-89-8	30.0-35.0 %
04	Acetone	67-64-1	15.0-20.0 %

ITEM	EXPOSURE LIMITS					
	ACGIH		OSHA		COMPANY	
	TLV-TWA	TLV-STEL	PEL-TWA	PEL-CEILING	TLV-TWA	SKIN
01	50 ppm.	N.E.	100 ppm.	N.E.	N.E.	YES
02	50 ppm	N.E.	50 ppm	N.E.	N.E.	NO
03	400 ppm	N.E.	400 ppm	N.E.	N.E.	NO
04	750 ppm	1000 ppm	750 ppm	N.E.	N.E.	NO

(See Section 16 for abbreviation legend)

Remaining ingredients are not considered hazardous per the OSHA Hazard Communication Standard. *lt*

Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); limits may vary between states.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: DANGER! Extremely flammable liquid and vapor. Vapor harmful. Harmful or fatal if swallowed. Vapors may cause flash fire or explosion. Aspiration hazard if swallowed - can enter lungs and cause damage. Harmful if inhaled.

POTENTIAL HEALTH EFFECTS:

EFFECTS OF OVEREXPOSURE - EYE CONTACT: May cause eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May irritate skin. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

EFFECTS OF OVEREXPOSURE - INHALATION: Vapor harmful if inhaled. Vapor may irritate nose and upper respiratory tract. Vapor inhalation may affect the brain or nervous system causing dizziness, headache or nausea.

EFFECTS OF OVEREXPOSURE - INGESTION: This material may be harmful or fatal if swallowed. Aspiration of material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal. If ingested, this product may cause vomiting, diarrhea, and depressed respiration.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Reports have associated permanent brain and nervous system damage with prolonged and repeated occupational overexposure to solvents. Overexposure or misuse of toluene can cause liver, kidney, and brain damage as well as cardiac abnormalities. Hexane exposure can cause nerve damage to arms and legs which may be permanent. Symptoms include: loss of memory, loss of intellectual ability, and loss of coordination.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY CONTACT: None known.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT INHALATION

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Flush with large quantities of water until irritation subsides. Contact a physician.

SKIN CONTACT: Wash with soap and water.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Contact a physician immediately.

INGESTION: DO NOT INDUCE VOMITING. If irritation or complications arise, contact a physician or Regional Poison Control Center immediately.

COMMENTS: None.

(Continued on Page 3)

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: -50 F
(SETAFLASH CLOSED CUP)

LOWER EXPLOSIVE LIMIT: N.A.
UPPER EXPLOSIVE LIMIT: N.A.

AUTOIGNITION TEMPERATURE: N.E.

EXTINGUISHING MEDIA: CO2 DRY CHEMICAL FOAM

UNUSUAL FIRE AND EXPLOSION HAZARDS: Extremely flammable. Material will readily ignite at room temperature. Vapors may form an explosive mixture with air. Vapors can travel through a source of ignition and flashback. Containers may explode if exposed to extreme heat. Eliminate sources of ignition: heat, electrical equipment, sparks, and flames. Do not put in contact with oxidizing or caustic materials.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment, including self-contained breathing apparatus, is recommended to protect from combustion products. Cool exposed containers with water.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Dike spill area. Immediately eliminate sources of ignition. Use absorbent material or scrape up dried material and place into containers.

SECTION 7 - HANDLING AND STORAGE

HANDLING INFORMATION: KEEP OUT OF REACH OF CHILDREN. Avoid skin and eye contact. Avoid breathing vapors. Use only in a well ventilated area.

STORAGE INFORMATION: Store away from caustics and oxidizers. Keep away from heat, spark, and flame. Keep containers tightly closed when not in use. Keep containers from excessive heat and freezing. Do not store at temperatures above 120 degrees F.

OTHER PRECAUTIONS: Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal. Do not take internally. Construction and repair activities can adversely affect indoor air quality. Consult with the occupants or a representative (i.e. maintenance, building manager, industrial hygienist, or safety officer) to determine ways to minimize any impact.

Construction and repair activities can adversely affect indoor air quality. Consult with occupants or a representative (i.e. maintenance, building manager, industrial hygienist, or safety officer) to determine ways to minimize any impact.

(Continued on Page 4)

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide sufficient mechanical ventilation (local or general exhaust) to maintain exposure below PEL and TLV. Vapors are heavier than air and will collect in low areas. Check all low areas (basements, sumps, etc.) for vapors before entering.

RESPIRATORY PROTECTION: If 8 hour exposure limit or value is exceeded for any component, use an approved NIOSH/OSHA respirator. Consult your safety equipment supplier and the OSHA regulation, 29 CFR 1910.134 for respirator requirements. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

EYE PROTECTION: Goggles or safety glasses with side shields.

SKIN PROTECTION: Solvent impervious gloves.

OTHER PROTECTIVE EQUIPMENT: Provide eyewash and solvent impervious apron if body contact may occur.

HYGIENIC PRACTICES: Remove contaminated clothing and wash before reuse.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE	: 130 - 140 F	VAPOR DENSITY	: Is heavier than air
ODOR	: Gasoline-like		
APPEARANCE	: Liquid	EVAPORATION RATE:	Is faster than Butyl Acetate
SOLUBILITY IN H2O	: Negligible		
SPECIFIC GRAVITY	: 0.7958		
VAPOR PRESSURE	: 186 mm Hg @ 68F		
PHYSICAL STATE	: Liquid		

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Excessive heat and freezing.

INCOMPATIBILITY: Strong oxidizers and caustics.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decomposition products, i.e. COx, NOx

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

(Continued on Page 5)

SECTION 11 - TOXICOLOGICAL PROPERTIES

No product or component toxicological information is available.

SECTION 12 - ECOLOGICAL INFORMATION

No Information.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT/DISPOSAL: Dispose of according to Federal, State, and Local Standards. Discarded material should be incinerated at a permitted facility. Liquids cannot be disposed of in a landfill. Do not reuse empty container. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA WASTE CODE - If discarded (40 CFR 261): D001-Ignitable

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Adhesive

DOT HAZARD CLASS: 3

DOT UN/NA NUMBER: UN 1133 PACKING GROUP: II

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

----- CHEMICAL NAME -----	CAS NUMBER	WT/WT % RANGE
Toluene	108-88-3	15.0-20.0 %
N-Hexane	110-54-3	10.0-15.0 %

Continued on Page 6)

SECTION 15 - REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

----- CHEMICAL NAME -----	CAS NUMBER
No information is available.	

NEW JERSEY RIGHT-TO-KNOW:

The following materials are non-hazardous, but are among the top five components in this product:

----- CHEMICAL NAME -----	CAS NUMBER
Polychlorinated Rubber	TSRN-618608-5023P

PENNSYLVANIA RIGHT-TO-KNOW:

The following non-hazardous ingredients are present in the product at greater than 3%:

----- CHEMICAL NAME -----	CAS NUMBER
Polychlorinated Rubber	proprietary
Phenolic resin	proprietary

CALIFORNIA PROPOSITION 65:

WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause birth defects or other reproductive harm:

----- CHEMICAL NAME -----	CAS NUMBER
Toluene	108-88-3

INTERNATIONAL REGULATIONS: AS FOLLOWS -

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: No information available.

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 2 FLAMMABILITY: 3 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 07/18/95

VOC less water, less exempt solvent: 610-620 gm/l (77-78% where acetone is exempt

VOC material: 490-500 gm/l (62-63%)

(Continued on Page 7

SECTION 16 - OTHER INFORMATION

LEGEND: ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
N.A. - NOT APPLICABLE
N.E. - NOT ESTABLISHED
PEL - PERMISSIBLE EXPOSURE LIMIT
NTP - NATIONAL TOXICOLOGY PROGRAM
SARA - SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
STEL - SHORT TERM EXPOSURE LIMIT
TLV - THRESHOLD LIMIT VALUE(8 HR. TIME WEIGHTED AVERAGE OR TWA)
VOC - VOLATILE ORGANIC COMPOUND
NJRTK - NEW JERSEY RIGHT TO KNOW LAW
N.D. - NOT DETERMINED

Supersedes MSDS# 30519

This data is offered in good faith as typical values and not as a product specification. No warranty either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review the recommendations in specific context of the intended use and determine if they are appropriate.

< End OF MSDS >



Material Safety Data Sheet

The Dow Chemical Company

Product Name: BETAPRIME (TM) 5404

Issue Date: 2006.05.05
Print Date: 09 May 2006

The Dow Chemical Company encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name
BETAPRIME (TM) 5404

COMPANY IDENTIFICATION
The Dow Chemical Company
2030 Willard H. Dow Center
Midland, MI 48674
USA

Prepared By: Prepared for use in Canada by EH&S, Product Regulatory
Management Department.
450-652-1029
Revision: 2006.05.05
Print Date: 5/9/2006

Customer Information Number: 800-258-2436

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 989-636-4400
Local Emergency Contact: 519-339-3711

2. Hazards Identification

Emergency Overview

Color: Black

Physical State: Liquid

Odor: Characteristic

Hazards of product:

WARNING! Flammable liquid and vapor. May cause allergic skin and respiratory reaction. May be harmful if inhaled. May cause central nervous system effects; may cause respiratory tract irritation. May cause skin irritation. Causes eye irritation.

* Indicates a Trademark

Potential Health Effects

Eye Contact: May cause moderate eye irritation. May cause moderate corneal injury. Vapor may cause eye irritation experienced as mild discomfort and redness.

Skin Contact: Prolonged contact may cause moderate skin irritation with local redness. May cause drying and flaking of the skin. May stain skin.

Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Skin Sensitization: A component in this mixture has been shown to be a skin sensitizer. Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.

Inhalation: Vapor concentrations are attainable which could be hazardous on single exposure. May cause respiratory irritation and central nervous system depression. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness. May cause nausea and vomiting. For some component(s): Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause pulmonary edema (fluid in the lungs.) Effects may be delayed. Decreased lung function has been associated with overexposure to isocyanates. This material contains mineral and/or inorganic fillers. There is essentially no potential for inhalation exposure to these fillers incidental to industrial handling due to the physical state.

Respiratory Sensitization: A component in this mixture may cause an allergic respiratory response. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening.

Ingestion: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

Effects of Repeated Exposure: Methyl ethyl ketone has caused liver effects in laboratory animals exposed by inhalation to high concentrations. Methyl ethyl ketone is probably not neurotoxic in itself but it potentiates the neurotoxicity of methyl-n-butyl ketone and n-hexane. Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols. Contains component(s) which have been reported to cause effects on the following organs in animals: Liver. Respiratory tract.

Cancer Information: Lung tumors have been observed in laboratory animals exposed to aerosol droplets of MDI/Polymeric MDI (6 mg/m³) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

Birth Defects/Developmental Effects: In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother. Contains component(s) which did not cause birth defects in animals; other fetal effects occurred only at doses toxic to the mother.

3. Composition/information on ingredients

Component	CAS #	Amount w/w
Methyl ethyl ketone	78-93-3	> 50.0 - < 60.0 %
Carbon black	1333-86-4	< 10.0 %
Ethyl acetate	141-78-6	< 10.0 %
Diphenylmethane-4,4'-diisocyanate (MDI), isomers(1) and homologues(2), blending of (1) and (2)	9016-87-9	< 10.0 %
3-Methoxy-1-butyl acetate	4435-53-4	< 10.0 %
4,4' -Methylenediphenyl diisocyanate	101-68-8	< 5.0 %
Aromatic hydrocarbons (mainly C10)	64742-95-6	< 2.5 %

Amounts are presented as percentages by weight.

4. First-aid measures

Eye Contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.

Skin Contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. An MDI skin decontamination study demonstrated that cleaning very soon after exposure is important, and that a polyglycol-based skin cleanser or corn oil may be more effective than soap and water. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Notes to Physician: May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Maintain adequate ventilation and oxygenation of the patient. If you are sensitized to diisocyanates, consult your physician regarding working with other respiratory irritants or sensitizers. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Medical Conditions Aggravated by Exposure: Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome). Skin contact may aggravate preexisting dermatitis.

5. Fire Fighting Measures

Extinguishing Media: Dry chemical fire extinguishers. Water fog or fine spray. Foam.

Extinguishing Media to Avoid: Do not use direct water stream.

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves).

Unusual Fire and Explosion Hazards: None known.

Hazardous Combustion Products: Hazardous combustion by-products may include but are not limited to carbon dioxide and carbon monoxide.

See Section 9 for related Physical Properties

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Contain spilled material if possible. Absorb with materials such as: Cat litter. Sand. Sawdust.

Ignition Sources Removal: Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond all containers and handling equipment. Ignition sources can include and are not limited to pilot lights, flames, smoking, sparks, heaters, electrical equipment, and static discharges.

Dust Control: Not applicable.

Personal Precautions: Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Inhalation, Skin, Mucous and Eye Contact Prevention: Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. Handling and Storage

Handling

General Handling: Use with adequate ventilation. Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Do not breathe vapor. Keep container closed. Keep away from heat, sparks and flame. Do not cut or weld container. No smoking, open flames or sources of ignition in handling and storage area.

Storage

Keep container tightly closed and in a well-ventilated place.

Storage temperature:

5 - 35 °C

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
4,4' -Methylenediphenyl diisocyanate	OEL (QUE)	TWA	0.051 mg/m3 0.005 ppm SEN
	CAD MB OEL	Ceiling	0.02 ppm
	ACGIH	TWA	0.005 ppm
	CAD MB OEL	Ceiling	0.02 ppm
	CAD AB OEL	TWA	0.051 mg/m3 0.005 ppm
	CAD BC OEL	TWA	0.005 ppm SKIN
	CAD BC OEL	CEILING	0.01 ppm SKIN
	CAD ON OEL	TWA	0.2 micromoles/m3
	CAD ON OEL	TWA	0.005 ppm
	CAD ON OEL	CEILING	0.8 micromoles/m3
Methyl ethyl ketone	OEL (QUE)	TWA	150 mg/m3 50 ppm
	OEL (QUE)	STEL	300 mg/m3 100 ppm
	CAD AB OEL	TWA	590 mg/m3 200 ppm
	CAD AB OEL	STEL	895 mg/m3 300 ppm
	CAD ON OEL	TWA	590 mg/m3 200 ppm
	CAD ON OEL	STEL	885 mg/m3 300 ppm
	ACGIH	TWA	200 ppm BEI
	ACGIH	STEL	300 ppm BEI
	CAD AB OEL	STEL	885 mg/m3 300 ppm
	CAD BC OEL	TWA	50 ppm
CAD BC OEL	STEL	100 ppm	
Ethyl acetate	OEL (QUE)	TWA	1,440 mg/m3 400 ppm
	CAD AB OEL	TWA	1,440 mg/m3 400 ppm
	CAD BC OEL	TWA	150 ppm
	CAD ON OEL	TWA	1,440 mg/m3 400 ppm
	ACGIH	TWA	400 ppm

Consult local authorities for recommended exposure limits.

A "skin" notation following the exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact.

It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

A BEI notation following the exposure guideline refers to a guidance value for assessing biological monitoring results as an indicator of the uptake of a substance from all routes of exposures.

Personal Protection

Eye/Face Protection: Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator. Eye wash fountain should be located in immediate work area.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Chlorinated polyethylene. Viton. Neoprene. Natural rubber ("latex"), Nitrile/butadiene rubber ("nitrile" or "NBR"). Avoid gloves made of: Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Ventilation: Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. The odor and irritancy of this material are inadequate to warn of excessive exposure.

9. Physical and Chemical Properties

Physical State	Liquid
Color	Black
Odor	Characteristic
Flash Point - Closed Cup	-8 °C <i>Vendor</i>
Flammable Limits In Air	Lower: No test data available Upper: No test data available
Autoignition Temperature	No test data available
Vapor Pressure	No test data available
Boiling Point (760 mmHg)	No test data available.
Vapor Density (air = 1)	No test data available
Specific Gravity (H ₂ O = 1)	0.90 <i>Vendor</i>
Freezing Point	No test data available
Melting Point	No test data available
Solubility in Water (by weight)	No test data available

pH	No test data available
Dynamic Viscosity	No test data available
Volatile Organic Compounds	5.80 lb/gal EPA METHOD NO. 24, PROCEDURE B

10. Stability and Reactivity

Stability/Instability

Stable under recommended storage conditions. See Storage, Section 7.

Conditions to Avoid: Some components of this product can decompose at elevated temperatures.

Incompatible Materials: Strong oxidizers. Acids.

Hazardous Decomposition Products: Unlikely to be formed under normal industrial use.

Hazardous Polymerization

Will not occur.

11. Toxicological Information

Acute Toxicity

Ingestion

Single dose oral LD50 has not been determined.

Skin Absorption

The dermal LD50 has not been determined.

Sensitization

Skin

A component in this mixture has been shown to be a skin sensitizer. Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.

Respiratory

A component in this mixture may cause an allergic respiratory response. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening.

Repeated Dose Toxicity

Methyl ethyl ketone has caused liver effects in laboratory animals exposed by inhalation to high concentrations. Methyl ethyl ketone is probably not neurotoxic in itself but it potentiates the neurotoxicity of methyl-n-butyl ketone and n-hexane. Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols. Contains component(s) which have been reported to cause effects on the following organs in animals: Liver. Respiratory tract.

Chronic Toxicity and Carcinogenicity

Lung tumors have been observed in laboratory animals exposed to aerosol droplets of MDI/Polymeric MDI (6 mg/m³) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

Developmental Toxicity

In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother. Contains component(s) which did not cause birth defects in animals; other fetal effects occurred only at doses toxic to the mother.

Genetic Toxicology

Contains component(s) which were negative in some in vitro genetic toxicity studies and positive in others. Contains component(s) which was negative in animal genetic toxicity studies.

Component Toxicology - Methyl ethyl ketone

Skin Absorption	LD50, Rabbit 6,440 - 8,050 mg/kg
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Component Toxicology - Carbon black

Skin Absorption	LD50, Rabbit > 3,000 mg/kg
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Component Toxicology - Methyl ethyl ketone

Inhalation	LC50, 4 h, Vapor, Rat 11,700 ppm
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Component Toxicology - Carbon black

Inhalation	LC50, 1 h, Aerosol, Rat 27 mg/l
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Component Toxicology - Methyl ethyl ketone

Ingestion	LD50, Rat 2,657 - 5,554 mg/kg
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Component Toxicology - Carbon black

Ingestion	LD50, Rat > 15,400 mg/kg
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12. Ecological Information

CHEMICAL FATEData for Component: **Methyl ethyl ketone****Movement & Partitioning**

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).

Henry's Law Constant (H): 2.44E-5 atm*m3/mole; 25 °C Measured

Partition coefficient, n-octanol/water (log Pow): 0.29 Measured

Partition coefficient, soil organic carbon/water (Koc): 3.8 Estimated

Persistence and Degradability

Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%).

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
1.33E-12 cm3/s	8 d	Estimated

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
71 - 76 %	71 - 82 %	71 - 89 %	

Theoretical Oxygen Demand: 2.44 mg/mg

Data for Component: **Carbon black****Movement & Partitioning**

Partitioning from water to n-octanol is not applicable.

Persistence and Degradability

Biodegradation is not applicable.

Data for Component: **Ethyl acetate****Movement & Partitioning**

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).

Henry's Law Constant (H): 1.2E-4 atm*m3/mole; 25 °C Measured

Partition coefficient, n-octanol/water (log Pow): 0.73 Measured

Partition coefficient, soil organic carbon/water (Koc): 3 Estimated

Bioconcentration Factor (BCF): 30; fish; Measured

Persistence and Degradability

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method
100 %	28 d	OECD 301D Test

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
65 - 71 %	67 - 77 %	77 - 90 %	

Theoretical Oxygen Demand: 1.82 mg/mg

Data for Component: Diphenylmethane-4,4'-diisocyanate (MDI), isomers(1) and homologues(2), blending of (1) and (2)

Movement & Partitioning

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Persistence and Degradability

In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.

Data for Component: 4,4'-Methylenediphenyl diisocyanate

Movement & Partitioning

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Persistence and Degradability

In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.

Data for Component: Aromatic hydrocarbons (mainly C10)

Movement & Partitioning

For the major component(s): Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Potential for mobility in soil is low (Koc between 500 and 2000). For the minor component(s): Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Persistence and Degradability

For the major component(s): Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%). For some component(s): Biodegradation under aerobic static laboratory conditions is low (BOD20 or BOD28/ThOD between 2.5 and 10%).

ECOTOXICITY

Data for Component: Methyl ethyl ketone

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, bluegill (*Lepomis macrochirus*): 1,690 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, water flea *Daphnia magna*, immobilization: 5,091 mg/l

Aquatic Plant Toxicity

EC50, alga *Scenedesmus* sp., biomass growth inhibition: 4,300 mg/l

Toxicity to Micro-organisms

EC50; bacteria, Growth inhibition (cell density reduction): > 1,000 mg/l

Data for Component: Carbon black

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, golden orfe (*Leuciscus idus*): > 1,000 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, water flea *Daphnia magna*, immobilization: > 5,600 mg/l

Data for Component: Ethyl acetate

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, fathead minnow (*Pimephales promelas*): 230 - 290 mg/l

LC50, guppy (*Poecilia reticulata*): 210 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, water flea *Daphnia pulex*, immobilization: 262 mg/l

Aquatic Plant Toxicity

EC50, green alga *Selenastrum capricornutum*, biomass growth inhibition: > 2,000 mg/l

Data for Component: **Diphenylmethane-4,4'-diisocyanate (MDI), isomers(1) and homologues(2), blending of (1) and (2)**

The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species. Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Toxicity to Soil Dwelling Organisms

LC50, Earthworm *Eisenia foetida*, adult, 14 d: > 1,000 mg/kg

Data for Component: **4,4' -Methylenediphenyl diisocyanate**

The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species. Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Toxicity to Soil Dwelling Organisms

LC50, Earthworm *Eisenia foetida*, adult, 14 d: > 1,000 mg/kg

Data for Component: **Aromatic hydrocarbons (mainly C10)**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, rainbow trout (*Oncorhynchus mykiss*), 96 h: 9.22 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, saltwater mysid *Mysidopsis bahia*, 96 h: 2.0 mg/l

Toxicity to Non-mammalian Terrestrial Species

dietary LC50, bobwhite (*Colinus virginianus*): > 6,500 ppm

oral LD50, bobwhite (*Colinus virginianus*): > 2,250 mg/kg

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. DOW HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Group at 1-800-258-2436 or 1-989-832-1556 (U.S.), or 1-800-331-6451 (Canada) for further details.

Treatment and disposal methods of used packaging: Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

14. Transport Information

TDG Small container

Proper Shipping Name: COATING SOLUTION

Hazard Class: 3 ID Number: UN1139 Packing Group: PG II

TDG Large container

Proper Shipping Name: COATING SOLUTION

Hazard Class: 3 ID Number: UN1139 Packing Group: PG II

ICAO/IATA

Proper Shipping Name: COATING SOLUTION

Hazard Class: 3 ID Number: UN1139 Packing Group: PG II

Cargo Packing Instruction: 307

Passenger Packing Instruction: 305

15. Regulatory Information

European Inventory of Existing Commercial Chemical Substances (EINECS)

The components of this product are on the EINECS inventory or are exempt from inventory requirements.

US. Toxic Substances Control Act

All components of this product are either on the TSCA Inventory, are exempt from TSCA Inventory Requirements under 40 CFR 720.30, or comply with the PMN Polymer Exemption 40 CFR 723.250.

CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

China. Inventory of Existing Chemical Substances

This product is listed on, or complies with, the State Environmental Protection Agency (SEPA) China Chemical Inventory.

Australia. Industrial Chemical (Notification and Assessment) Act

The principal components and additives of this product are included in the Australian Inventory of Chemical Substances (AICS) or comply with the requirements of the Industrial Chemicals (Notification and Assessment) Act 1989.

Korea Existing Chemicals Inventory (KECI)

The components of this product are on the Korea Existing Chemicals Inventory (KECI) or are exempt from the inventory requirements.

Philippines Inventory of Chemicals and Chemical Substances (PICCS) List

The components of this product are on the Philippines Inventory of Chemical and Chemical Substances (PICCS) or are exempt from the inventory requirements.

Hazardous Products Act Information: CPR Compliance

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Hazardous Products Act Information: WHMIS Classification

B2	Flammable Liquid with a Flash Point Less Than 37.8 C
D2A	Possible, Probable or Known Human Carcinogen According to Classifications By IARC or ACGIH
D2A	Respiratory Tract Sensitizer
D2B	Eye or Skin Irritant
D2B	Skin Sensitizer

Hazardous Products Act Information: Hazardous Ingredients

Component	CAS #	Amount W/W
Methyl ethyl ketone	78-93-3	> 30.0 - < 60.0 %
Ethyl acetate	141-78-6	> 1.0 - < 10.0 %
4,4' -Methylenediphenyl diisocyanate	101-68-8	> 1.0 - < 5.0 %
Carbon black	1333-86-4	> 1.0 - < 10.0 %

16. Other Information

Recommended Uses and Restrictions

A primer -- For use in automotive applications.

Revision

Identification Number: 83283 / 1001 / Issue Date 2006.05.05 / Version: 1.1

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
VOL/VOL	Volume/Volume

The Dow Chemical Company urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

Material Safety Data Sheet



Page: 1

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

24-Hour Emergency Phone Number: 989-636-4400

Product: **BETASEAL(TM) EXPRESS**

Product Code: 73152

Effective Date: 05/07/03

Date Printed: 05/08/03

MSD: 007637

The Dow Chemical Company, Midland, MI 48674

Customer Information Center: 800-258-2436

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component(s)	CAS#	Amount (wt % or ppm)
MDI, 4,4'-isomer, free	000101-68-8	< 1
Carbon black	001333-86-4	20-30
Clay	001332-58-7	< 10
Phthalate esters	066402-68-4	15-25
	068515-44-6	
	068515-45-7	
	111381-89-6	
	111381-90-9	
MDI-based urethane polymer	085507-79-5	40-50
	111381-91-0	
	P96-1231	

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

* Black paste. Odorless. May cause allergic respiratory *
* reaction. May cause allergic skin reaction. May cause eye *
* irritation. *

POTENTIAL HEALTH EFFECTS (See Section 11 for toxicological data.)

This section includes possible adverse effects which could occur if this material is not handled in the recommended manner.

EYE: May cause eye irritation.

(Continued on page 2, over)

* OR (R) INDICATES A TRADEMARK OF THE DOW CHEMICAL COMPANY

Product: BETASEAL(TM) EXPRESS
Product Code: 73152

Effective Date: 05/07/03

Date Printed: 05/08/03

MSD: 007637

SKIN: Prolonged or repeated exposure may cause slight skin irritation with local redness. Material may stick to skin causing irritation upon removal. Skin contact may cause an allergic skin reaction. Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization. Prolonged skin contact is unlikely to result in absorption of harmful amounts. May stain skin.

INGESTION: Low toxicity if swallowed. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury.

INHALATION: At room temperature, exposure to vapor is minimal due to low volatility. Vapor from heated material may cause respiratory irritation and other effects. For the minor component, MDI, excessive exposure may cause irritation to upper respiratory tract and lungs and pulmonary edema (fluid in the lungs). May cause allergic respiratory response. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Effects may be delayed. Occasionally, breathing difficulty may be life threatening. Decreased lung function has been associated with overexposure to isocyanates. This material contains mineral and/or inorganic fillers. There is essentially no potential for inhalation exposure to these fillers incidental to industrial handling due to the physical state. Signs and symptoms of excessive exposure may be nausea and/or vomiting.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: For a phthalate ester component: liver effects were observed in rats given high doses in their diet; no adverse effects were observed in repeated exposure inhalation studies in several animal species. Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposure to MDI/polymeric MDI aerosols.

CANCER INFORMATION: Contains a phthalate ester which produced an increased incidence of leukemia in a 2-yr animal feeding study; effects were not dose related. There were no carcinogenic effects observed in rats given 0.03-0.3% in their diet for 30 months. For the minor component, MDI: Lung tumors have been observed in laboratory animals exposed to aerosol droplets of MDI (6 mg/m³) for their lifetime. Tumors occurred concurrently

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with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

TERATOLOGY (BIRTH DEFECTS): The phthalate ester has caused birth defects in laboratory animals only at doses toxic to the mother. In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother.

REPRODUCTIVE EFFECTS: For a phthalate ester component: minimal effects on reproduction considered secondary to parental toxicity were observed in animals given extremely high dietary doses. A lower dose produced parental toxicity but no reproductive effects. There were no effects on fertility at any dose.

4. FIRST AID

EYE: Flush eyes thoroughly with water for several minutes. Remove contact lenses after initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

SKIN: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. An MDI skin decontamination study demonstrated that cleaning very soon after exposure is important, and that a polyglycol-based skin cleanser or corn oil may be more effective than soap and water.

INGESTION: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

INHALATION: Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

NOTE TO PHYSICIAN: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and anti-tussives may be of help. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory

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distress. Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: > 230 F

METHOD USED: ERDCO

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, foam.

SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters should wear self-contained, positive pressure breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

6. ACCIDENTAL RELEASE MEASURES (See Section 15 for Regulatory Information)

PROTECT PEOPLE: Clear non-emergency personnel from area. Use appropriate safety equipment. For additional information, refer to "Exposure Controls/Personal Protection", MSDS section 8.

PROTECT THE ENVIRONMENT: Contain material to prevent contamination of soil, surface water or ground water.

CLEAN-UP: Contain spill if possible. Absorb with material such as cat litter, sand or sawdust. Please refer to Disposal Information, MSDS Section 13.

7. HANDLING AND STORAGE

HANDLING & STORAGE: Store in tightly closed container. Store indoors between 60 and 80F.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

These precautions are suggested for conditions with high potential for exposure. If handling procedures are such that there is only a low potential for exposure, less protection may be needed. Emergency conditions may require additional precautions.

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. The odor and irritancy of this material are

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inadequate to warn of excessive exposure. Use only with adequate ventilation. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and the people working at this point.

PERSONAL PROTECTIVE EQUIPMENT:

EYE/FACE PROTECTION: Use safety glasses.

SKIN PROTECTION: Use protective clothing chemically resistant to this material. Selection of specific items such as faceshield, gloves, boots, apron or full-body suit will depend on operation. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (airline or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus.

EXPOSURE GUIDELINES: Methylene bisphenyl isocyanate (MDI): ACGIH TLV is 0.005 ppm TWA and OSHA PEL is 0.02 ppm ceiling.

PELs are in accord with those recommended by OSHA, as in the 1989 revision of PELs.

Although some of the fillers used in this product may have exposure guidelines, no exposure would be expected under normal handling conditions because of the physical state of the material.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Black paste.

ODOR: Odorless.

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VAPOR PRESSURE: N/A

VAPOR DENSITY: N/A

BOILING POINT: N/A

SOLUBILITY IN WATER/MISCIBILITY: N/A

SPECIFIC GRAVITY OR DENSITY: 1.19 (+/-0.03)

VOLATILE ORGANIC COMPOUNDS (VOC) CONTENT: 0.11 nominal (lbs/gal)
EPA Method 24 Procedure B

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.

INCOMPATIBILITY WITH OTHER MATERIALS: Strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide, carbon monoxide,
smoke, fumes.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION (See Section 3 for Potential Health Effects. For detailed toxicological data, write or call the address or non-emergency number shown in Section 1)

SKIN: The dermal LD50 has not been determined.

INGESTION: Single dose oral LD50 has not been determined.

MUTAGENICITY: For the phthalate ester component, in vitro mutagenicity studies were negative. Mutagenicity data on MDI are inconclusive. MDI was weakly positive in some in vitro (test tube) studies; other in vitro studies were negative. A mutagenicity study in animals was negative.

12. ECOLOGICAL INFORMATION (For detailed Ecological data, write or call the address or non-emergency number shown in Section 1)

For detailed ecological data, write or call the Dow Chemical Company.

13. DISPOSAL CONSIDERATIONS (See Section 15 for Regulatory Information)

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DISPOSAL: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.

All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterization and compliance with applicable law are the responsibility solely of the waste generator.

THE DOW CHEMICAL COMPANY HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL.

THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information On Ingredients).

FOR UNUSED AND UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted incinerator or other thermal destruction device.

As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics and that manage used drums. Telephone Dow's Customer Information Center at 800-258-2436 or 989-832-1556 for further details.

14. TRANSPORT INFORMATION

U.S. DOT CLASSIFICATION/DESCRIPTION: For DOT regulatory information, if required, consult transportation regulations or product shipping papers.

15. REGULATORY INFORMATION (Not meant to be all-inclusive--selected regulations represented)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

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See other sections for health and safety information.

U.S. REGULATIONS

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SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
METHYLENE BIS(PHENYLISOCYANATE) (MDI)	000101-68-8	<1 %

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

- An immediate health hazard
- A delayed health hazard

TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME	CAS NUMBER	LIST
METHYLENE BIS(PHENYLISOCYANATE) (MDI)	000101-68-8	NJ2 NJ3 PA1 PA3
KAOLIN	001332-58-7	PA1
CARBON BLACK	001333-86-4	NJ3 PA1

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REGULATORY INFORMATION (CONTINUED)

- NJ2=New Jersey Environmental Hazardous Substance (present at greater than or equal to 1.0%).
- NJ3=New Jersey Workplace Hazardous Substance (present at greater than or equal to 1.0%).
- PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%).
- PA3=Pennsylvania Environmental Hazardous Substance (present at greater than or equal to 1.0%).

OSHA HAZARD COMMUNICATION STANDARD:

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND):

This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA which may require reporting of releases:

Category:

Chemical Name	CAS#	RQ	% in Product
MDI, 4,4'-isomer, free	000101-68-8	5000 lbs	< 1

CANADIAN REGULATIONS

WHMIS INFORMATION: The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:

- D2A - possible, probable or known human carcinogen according to classifications by IARC or ACGIH
 - D2A - respiratory tract sensitizer
 - D2B - skin sensitizer
- Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program.

CPR STATEMENT: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR)

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REGULATORY INFORMATION (CONTINUED)

and the MSDS contains all the information required by the CPR.

HAZARDOUS PRODUCTS ACT INFORMATION: This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 and 14):

COMPONENTS:	CAS #	AMOUNT (%w/w)
Carbon Black	001333-86-4	20-30
MDI, 4,4'-isomer, free	000101-68-8	0.1-1

16. OTHER INFORMATION

Section(s) changed: 2, 4, 8

* OR (R) INDICATES A TRADEMARK OF THE DOW CHEMICAL COMPANY
The Information Herein Is Given In Good Faith, But No Warranty,
Express Or Implied, Is Made. Consult The Dow Chemical Company
For Further Information.



Material Safety Data Sheet

The Dow Chemical Company

Product Name: DURAMOULD* ETM 60A Polyol

Issue Date: 06/24/2009
Print Date: 06 Apr 2010

The Dow Chemical Company encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name
DURAMOULD* ETM 60A Polyol

COMPANY IDENTIFICATION
The Dow Chemical Company
2030 Willard H. Dow Center
Midland, MI 48674
USA

Customer Information Number: 800-258-2436

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: 989-636-4400
Local Emergency Contact: 989-636-4400

2. Hazards Identification

Emergency Overview
Color: Orange to brown
Physical State: Liquid.
Odor: Amine.
Hazards of product:

WARNING! May cause allergic skin reaction. Isolate area. Slipping hazard. Highly toxic to fish and/or other aquatic organisms.

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Health Effects

Eye Contact: May cause slight temporary eye irritation. Corneal injury is unlikely.
Skin Contact: Prolonged exposure not likely to cause significant skin irritation.
Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.
Skin Sensitization: A component in this mixture has been shown to be a skin sensitizer.

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Inhalation: At room temperature, exposure to vapor is minimal due to low volatility; single exposure is not likely to be hazardous.

Ingestion: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

3. Composition Information

Component	CAS #	Amount
Polyether polyol	Trade secret	> 60.0 - < 100.0 %
6-Methyl-2,4-bis(methylthio)phenylene-1,3-diamine	106264-79-3	> 5.0 - < 15.0 %
Zinc Neodecanoate	27253-29-8	> 1.0 - < 5.0 %

4. First-aid measures

Eye Contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Skin Contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Notes to Physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Emergency Personnel Protection: If potential for exposure exists refer to Section 8 for specific personal protective equipment.

5. Fire Fighting Measures

Extinguishing Media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. May spread fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.
Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Contain spilled material if possible. Absorb with materials such as: Dirt. Sand. Collect in suitable and properly labeled containers. Wash the spill site with water. See Section 13, Disposal Considerations, for additional information.

Personal Precautions: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Spilled material may cause a slipping hazard. Refer to Section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. Spills or discharge to natural waterways is likely to kill aquatic organisms.

7. Handling and Storage

Handling

General Handling: Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Keep container closed. This material is hygroscopic in nature. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Other Precautions: Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

Storage

Protect from atmospheric moisture. Store in a dry place. Avoid prolonged exposure to heat and air. Store in the following material(s): Carbon steel. Stainless steel. Polypropylene. Polyethylene-lined container. Teflon. Glass-lined container. Aluminum. Plasite 3066 lined container. Plasite 3070 lined container. 316 stainless steel. See Section 10 for more specific information.

Storage Period:
12 Months

Storage temperature:
25 °C

8. Exposure Controls / Personal Protection

Exposure Limits

None established

Personal Protection

Eye/Face Protection: Use safety glasses.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Nitrile/butadiene rubber ("nitrile" or "NBR"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all

relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Under intended handling conditions, no respiratory protection should be needed.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Ventilation: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations..

9. Physical and Chemical Properties

Physical State	Liquid.
Color	Orange to brown
Odor	Amine.
Odor Threshold	No test data available
Flash Point - Closed Cup	> 100 °C (> 212 °F) <i>Literature</i>
Flammability (solid, gas)	Not applicable to liquids
Flammable Limits In Air	Lower: No test data available Upper: No test data available
Autoignition Temperature	No test data available
Vapor Pressure	< 1 mmHg @ 25 °C <i>Literature</i>
Boiling Point (760 mmHg)	> 100 °C (> 212 °F) <i>Estimated.</i>
Vapor Density (air = 1)	No test data available
Specific Gravity (H ₂ O = 1)	1.03 <i>ASTM D891</i>
Freezing Point	No test data available
Melting Point	No test data available
Solubility in water (by weight)	Negligible
pH	Not applicable
Decomposition Temperature	No test data available
Partition coefficient, n-octanol/water (log Pow)	No data available for this product. See Section 12 for individual component data.
Evaporation Rate (Butyl Acetate = 1)	No test data available
Kinematic Viscosity	No test data available

10. Stability and Reactivity

Stability/Instability

Stable under recommended storage conditions. See Storage, Section 7.

Conditions to Avoid: Product can oxidize at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible Materials: Avoid contact with oxidizing materials. Avoid contact with: Strong acids. Strong bases. Avoid unintended contact with isocyanates. The reaction of polyols and isocyanates generates heat.

Hazardous Polymerization

Will not occur by itself.

Thermal Decomposition

Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon dioxide. Alcohols. Ethers. Hydrocarbons. Ketones. Polymer fragments.

11. Toxicological Information**Acute Toxicity****Ingestion**

Single dose oral LD50 has not been determined.

For the major component(s): Estimated. LD50, Rat > 2,000 mg/kg

Skin Absorption

The dermal LD50 has not been determined.

For the major component(s): Estimated. LD50, Rabbit > 2,000 mg/kg

Sensitization**Skin**

A component in this mixture has been shown to be a skin sensitizer.

Repeated Dose Toxicity

No relevant information found.

Chronic Toxicity and Carcinogenicity

No information currently available.

Developmental Toxicity

No relevant information found.

Reproductive Toxicity

No relevant information found.

Genetic Toxicology

Contains component(s) which were negative in some in vitro genetic toxicity studies and positive in others.

12. Ecological Information**ENVIRONMENTAL FATE**

Data for Component: Polyether polyol

Movement & Partitioning

No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

Persistence and Degradability

For this family of materials: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Data for Component: 6-Methyl-2,4-bis(methylthio)phenylene-1,3-diamine

Movement & Partitioning

Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Potential for mobility in soil is low (Koc between 500 and 2000). Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Henry's Law Constant (H): 2.18E-12 atm*m³/mole; 25 °C Estimated.

Partition coefficient, n-octanol/water (log Pow): 2.5 Measured

Partition coefficient, soil organic carbon/water (Koc): 1,249 Estimated.

Bioconcentration Factor (BCF): 17; Estimated.

Persistence and Degradability

Material is not readily biodegradable according to OECD/EC guidelines.

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
2.022E-10 cm ³ /s	0.053 d	Estimated.

Theoretical Oxygen Demand: 2.69 mg/mg

Data for Component: Zinc Neodecanoate

Movement & Partitioning

No relevant information found.

Persistence and Degradability

No relevant information found.

ECOTOXICITY

Data for Component: Polyether polyol

For this family of materials: Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Data for Component: 6-Methyl-2,4-bis(methylthio)phenylene-1,3-diamine

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, rainbow trout (*Oncorhynchus mykiss*), 96 h: 16.9 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, water flea *Daphnia magna*, 48 h, immobilization: 0.9 mg/l

Data for Component: Zinc Neodecanoate

No relevant information found.

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 10 Regulatory Information, MSDS Section 15

14. Transport Information

DOT Non-Bulk
NOT REGULATED

DOT Bulk
NOT REGULATED

IMDG
NOT REGULATED

ICAO/IATA
NOT REGULATED

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	No
Fire Hazard	No
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Component	CAS #	Amount
Zinc Neodecanoate	27253-29-8	> 1.0 - < 5.0 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

US. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

CEPA - Domestic Substances List (DSL)

This product contains one or more substances which are not listed on the Canadian Domestic Substances List (DSL). Contact your sales or technical service representative for more information.

16. Other Information

Product Literature

Additional information on this product may be obtained by calling your sales or customer service contact.

Recommended Uses and Restrictions

Component(s) for the manufacture of urethane polymers. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

Revision

Identification Number: 1037524 / 1001 / Issue Date 06/24/2009 / Version: 1.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

The Dow Chemical Company urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.



Material Safety Data Sheet

The Dow Chemical Company

Product Name: DURAMOULD* ETM 6075 Prepolymer

Issue Date: 03/22/2010
Print Date: 13 Apr 2010

The Dow Chemical Company encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name
DURAMOULD* ETM 6075 Prepolymer

COMPANY IDENTIFICATION
The Dow Chemical Company
2030 Willard H. Dow Center
Midland, MI 48674
USA

Customer Information Number: 800-258-2436

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 989-636-4400
Local Emergency Contact: 989-636-4400

2. Hazards Identification

Emergency Overview

Color: Red to brown
Physical State: Liquid.
Odor: Sweet
Hazards of product:

WARNING! Causes eye irritation. May cause allergic skin reaction. May cause allergic respiratory reaction. May be harmful if inhaled. May react with water. Isolate area. Keep upwind of spill. Stay out of low areas. Elevated temperatures can cause hazardous polymerization. Material reacts slowly with water, releasing carbon dioxide which can cause pressure buildup and rupture of closed containers. Elevated temperatures accelerate this reaction. Toxic fumes may be released in fire situations. Suspect cancer hazard. May cause cancer.

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200

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Potential Health Effects

Eye Contact: May cause moderate eye irritation. May cause moderate corneal injury

Skin Contact: Prolonged contact may cause slight skin irritation with local redness

Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts

Skin Sensitization: Skin contact may cause an allergic skin reaction. Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.

Inhalation: Vapor concentrations are attainable which could be hazardous on single exposure.

Excessive exposure to TDI may cause severe irritation of the upper respiratory tract and lungs, fluid in the lungs, permanent decrease of lung function, neurologic disorders, cholinesterase depression and gastrointestinal distress.

Respiratory Sensitization: May cause allergic respiratory response. Reexposure to extremely low isocyanate concentrations may cause allergic respiratory reactions in individuals already sensitized.

Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening. Effects may be delayed.

Ingestion: Very low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Swallowing may result in gastrointestinal irritation or ulceration.

Aspiration hazard: Based on physical properties, not likely to be an aspiration hazard.

Cancer Information: An oral study in which high doses of TDI were reported to cause cancer in animals has been found to contain numerous deficiencies which compromise the validity of the study. TDI did not cause cancer in laboratory animals exposed by inhalation, the most likely route of exposure.

Birth Defects/Developmental Effects: TDI did not cause birth defects in laboratory animals. Slight effects were observed in the fetus but only at doses which caused toxic effects to the mother.

3. Composition Information

Component	CAS #	Amount
Polypropylene Glycol-Propoxylated Glycerol-TDI Copolymer	57451-08-8	> 70.0 %
Toluene-diisocyanate, mixture of toluene-2,4-di-isocyanate and toluene-2,6-di-isocyanate	26471-62-5	< 10.0 %

Toluene-diisocyanate (TDI) with CAS# 26471-62-5 describes a mixture of toluene-2,4-di-isocyanate and toluene-2,6-di-isocyanate

4. First-aid measures

Eye Contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Eye wash fountain should be located in immediate work area.

Skin Contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. An MDI skin decontamination study demonstrated that cleaning very soon after exposure is important, and that a polyglycol-based skin cleanser or corn oil may be more effective than soap and water. This may also apply to other isocyanates. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Safety shower should be located in immediate work area.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Ingestion: Do not induce vomiting. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Do not give anything by mouth unless the person is fully conscious.

Notes to Physician: Maintain adequate ventilation and oxygenation of the patient. May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled

beta2 agonist and oral or parenteral corticosteroids. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. If you are sensitized to diisocyanates, consult your physician regarding working with other respiratory irritants or sensitizers. Cholinesterase inhibition has been noted in human exposure but is not of benefit in determining exposure and is not correlated with signs of exposure. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/esophageal control if lavage is done. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Medical Conditions Aggravated by Exposure: Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

Emergency Personnel Protection: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

5. Fire Fighting Measures

Extinguishing Media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. May spread fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water is not recommended, but may be applied in large quantities as a fine spray when other extinguishing agents are not available. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Use water spray to cool fire-exposed containers and fire-affected zone until fire is out. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

Unusual Fire and Explosion Hazards: Product reacts with water. Reaction may produce heat and/or gases. This reaction may be violent. Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns.

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Isocyanates. Hydrogen cyanide. Carbon monoxide. Carbon dioxide.

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Contain spilled material if possible. Absorb with materials such as: Dirt, Vermiculite, Sand, Clay. Do NOT use absorbent materials such as: Cement powder (Note: may generate heat). Collect in suitable and properly labeled open containers. Do not place in sealed containers. Suitable containers include: Metal drums, Plastic drums, Polylined fiber pacs. Wash the spill site with large quantities of water. Attempt to neutralize by adding suitable decontaminant solution: Formulation 1: sodium carbonate 5 - 10%; liquid detergent 0.2 - 2%; water to make up to 100%, OR Formulation 2: concentrated ammonia solution 3 - 8%; liquid detergent

0.2 - 2%; water to make up to 100%. If ammonia is used, use good ventilation to prevent vapor exposure. Contact Dow for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

Personal Precautions: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. Keep upwind of spill. Ventilate area of leak or spill. If available, use foam to smother or suppress. Refer to Section 7, Handling, for additional precautionary measures. See Section 10 for more specific information. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. Handling and Storage

Handling

General Handling: Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Avoid breathing vapor. Wash thoroughly after handling. Keep container tightly closed. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Other Precautions: Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

Storage

Store in a dry place. Protect from atmospheric moisture. Do not store product contaminated with water to prevent potential hazardous reaction. See Section 10 for more specific information. Additional storage and handling information on this product may be obtained by calling your sales or customer service contact.

Storage Period:
6 Months

Storage temperature:
25 °C

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Toluene-diisocyanate, mixture of toluene-2,4-di-isocyanate and toluene-2,6-di-isocyanate	ACGIH	TWA	0.005 ppm SEN
	ACGIH	STEL	0.02 ppm SEN
	Dow IHG	TWA	0.005 ppm SEN
	Dow IHG	Ceiling	0.02 ppm SEN
2,4-Diisocyanato-1-methylbenzene	ACGIH	TWA	0.005 ppm SEN
	ACGIH	STEL	0.02 ppm SEN
	OSHA Table Z-1	Ceiling	0.14 mg/m ³ 0.02 ppm
	Dow IHG	TWA	0.005 ppm SEN
	Dow IHG	Ceiling	0.02 ppm SEN
2,6-Diisocyanatotoluene	ACGIH	TWA	0.005 ppm SEN
	ACGIH	STEL	0.02 ppm SEN
	Dow IHG	TWA	0.005 ppm SEN
	Dow IHG	Ceiling	0.02 ppm SEN

A "SEN" notation following the exposure guideline refers to the potential to produce sensitization, as confirmed by human or animal data.

Personal Protection

Eye/Face Protection: Use chemical goggles. Eye wash fountain should be located in immediate work area

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water. Contaminated clothing should be disposed of properly or decontaminated and laundered before reuse. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber, Chlorinated polyethylene, Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Neoprene, Nitrile/butadiene rubber ("nitrile" or "NBR"), Polyvinyl chloride ("PVC" or "vinyl"), Viton. **NOTICE:** The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air purifying respirator. The respirator should contain an organic vapor sorbent. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. The following should be effective types of air-purifying respirators: Organic vapor cartridge.
Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Ventilation: Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. The odor and irritancy of this material are inadequate to warn of excessive exposure.

9. Physical and Chemical Properties
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Physical State	Liquid.
Color	Red to brown
Odor	Sweet
Odor Threshold	No test data available
Flash Point - Closed Cup	> 150 °C (> 302 °F) <i>Literature</i>
Flammability (solid, gas)	Not applicable to liquids
Flammable Limits In Air	Lower: No test data available Upper: No test data available
Autoignition Temperature	No test data available
Vapor Pressure	0.01 mmHg @ 25 °C <i>Literature</i>
Boiling Point (760 mmHg)	No test data available.
Vapor Density (air = 1)	No test data available
Specific Gravity (H ₂ O = 1)	1.05 <i>ASTM D891</i>
Freezing Point	No test data available
Melting Point	No test data available
Solubility in water (by weight)	reacts with water
pH	Not applicable
Decomposition Temperature	No test data available

Partition coefficient, n-octanol/water (log Pow)	No data available for this product See Section 12 for individual component data
Evaporation Rate (Butyl Acetate = 1)	No test data available
Dynamic Viscosity	3,000 cps @ 25 °C ASTM D4878
Kinematic Viscosity	No test data available

10. Stability and Reactivity

Stability/Instability

Stable under recommended storage conditions. See Storage, Section 7

Conditions to Avoid: Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid. Avoid moisture. Material reacts slowly with water, releasing carbon dioxide which can cause pressure buildup and rupture of closed containers. Elevated temperatures accelerate this reaction.

Incompatible Materials: Avoid contact with: Acids. Alcohols. Amines. Water. Ammonia. Bases. Metal compounds. Moist air. Strong oxidizers. Products based on diisocyanates like TDI and MDI react with many materials to release heat. The reaction rate increases with temperature as well as with increased contact; these reactions can become violent. Contact is increased by stirring or if the other material acts as a solvent. Products based on diisocyanates such as TDI and MDI are not soluble in water and will sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea. Avoid contact with metals such as: Aluminum. Zinc. Brass. Tin. Copper. Galvanized metals. Avoid contact with absorbent materials such as: Moist organic absorbents. Avoid unintended contact with polyols. The reaction of polyols and isocyanates generate heat.

Hazardous Polymerization

Can occur. Polymerization can be catalyzed by: Strong bases. Water.

Thermal Decomposition

Decomposition products depend upon temperature, air supply and the presence of other materials. Gases are released during decomposition.

11. Toxicological Information

Acute Toxicity

Ingestion

Single dose oral LD50 has not been determined. Estimated. LD50, Rat > 5,000 mg/kg

Dermal

The dermal LD50 has not been determined. Estimated. LD50, Rabbit > 2,000 mg/kg

Inhalation

The LC50 has not been determined.

Eye damage/eye irritation

May cause moderate eye irritation. May cause moderate corneal injury.

Skin corrosion/irritation

Prolonged contact may cause slight skin irritation with local redness.

Sensitization

Skin

Skin contact may cause an allergic skin reaction. Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.

Respiratory

May cause allergic respiratory response. Reexposure to extremely low isocyanate concentrations may cause allergic respiratory reactions in individuals already sensitized. Asthma-like symptoms may

include coughing, difficult breathing and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening. Effects may be delayed

Repeated Dose Toxicity

For the minor component(s): Toluene diisocyanate (TDI). Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.

Chronic Toxicity and Carcinogenicity

An oral study in which high doses of TDI were reported to cause cancer in animals has been found to contain numerous deficiencies which compromise the validity of the study. TDI did not cause cancer in laboratory animals exposed by inhalation, the most likely route of exposure

Carcinogenicity Classifications:

Component	List	Classification
Toluene-diisocyanate, mixture of toluene-2,4-di-isocyanate and toluene-2,6-di-isocyanate	NTP	Anticipated carcinogen
	IARC	Possibly carcinogenic to humans ; 2B

Developmental Toxicity

TDI did not cause birth defects in laboratory animals. Slight effects were observed in the fetus but only at doses which caused toxic effects to the mother.

Reproductive Toxicity

In animal studies, TDI has been shown not to interfere with reproduction.

Genetic Toxicology

In vitro genetic toxicity studies were negative. The data presented are for the following material: Toluene diisocyanate (TDI). Animal genetic toxicity studies were negative. Results of a Drosophila study were reported to be weakly positive; however, these positive findings are believed to be due to degradation of TDI in the solvent delivery vehicle.

12. Ecological Information

ENVIRONMENTAL FATE

Data for Component: Polypropylene Glycol-Propoxylated Glycerol-TDI Copolymer

Movement & Partitioning

For similar material(s): In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Persistence and Degradability

For similar material(s): In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable.

Data for Component: Toluene-diisocyanate, mixture of toluene-2,4-di-isocyanate and toluene-2,6-di-isocyanate

Movement & Partitioning

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Henry's Law Constant (H): 1.11E-05 atm*m³/mole; 25 °C Estimated.

Partition coefficient, soil organic carbon/water (Koc): 9,114 Estimated.

Persistence and Degradability

In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
6.26E-12 cm ³ /s	1,708 d	Estimated.

ECOTOXICITY

Data for Component: Polypropylene Glycol-Propoxylated Glycerol-TDI Copolymer

|| For similar material(s): Not expected to be acutely toxic to aquatic organisms

Data for Component: Toluene-diisocyanate, mixture of toluene-2,4-di-isocyanate and toluene-2,6-di-isocyanate

|| The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species. Acute aquatic LC50s range from moderately toxic (1 - 10 mg/L) to practically non-toxic (> 100 mg/L) in most species tested; however, it is highly toxic (0.1 - 1 mg/L) in a specific life stage of Japanese red sea bream.

Toxicity to Soil Dwelling Organisms

|| LC50, Earthworm Eisenia foetida, adult, 14 d: > 1,000 mg/kg

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION. Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 10 Regulatory Information, MSDS Section 15

14. Transport Information**DOT Non-Bulk**

Proper Shipping Name: ISOCYANATE SOLUTIONS, TOXIC, N O S.

Technical Name: TOLUENE DIISOCYANATE

Hazard Class: 6.1 ID Number: UN2206 Packing Group: PG III

DOT Bulk

Proper Shipping Name: ISOCYANATE SOLUTIONS, TOXIC, N.O.S

Technical Name: TOLUENE DIISOCYANATE

Hazard Class: 6.1 ID Number: UN2206 Packing Group: PG III

IMDG

Proper Shipping Name: ISOCYANATE SOLUTIONS, TOXIC, N O S.

Technical Name: TOLUENE DIISOCYANATE

Hazard Class: 6.1 ID Number: UN2206 Packing Group: PG III

EMS Number: F-A,S-A

Marine pollutant.: No

ICAO/IATA

Proper Shipping Name: ISOCYANATE SOLUTIONS, TOXIC, N O S

Technical Name: TOLUENE DIISOCYANATE

Hazard Class: 6.1 ID Number: UN2206 Packing Group: PG III

Cargo Packing Instruction: 618

Passenger Packing Instruction: 611

Additional Information

Reportable quantity. 1,000 lb - TOLUENE DIISOCYANATE

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	Yes
Fire Hazard	No
Reactive Hazard	Yes
Sudden Release of Pressure Hazard	No

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Component	CAS #	Amount
Toluene-diisocyanate, mixture of toluene-2,4-di-isocyanate and toluene-2,6-di-isocyanate	26471-62-5	< 10.0 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
Toluene-diisocyanate, mixture of toluene-2,4-di-isocyanate and toluene-2,6-di-isocyanate	26471-62-5	< 10.0 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

The following product components are cited in the Pennsylvania Special Hazardous Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
Toluene-diisocyanate, mixture of toluene-2,4-di-isocyanate and toluene-2,6-di-isocyanate	26471-62-5	< 10.0 %

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

WARNING: This product contains a chemical(s) known to the State of California to cause cancer

Component	CAS #	Amount
Toluene-diisocyanate, mixture of toluene-2,4-di-isocyanate and toluene-2,6-di-isocyanate	26471-62-5	< 10.0 %

CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

US. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

16. Other Information**Product Literature**

Additional information on this product may be obtained by calling your sales or customer service contact.

Recommended Uses and Restrictions

Component(s) for the manufacture of urethane polymers. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

Revision

Identification Number: 1040421 / 1001 / Issue Date 03/22/2010 / Version: 2.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document

Legend

N/A	Not available
WW	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

The Dow Chemical Company urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.



MATERIAL SAFETY DATA SHEET

1) PRODUCT AND COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY
 Midland Michigan 48674
 USA

24-Hour Emergency Phone Number: 989-636-4400

Customer Service: 800-366-4740

PRODUCT NAME : FROTH-PAK* 12 Polyurethane Spray Foam System

COMPONENT : Isocyanate, Side A

GMID : semi 00158124, fini 00157802

COLLECTIVE ID : 30

MATERIAL TYPE : isocyanate

ISSUE DATE : 01/30/2007

REVISION DATE : 03/04/2004

2) COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS Number	%
Polymethylene polyphenyl isocyanate containing 4,4'methylene bisphenyl isocyanate CAS# 101-68-8 at approximately 40-50%	009016-87-9	60-100%
Chlorodifluoromethane	75-45-6	5-10%

3) HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Vapors reduce oxygen available for breathing and are heavier than air.

Sprayed or heated material harmful if inhaled. May cause allergic skin reaction. May cause allergic respiratory reaction and lung injury. Avoid temperatures above 105F (41C). Toxic flammable gases and heat are released under decomposition conditions. Toxic fumes may be released in fire situations. Reacts slowly with water, releasing carbon dioxide, which can cause pressure buildup and rupture of closed containers. Elevated temperatures accelerate this process.

EYE

May cause moderate eye irritation. May cause very slight transient (temporary) corneal injury.

SKIN

Prolonged or repeated exposure may cause slight skin irritation. May cause allergic skin reaction in susceptible individuals. Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization. May stain skin. A single prolonged exposure is not likely to result in the material being absorbed in harmful amounts.

INGESTION

Single dose oral toxicity is considered to be low. No hazards anticipated from swallowing small amounts incidental to normal handling operations.

INHALATION

At room temperature, vapors are minimal due to low vapor pressure. However, certain operations may generate vapor or aerosol concentrations sufficient to cause irritation or other adverse effects. Such operations include those in which the material is heated, sprayed or otherwise mechanically dispersed such as drumming, venting or pumping. Excessive exposure may cause irritation to upper respiratory tract and lungs, and pulmonary edema (fluid in the lungs). May cause respiratory sensitization in

MATERIAL SAFETY DATA SHEET

susceptible individuals. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Effects may be delayed. Decreased lung function has been associated with overexposure to isocyanates.

SYSTEMIC EFFECTS

Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols.

TERATOLOGY

In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother.

CANCER INFORMATION

Lung tumors have been observed in laboratory animals exposed to aerosol droplets of MDI/Polymeric MDI (6 mg/m³) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

4) FIRST-AID MEASURES

EYE

Irrigate with flowing water immediately and continuously for 15 minutes. Remove contacts after first five minutes and continue washing. Consult medical personnel.

SKIN

Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. An MDI skin decontamination study demonstrated that a polyglycol-based skin cleanser or corn oil may be more effective than soap and water.

INGESTION

If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

INHALATION

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

NOTE TO PHYSICIAN

No specific antidote. Provide supportive care. Treatment based on judgment of the physician in response to reactions of the patient. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants, and antitussives may be of help. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed for 24-48 hours for signs of respiratory distress.

5) FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: >400F, >204C

METHOD USED: PMCC, ASTM D93

AUTOIGNITION TEMPERATURE: >1100F, 600C

FLAMMABILITY LIMITS

LFL: Not applicable.

UFL: Not applicable.

HAZARDOUS COMBUSTION PRODUCTS

During a fire, smoke may contain the original material in addition to unidentified

MATERIAL SAFETY DATA SHEET

toxic and/or irritating compounds. Hazardous combustion products may include but are not limited to: nitrogen oxides, isocyanates, hydrogen cyanide, carbon monoxide, and carbon dioxide.

Additional combustion products may include ammonia, hydrochloric acid, hydrofluoric acid, chlorine, fluorine, phosgene and phosphorous oxides.

OTHER FLAMMABILITY INFORMATION

Product reacts with water. Reaction may produce heat and/or gases. Reaction may be violent. Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns. Spills of these organic liquids on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

EXTINGUISHING MEDIA

Use carbon dioxide, dry chemical, foam, water fog or fine spray. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effective. Do not use direct water stream which can spread fire.

FIRE FIGHTING INSTRUCTIONS

Keep people away. Isolate fire area and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water is not recommended but may be applied in very large quantities as a fine spray when other extinguishing agents are not available. Contain fire water run-off if possible. Do not use direct water stream. May spread fire. Fight fire from protected location or safe distance. Consider use of unmanned hose holder or monitor nozzles. Use water spray to cool fire exposed containers and fire affected zone until fire is out. Immediately withdraw all personnel from area in case of rising sound from venting safety devices or discoloration of the containers. Move containers from fire area if this is possible without hazard.

PROTECTIVE EQUIPMENT - FIRE FIGHTERS

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant clothing with SCBA. If this will not provide sufficient fire protection; consider fighting fire from a remote location.

6) ACCIDENTAL RELEASE MEASURES

PROTECT PEOPLE

Avoid any contact. Barricade area. Clear non-emergency personnel from area. Keep upwind of spill. Ventilate area of leak or spill. The area must be evacuated and reentered by persons equipped for decontamination. Use appropriate safety equipment. If available, use foam to suppress vapors.

PROTECT THE ENVIRONMENT

Contain liquid to prevent contamination of soil, surface water or ground water. Keep out of ditches, sewers, and water supplies. Should the product enter sewers or drains, it should be pumped into a covered, vented container; the cover should be placed loosely on the container but not made pressure tight. Move to a well-ventilated area. Emergency services may need to be called to assist in the cleanup operation.

CLEAN-UP

Supplies of suitable decontaminant should always be kept available. Absorb with material such as: sawdust, vermiculite, dirt, sand, clay, cob grit, Milsorb. Avoid materials such as cement powder. Collect material in suitable and properly labeled OPEN containers. Do not place in sealed container. Prolonged contact with water results in a chemical reaction which may result in rupture of the container. Place in: polylined fiber pacs, plastic drums, or properly labeled metal containers. Remove to a well

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ventilated area. Clean up floor areas. Attempt to neutralize by suitable decontaminant solution: Formulation 1: sodium carbonate 5-10%; liquid detergent 0.2-2%; water to make up to 100%. OR Formulation 2: Concentrated ammonia solution 3-8%; liquid detergent 0.2-2%; water to make up to 100%. If ammonia is used, use good ventilation to prevent vapor exposure. If you have any questions on how to neutralize call The Dow Chemical Company.

7) HANDLING AND STORAGE

HANDLING

CAUTION: Contents under pressure. Avoid open flames. Do not puncture or incinerate.

Avoid contact of this product with water at all times during handling and storage. Use only with adequate ventilation. Keep equipment clean. Use disposable containers and tools where possible. Do not eat, drink, or smoke in working area.

STORAGE

Store in a dry place between 75F-105F (24C-41C). Keep containers tightly closed when not in use. Protect from atmospheric moisture. Maintain a nitrogen atmosphere. Do not store product contaminated with water to prevent potentially hazardous reaction.

8) EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING CONTROLS

Use only with adequate ventilation. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and the people working at this point. Odor is inadequate warning of excessive exposure.

EYE/FACE PROTECTION

Use chemical goggles.

SKIN PROTECTION

Use protective clothing impervious to this material. Selection of specific items such as faceshield, gloves, boots, apron, or full-body suit will depend on operation. Consideration of all chemicals involved, time and the dexterity needed to safely complete the job must be considered. Solvents can significantly change the permeation of a chemical through a barrier. Work with your safety equipment supplier to obtain the best Personal Protective Equipment for the job. Nitrile gloves are often found to be appropriate for work with MDI. Butyl rubber, PVC and neoprene are also often chosen.

Remove contaminated clothing immediately, wash skin area with soap and water (warm water if available) and launder clothing before reuse. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and destroyed.

RESPIRATORY PROTECTION

Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (airline or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus.

EXPOSURE GUIDELINES(S)

Chlorofluoromethane (HCFC-22): ACGIH Threshold Limit Value (TLV) is 1000 ppm TWA-8 hours.

Methylene bisphenyl isocyanate (MDI): ACGIH TLV is 0.005 ppm TWA and OSHA PEL is 0.02 ppm Ceiling. PELs are in accord with those recommended by OSHA, as in the 1989

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revision of PELs.

9) PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE

Brown liquid.

ODOR

Slightly musty.

VAPOR PRESSURE

$<1 \times 10^{-5}$ mm Hg @ 25C

VAPOR DENSITY

8.5 (air = 1)

BOILING POINT

410 F (210 C) @ 5 mm Hg

SOLUBILITY IN WATER

Insoluble in water; reacts with evolution of CO₂.

SPECIFIC GRAVITY

1.24 @ 20C

10) STABILITY AND REACTIVITY

CHEMICAL STABILITY

Stable under recommended storage conditions.

CONDITIONS TO AVOID

Avoid temperatures above 105F, 41C. Avoid temperatures below 75F, 24C. Can react with itself at temperatures above 320F, 160C. Product can decompose at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid. Avoid moisture. Material reacts slowly with water, releasing carbon dioxide, which can cause pressure buildup and rupture of closed containers. Elevated temperatures accelerate this reaction.

INCOMPATIBILITY WITH OTHER MATERIALS

Avoid contact with acids, water, alcohols, amines, ammonia, bases, moist air, and strong oxidizers. Avoid contact with metals such as aluminum, brass, copper, galvanized metals, tin, zinc. Avoid contact with moist organic absorbents. Reaction with water will generate carbon dioxide and heat. Generation of gas can cause pressure buildup in closed systems. Avoid unintended contact with polyols. The reaction of polyols and isocyanates generate heat. Diisocyanates react with many materials and the rate of reaction increases with temperature as well as increased contact; these reactions can become violent. Contact is increased by stirring or if the other material mixes with the diisocyanate. Diisocyanates are not soluble in water and are denser than water and sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous decomposition products depend upon temperature, air supply and the presence of other materials. Gases are released during decomposition.

HAZARDOUS POLYMERIZATION

Can occur. Polymerization can be catalyzed by: strong bases and water. Can react with itself at temperatures above 320F (160C).

11) TOXICOLOGICAL INFORMATION

ACUTE

Excessive exposure to HCFC-22 (Chlorodifluoromethane) may cause depression of the

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central nervous system, or possible asphyxiation.

SKIN

MDI: The LD50 for skin absorption in rabbits is > 2000 mg/kg.

INGESTION

MDI: The oral LD50 for rats is > 10,000 mg/kg.

MUTAGENICITY

MDI: Mutagenicity data on MDI are inconclusive. MDI was weakly positive in some in-vitro (test tube) studies;

other in-vitro studies were negative. A mutagenicity study in animals was negative.

12) ECOLOGICAL INFORMATION

MOVEMENT & PARTITIONING

Based on information for MDI and polymeric MDI. In the aquatic or terrestrial environment, movement is expected to be limited by its reactivity with water forming predominantly insoluble polyureas.

Volatilization from water to air is expected for HCFC-22, chlorodifluoromethane.

DEGRADATION & PERSISTENCE

Based on information for MDI and polymeric MDI. In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.

ECOTOXICITY

Based on information for MDI and polymeric MDI. The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species. Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 > 100 mg/L in most sensitive species). The LC50 in earthworm *Eisenia foetida* is > 1000 mg/kg.

13) DISPOSAL CONSIDERATIONS

DISPOSAL CONSIDERATIONS

FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: recycler, reclaimer, incinerator or other thermal destruction device.

As a service to its customers, Dow can provide names of information resource to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Center at 800-258-2436 or 989-832-1556 for further details.

DISPOSAL

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. THE DOW CHEMICAL COMPANY HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information On Ingredients).

14) TRANSPORT INFORMATION

US D.O.T.

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This product is not regulated when pressures are less than 40 psi. When greater than 40 psi, the classification is: Compressed Gases, N.O.S. (chlorodifluoromethane), 2.2 UN1956.

CANADIAN TDG

This product is not regulated when pressures are less than 40 psi. When greater than 40 psi, the classification is: Compressed Gases, N.O.S. (chlorodifluoromethane), 2.2 UN1956.

15) REGULATORY INFORMATION

NOTICE

The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, expressed or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

REGULATORY INFORMATION

U.S. REGULATIONS

SARA 313 INFORMATION: This product contains the following subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME CAS NUMBER

Methylene bis(pheylisocyanate) (MDI)	101-68-8
Polymeric Diphenylmethane diisocyanate	9016-87-9
Chlorodifluoromethane	75-45-6

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

- An immediate health hazard
- A delayed health hazard

TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

OSHA HAZARD COMMUNICATION STANDARD:

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND):

This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA which may require reporting of releases:

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Category:

Chemical Name	CAS#	RQ

Methylene Bis(phenylisocyanate)	101-68-8	5000 lbs

STATE RIGHT TO KNOW

Pennsylvania Hazardous Substance

Methylene Bis(phenylisocyanate)	101-68-8
Chlorodifluoromethane	75-45-6

CANADIAN REGULATIONS

WHMIS INFORMATION: The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:

D2A - respiratory tract sensitizer

D2B - eye or skin irritant

D2B - skin sensitizer

A - compressed gas

Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program.

CPR STATEMENT: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

HAZARDOUS PRODUCTS ACT INFORMATION: This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 and 14):

COMPONENTS:	CAS #
Methylene bis(pheylisocyanate) (MDI)	101-68-8

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA):

All substances in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

16) OTHER INFORMATION

OTHER INFORMATION

No other information.

(TM), *, or (R) Indicates a trademark of The Dow Chemical Company.



MATERIAL SAFETY DATA SHEET

1) PRODUCT AND COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY
 Midland Michigan 48674
 USA

24-Hour Emergency Phone Number: 989-636-4400

Customer Service: 800-366-4740

PRODUCT NAME : FROTH-PAK* 12 Polyurethane Spray Foam System

COMPONENT : Polyol, Side B

GMID : semi 00158128, fini 00157802

COLLECTIVE ID : 35

MATERIAL TYPE : Polyol blend

ISSUE DATE : 01/30/2007

REVISION DATE : 08/10/2004

2) COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS Number	%
Polyols	mixture	40-70%
Amine Polyol	52019-35-9	15-40%
Chlorodifluoromethane	75-45-6	10-30%

3) HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Vapors reduce oxygen available for breathing and are heavier than air.

May cause severe eye burns and skin irritation.

EYE

May cause severe eye irritation. May cause moderate corneal injury. May cause permanent impairment of vision, even blindness. Elevated temperatures may generate vapor levels sufficient to cause eye irritation.

SKIN

Repeated exposure may cause skin irritation. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

INGESTION

Single dose oral toxicity is considered to be low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury.

INHALATION

Exposure to fluorocarbons at high concentrations may effect the nervous system and produce a rapid anesthetic effect. The dense vapor of this material can reduce the oxygen available for breathing and produce symptoms such as headache, dizziness, drowsiness, cyanosis and lack of muscle control followed by collapse. Prolonged exposure to an oxygen-deficient atmosphere may be fatal. Inhalation of this material may cause an increase in the sensitivity of the heart to adrenaline, which could result in irregular heart beats and reduced heart function.

SYSTEMIC EFFECTS

Excessive exposure to fluorocarbons may effect the central nervous system and produce anesthetic and narcotic-like symptoms.

4) FIRST-AID MEASURES

EYE

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Irrigate eyes immediately with water for at least 30 minutes. Remove contacts after the first five minutes and then continue washing. Obtain medical treatment immediately.

SKIN

Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists.

INGESTION

If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

INHALATION

Remove to fresh air if effects occur. Consult a Physician.

NOTE TO PHYSICIAN

No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

5) FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES

Flash point: >212 deg. F (100 deg. C)

HAZARDOUS COMBUSTION PRODUCTS

Incomplete combustion may lead to the build-up of toxic pyrolysis products. Complete combustion will result in: Carbon oxides, Nitrogen oxides, Water, Ammonia and trace amounts of Hydrogen Cyanide.

Additional combustion products may include ammonia, hydrochloric acid, hydrofluoric acid, chlorine, fluorine, phosgene and phosphorous oxides.

OTHER FLAMMABILITY INFORMATION

SPECIFIC FIRE OR EXPLOSION HAZARDS: Will support combustion.

EXTINGUISHING MEDIA

Use carbon dioxide, dry chemical, foam, water fog or fine spray. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effective. Do not use direct water stream which can spread fire.

PROTECTIVE EQUIPMENT - FIRE FIGHTERS

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6) ACCIDENTAL RELEASE MEASURES

PROTECT PEOPLE

Isolate area. May be a slipping hazard. Wear adequate personal protective equipment

PROTECT THE ENVIRONMENT

Contain material to prevent contamination of ground and surface water. Spills should be collected to prevent contamination of waterways. Recover if possible, or dispose of according to applicable regulations.

CLEAN-UP

Spills should be contained by, and covered with large quantities of sand, earth or any other readily available absorbent material, which is then brushed in vigorously to assist absorption. The mixture can then be collected into drums and removed for disposal. Wash residues from area with soap and water and rinse down. Contaminated

MATERIAL SAFETY DATA SHEET

water should be retained, not being allowed to flow into ground or surface water.

7) HANDLING AND STORAGE

HANDLING

CAUTION: Contents under pressure. Avoid open flames. Do not puncture or incinerate.

Since polyols are handled together with diisocyanates, proper distinction between these two kinds of products is essential in order to avoid undesired mixing resulting in uncontrolled polymerization.

STORAGE

Keep container tightly closed; product is hygroscopic.

- Storage Temperature: 60-90F (15.6-32.2C)

8) EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING CONTROLS

Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

EYE/FACE PROTECTION

Use chemical goggles. If vapor exposure causes eye discomfort, use a full-face respirator. Eye wash fountain should be located in immediate work area.

SKIN PROTECTION

Use gloves impervious to this material. Wear clean, long-sleeved, body covering clothing. After work and before eating, drinking or smoking wash and clean yourself carefully with soap and water. Contaminated clothing should be washed and/or dry cleaned before re-use.

RESPIRATORY PROTECTION

For most conditions, no respiratory protection is needed; however, if handling at elevated temperature without sufficient ventilation or in presence of aerosols, use an approved air-purifying respirator. Atmospheric levels should be maintained below the exposure guideline.

EXPOSURE GUIDELINES(S)

Chlorofluoromethane (HCFC-22): ACGIH Threshold Limit Value (TLV) is 1000 ppm TWA-8 hours.

9) PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE

liquid

VAPOR PRESSURE

2500 mm Hg at 21 deg C. (70 deg F).

SPECIFIC GRAVITY

1.20 @ 25C

10) STABILITY AND REACTIVITY

CHEMICAL STABILITY

Stable under recommended storage conditions.

CONDITIONS TO AVOID

Product can oxidize or decompose at elevated temperatures.

Avoid open flames, welding arcs or other high temperature sources which induce thermal decomposition.

MATERIAL SAFETY DATA SHEET

Storage at temperatures higher than those recommended may lead to pressure build-up in closed containers. Do not store in open sunshine.

INCOMPATIBILITY WITH OTHER MATERIALS

Avoid contact with oxidizing materials and strong acids. Avoid unintended contact with isocyanates. The reaction of polyols and isocyanates generates heat.

Strong acids and oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS

None under normal conditions of storage and use.

HAZARDOUS POLYMERIZATION

Will not occur by itself.

11) TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION

Chlorodifluoromethane (HCFC-22): A slightly increased tumor incidence has been observed in one study using male rats exposed to 50,000 ppm HCFC-22 (50 times the current ACGIH TLV). The test material used in that study contained impurities, among which was HCFC-31, a known carcinogen and mutagen. No increased tumor incidences have been observed in female rats or in mice of both sexes. The data do not indicate that HCFC-22 constitutes a carcinogenic hazard to humans.

ACUTE

Excessive exposure to HCFC-22 (Chlorodifluoromethane) may cause depression of the central nervous system, or possible asphyxiation.

SKIN

Amine polyol LD50 for skin absorption in rabbits is 12,800 mg/kg.

Polyol: LD50 in rabbits is >2000 mg/kg.

INGESTION

Amine polyol oral LD50 for rats is 1370 mg/kg.

Polyol: LD50 in rats is >2000 mg/kg.

MUTAGENICITY

Mutagenicity studies on amine polyol was negative.

12) ECOLOGICAL INFORMATION

MOVEMENT & PARTITIONING

Bioconcentration is low (BCF less than 100 or Log Pow less than 3). Log octanol/water partition coefficient (log Pow) is 0.2.

Volatilization from water to air is expected for HCFC-22, chlorodifluoromethane.

DEGRADATION & PERSISTENCE

Based on the stringent test guidelines, the polyol cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

ECOTOXICITY

Based largely or completely on information for similar material. Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in most sensitive species).

13) DISPOSAL CONSIDERATIONS

DISPOSAL

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and

MATERIAL SAFETY DATA SHEET

regulations.

Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. THE DOW CHEMICAL COMPANY HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information On Ingredients).

FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: recycler, reclaimer, incinerator or other thermal destruction device.

As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Center at 800-258-2436 or 989-832-1556 for further details.

14) TRANSPORT INFORMATION

US D.O.T.

This product is not regulated when pressures are less than 40 psi. When greater than 40 psi, the classification is: Compressed Gases, N.O.S. (chlorodifluoromethane), 2.2 UN1956.

CANADIAN TDG

This product is not regulated when pressures are less than 40 psi. When greater than 40 psi, the classification is: Compressed Gases, N.O.S. (chlorodifluoromethane), 2.2 UN1956.

15) REGULATORY INFORMATION

NOTICE

The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, expressed or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

REGULATORY INFORMATION

U.S. REGULATIONS

SARA 313 INFORMATION: This product contains the following subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME CAS NUMBER

Chlorodifluoromethane 75-45-6

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable

MATERIAL SAFETY DATA SHEET

definitions, to meet the following categories:

An immediate health hazard

TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory.

OSHA HAZARD COMMUNICATION STANDARD:

This product a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND):

This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA which may require reporting of releases:

Category:

Chemical Name CAS# RQ

NONE

CALIFORNIA PROPOSITION 65: The following components are known to the state of California as causing cancer and/or birth defects:

NONE

PENNSYLVANIA STATE RIGHT TO KNOW HAZARDOUS PRODUCTS LIST:

NONE

CANADIAN REGULATIONS

WHMIS INFORMATION: The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:

D2B - eye or skin irritant

B3 - compressed gas

Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program.

CPR STATEMENT: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

HAZARDOUS PRODUCTS ACT INFORMATION: This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 and 14):

COMPONENTS: CAS #

MATERIAL SAFETY DATA SHEET

NONE

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA):

All substances in this product are listed on the Canadian Domestic Substance List (DSL).

16) OTHER INFORMATION

OTHER INFORMATION

No other information.

(TM), *, or (R) Indicates a trademark of The Dow Chemical Company.

MATERIAL SAFETY DATA SHEET

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3/17/2004

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

24-Hour Emergency Phone Number: 989-636-4400

Product Name: **GREAT STUFF* Big Gap Filler**

Collective ID: 19

Material Type: Flammable - OCF

Revised: 02/16/04 (sec. 2 & 15)

The Dow Chemical Company, Midland, MI 48674

Customer Service: 800-366-4740

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL	CAS#	CONCENTRATION
Polymethylene polyphenyl isocyanate containing 4,4'Methylene bisphenyl isocyanate (Approximately 40-50% MDI)	009016-87-9 000101-68-8	5-10, 10-30%
Liquified Petroleum Mixture Containing Isobutane (CAS# 75-28-5) Propane (CAS# 74-98-6) Dimethyl Ether (CAS#115-10-6)		10-30%
Prepolymers of MDI and Polyether Polyol	mixture	40-70, 60-100%

3. HAZARDS IDENTIFICATION

DANGER!

Extremely Flammable.

Sprayed or heated material harmful if inhaled. May cause allergic skin reaction. May cause allergic respiratory reaction and lung injury. Avoid temperatures above 105F (41C). Toxic flammable gases and heat are released under decomposition conditions. Toxic fumes may be released in fire situations. Reacts slowly with water releasing, carbon dioxide, which can cause pressure buildup and rupture of closed containers. Elevated temperatures accelerate this process.

POTENTIAL HEALTH EFFECTS (See Section 11 for toxicological data.)

EYE: May cause moderate eye irritation. May cause very slight transient (temporary) corneal injury.

SKIN: Prolonged or repeated exposure may cause slight skin irritation. May cause allergic skin reaction in susceptible individuals. Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization. May stain skin. A single prolonged exposure is not likely to result in the material being absorbed in harmful amounts.

MATERIAL SAFETY DATA SHEET

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GREAT STUFF Big Gap Filler

INGESTION: Single dose oral toxicity is considered to be low. No hazards anticipated from swallowing small amounts incidental to normal handling operations.

INHALATION: At room temperature, PMDI vapors are minimal due to low vapor pressure. However, certain operations may generate vapor or aerosol concentrations sufficient to cause irritation or other adverse effects. Excessive exposure may cause irritation to upper respiratory tract and lungs, and pulmonary edema (fluid in the lungs). May cause respiratory sensitization in susceptible individuals. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Effects may be delayed. Decreased lung function has been associated with overexposure to isocyanates.

In confined or poorly ventilated areas, propane and isobutane vapors can readily accumulate and can cause unconsciousness and death due to displacement of oxygen (simple asphyxia). Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). Signs and symptoms of excessive exposure may be central nervous system effects. At air concentrations < 1000 ppm, propane exerts very little physiological action; at 100,000 ppm and above it may produce dizziness or other central nervous system effects. Signs and symptoms of central nervous system depression, in order of increasing exposure, are headache, dizziness, drowsiness, and unconsciousness, even death.

A single prolonged (hours) excessive inhalation exposure to dimethyl ether may cause serious adverse effects, even death. Excessive exposure may cause irritation to upper respiratory tract (nose and throat). Signs and symptoms of excessive exposure may be anesthetic or narcotic effects. In animals,

4. FIRST-AID MEASURES

EYE: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

SKIN: Remove material from skin immediately by washing with soap and plenty of water, (warm water is preferable if readily available). Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. An MDI skin decontamination study demonstrated that cleaning very soon after exposure is important, and that a polyglycol-based skin cleanser or corn oil may be more effective than soap and water.

INGESTION: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

NOTE TO PHYSICIAN: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants, and antitussives may be of help. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed for 24-48 hours for signs of respiratory distress.

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GREAT STUFF Big Gap Filler

5. FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: -156F, -104C

METHOD USED: Estimated

AUTOIGNITION TEMPERATURE: NA

FLAMMABILITY LIMITS

LFL: NA

UFL: NA

HAZARDOUS COMBUSTION PRODUCTS: During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include but are not limited to: nitrogen oxides, isocyanates, hydrogen cyanide, carbon monoxide, and carbon dioxide.

OTHER FLAMMABILITY INFORMATION: Product reacts with water. Reaction may produce heat and/or gases. Reaction may be violent. Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns. Spills of these organic liquids on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, foam, water fog or fine spray. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively. Do not use direct water stream. May spread fire.

FIRE FIGHTING INSTRUCTIONS: Keep people away. Isolate fire area and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water is not recommended but may be applied in very large quantities as a fine spray when other extinguishing agents are not available.

Contain fire water run-off if possible. Do not use direct water stream. May spread fire. Fight fire from protected location or safe distance. Consider use of unmanned hose holder or monitor nozzles. Use water spray to cool fire exposed containers and fire affected zone until fire is out. Immediately withdraw all personnel from area in case of rising sound from venting safety device or discoloration of the container. Move container from fire area if this is possible without hazard.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant clothing with SCBA. This will not provide sufficient fire protection; consider fighting fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer

6. ACCIDENTAL RELEASE MEASURES

PROTECT PEOPLE: Avoid any contact. Barricade area. Clear non-emergency personnel from area. Keep upwind of spill. Ventilate area of leak or spill. The area must be evacuated and reentered by persons equipped for decontamination. Use appropriate safety equipment. Ventilate area of leak or spill. If available, use foam to suppress vapors. For additional information, refer to "Exposure Controls/Personal Protection", MSDS Section 8. See Section 10, Stability and Reactivity.

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GREAT STUFF Big Gap Filler

PROTECT THE ENVIRONMENT: Contain liquid to prevent contamination of soil, surface water or ground water. Keep out of ditches, sewers, and water supplies. Should the product enter sewers or drains, it should be pumped into a covered, vented container; the cover should be placed loosely on the container but not made pressure tight. Move to a well-ventilated area. Emergency services may need to be called to assist in the cleanup operation.

CLEAN-UP: Supplies of suitable decontaminant should always be kept available. Absorb with material such as: sawdust, vermiculite, dirt, sand, clay, cob grit, Milsorb. Avoid materials such as cement powder. Collect material in suitable and properly labeled OPEN containers. Do not place in sealed container. Prolonged contact with water results in a chemical reaction which may result in rupture of the container. Place in: polylined fiber pacs, plastic drums, or properly labeled metal containers. Remove to a well ventilated area. Clean up floor areas. Attempt to neutralize by suitable decontaminant solution: Formulation 1: sodium carbonate 5-10%; liquid detergent 0.2-2%; water to make up to 100%. OR Formulation 2: Concentrated ammonia solution 3-8%; liquid detergent 0.2-2%; water to make up to 100%. If ammonia is used, use good ventilation to prevent vapor exposure. If you have any questions on how to neutralize call The Dow Chemical Company. Please refer to Disposal Information, MSDS Section 13. See Section 7 and 15 for more specific information.

7. HANDLING AND STORAGE

HANDLING: Avoid contact of this product with water at all times during handling and storage. Use only with adequate ventilation. Keep equipment clean. Use disposable containers and tools where possible. Do not eat, drink, or smoke in working area. Refer to Exposure Controls/Personal Protection, Section 8, of the MSDS.

STORAGE: Store in a dry place. Store between 32°F-90°F (0°-32°C). Keep containers tightly closed when not in use. Protect containers from physical abuse. Avoid direct sunlight. DO NOT incinerate aerosol can.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use only with adequate ventilation. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and the people working at this point. Odor is inadequate warning of excessive exposure.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: Use chemical goggles.

SKIN PROTECTION Use protective clothing impervious to this material. Selection of specific items such as faceshield, gloves, boots, apron, or full-body suit will depend on operation. Remove contaminated clothing immediately, wash skin area with soap and water (warm water if available) and launder clothing before reuse. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and destroyed.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic

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GREAT STUFF Big Gap Filler

vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (airline or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus.

EXPOSURE GUIDELINES(S):

Methylene bisphenyl isocyanate (MDI): ACGIH TLV is 0.005 ppm TWA and OSHA PEL is 0.02 ppm Ceiling.

Isobutane: ACGIH TLV and OSHA PEL are 800 ppm.

Propane: ACGIH TLV is 2500 ppm TWA and OSHA PEL is 1000 ppm.

Dimethyl Ether: ACGIH TLV is 1000 ppm TWA.

PELs are in accord with those recommended by OSHA, as in the 1989 revision of

9. PHYSICAL AND CHEMICAL PROPERTIES

Flash Point : -156°F (-104°C) (estimated)

Vapor Pres. (21°C/70°F) : 4210 mm HG

Specific Gravity : 1.1

VOC Content (g/L) : 158.1 grams/Litre

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under recommended storage conditions. See Section 7, Storage.

CONDITIONS TO AVOID: Avoid temperatures above 105F, 41C. Avoid temperatures below 75F, 24C. Can react with itself at temperatures above 320F, 160C. Product can decompose at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid. Avoid moisture. Material reacts slowly with water, releasing carbon dioxide, which can cause pressure buildup and rupture of closed containers. Elevated temperatures accelerate this reaction.

INCOMPATIBILITY WITH OTHER MATERIALS: Avoid contact with acids, water, alcohols, amines, ammonia, bases, moist air, and strong oxidizers. Avoid contact with metals such as aluminum, brass, copper, galvanized metals, tin, zinc. Avoid contact with moist organic absorbents. Reaction with water will generate carbon dioxide and heat. Generation of gas can cause pressure buildup in closed systems. Avoid unintended contact with polyols. The reaction of polyols and isocyanates generate heat. Diisocyanates react with many materials and the rate of reaction increases with temperature as well as increased contact, these reactions can become violent. Contact is increased by stirring or if the other material mixes with the diisocyanate. Diisocyanates are not soluble in water and are denser than water and sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea. See Hazardous Polymerization Section.

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GREAT STUFF Big Gap Filler

HAZARDOUS DECOMPOSITION PRODUCTS: Hazardous decomposition products depend upon temperature, air supply and the presence of other materials. Gases are released during decomposition.

HAZARDOUS POLYMERIZATION: Can occur. Polymerization can be catalyzed by: strong bases and water. Can react with itself at temperatures above 320F (160C).

11. TOXICOLOGICAL INFORMATION (See Section 3 for Potential Health Effects)

ACUTE:

SKIN: The LD50 for skin absorption in rabbits is > 2000 mg/kg.

INGESTION: The oral LD50 for rats is > 10,000 mg/kg.

MUTAGENICITY (EFFECTS ON GENETIC MATERIAL): Mutagenicity data on MDI are inconclusive. MDI was weakly positive in some in-vitro (test tube) studies; other in-vitro studies were negative. A mutagenicity study in animals was

DIMETHYL ETHER (115-10-6)

MUTAGENICITY

In vitro mutagenicity studies were positive. Animal mutagenicity studies were negative in some cases and positive in other cases.

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE

MOVEMENT & PARTITIONING: Based on information for MDI and polymeric MDI. In the aquatic or terrestrial environment, movement is expected to be limited by its reactivity with water forming predominantly insoluble polyureas.

DEGRADATION & PERSISTENCE: Based on information for MDI and polymeric MDI. In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.

ECOTOXICITY: Based on information for MDI and polymeric MDI. The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species. Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 > 100 mg/L in most sensitive species). The LC50 in earthworm *Eisenia foetida* is > 1000 mg/kg.

13. DISPOSAL CONSIDERATIONS

DISPOSAL CONSIDERATIONS (See Section 15 for Regulatory Information)

DISPOSAL: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. THE DOW CHEMICAL COMPANY HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING

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GREAT STUFF Big Gap Filler

PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information On Ingredients).

FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: recycler, reclaimer, incinerator or other thermal destruction device.

For additional information, refer to:

- Handling & Storage Information, MSDS Section 7. - Stability & Reactivity Information, MSDS Section 10.
- Regulatory Information, MSDS Section 15.

As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Center at 800-258-2436 or 989-832-1556 for further details.

14. TRANSPORT INFORMATION

Consumer Commodity ORM-D

15. REGULATORY INFORMATION

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, expressed or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

U.S. REGULATIONS

SARA 313 INFORMATION: This product contains the following subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER
METHYLENE BIS (PHENYLISOCYANATE) (MDI)	000101-68-8
POLYMERIC DIPHENYLMETHANE DIISOCYANATE	009016-87-9

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

PMDI/MDI
An immediate health hazard
A delayed health hazard

ISOBUTANE/PROPANE: A fire hazard

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GREAT STUFF Big Gap Filler

TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME	CAS NUMBER	LIST
Isobutane	75-28-5	MA, NJ, PA
Propane	74-98-6	MA, NJ, PA15.

REGULATORY INFORMATION

MA=Massachusetts Right to Know Substance List
NJ2=New Jersey Environmental Hazardous Substance
NJ3=New Jersey Workplace Hazardous Substance
PA1=Pennsylvania Hazardous Substance
PA3=Pennsylvania Environmental Hazardous Substance

OSHA HAZARD COMMUNICATION STANDARD: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND): To the best of our knowledge, this product contains the following chemical subject to reporting under CERCLA.

Propane 100 lbs
Isobutane 100 lbs

CANADIAN REGULATIONS

WHMIS INFORMATION: The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:
D3 combustible liquid.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA):
All substances in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

16. OTHER INFORMATION

HMIS - H - F - R - PPE
2 - 4 - 1 - B

This product is a polyurethane blend in the form of a solution in liquid containing by weight 50% or more polymer.

(TM), *, OR (R) INDICATES A TRADEMARK OF THE DOW CHEMICAL COMPANY



MATERIAL SAFETY DATASHEET
FICHE SIGNALÉTIQUE

IN CASE OF EMERGENCY / EN CAS D'URGENCE: SARNIA (519)339-3711 - FORT SASKATCHEWAN (780)998-8282 - VARENNES (450)652-1000

PREPARATION INFORMATION / RENSEIGNEMENTS SUR LA PRÉPARATION:

Prepared for use in Canada by: / Pour utilisation au Canada, préparé par:
EH&S Product Regulatory Management Department
Dow Chemical Canada Inc. P.O. Box 1012, Sarnia, Ontario N7T 7K7 (800) 331 - 6451

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Page: 1

IN CASE OF EMERGENCY: Fort Saskatchewan, Alberta: (780) 998-8282
Sarnia, Ontario: (519) 339-3711
Varenes, Quebec: (450) 652-1000

Product: URETHANE PINCHWELD PRIMER NO 3 U413

Product Code: 34002

Effective Date: 01/15/04 Date Printed: 01/16/04 MSD: 005632

Dow Chemical Canada Inc.
P.O. Box 1012, Sarnia, Ontario N7T 7K7

Prepared for use in Canada by the EH&S Product Regulatory
Management Department; Phone: (450) 652-1015

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component(s)	CAS#	Amount (wt % or ppm)
Methyl ethyl ketone	000078-93-3	35-45
Talc	014807-96-6	5-15
Carbon black	001333-86-4	< 5
Acetone	000067-64-1	10-20
Silica, quartz	014808-60-7	< 1
Polyurethane	009016-87-9	15-25
MDI, 4,4'-isomer, free	000101-68-8	< 5

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

* Black liquid. Ketone odor. Extremely flammable. Causes eye *
* irritation. May cause allergic respiratory reaction. May cause *
* allergic skin reaction. Toxic fumes released in fire situations. *
* May cause central nervous system effects. May cause anesthetic *
* effects. *

POTENTIAL HEALTH EFFECTS (See Section 11 for toxicological data.)

This section includes possible adverse effects which could occur
if this material is not handled in the recommended manner.

(Continued on page 2 , over)

* OR (R) INDICATES A TRADEMARK OF THE DOW CHEMICAL COMPANY

Product: URETHANE PINCHWELD PRIMER NO 3 U413
Product Code: 34002

Effective Date: 01/15/04

Date Printed: 01/16/04

MSD: 005632

EYE: May cause moderate eye irritation which may be slow to heal.
May cause moderate corneal injury. Vapors may irritate eyes.

SKIN: Prolonged or repeated exposure may cause moderate skin irritation. Repeated contact may cause drying or flaking of skin. May cause allergic skin reaction in susceptible individuals. Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

INGESTION: Single dose oral toxicity is considered to be low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury.

INHALATION: Excessive vapor concentrations are attainable and could be hazardous on single exposure. Excessive exposure may cause respiratory irritation and central nervous system depression. Signs and symptoms of central nervous system depression, in order of increasing exposure, are headache, dizziness, drowsiness, and incoordination. Signs and symptoms of excessive exposure may be nausea and/or vomiting. May cause respiratory sensitization in susceptible individuals. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Symptoms may include coughing, difficult breathing and a feeling of tightness in the chest. Effects may be delayed. Impaired lung function (decreased ventilatory capacity) has been associated with overexposure to isocyanates. This material contains mineral and/or inorganic fillers. There is essentially no potential for inhalation exposure to these fillers incidental to industrial handling due to the physical state.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:

For the components tested, effects have been reported on the following organs: blood, kidney, liver, lungs, testes, and upper respiratory tract. Signs and symptoms of excessive exposure may be anesthetic or narcotic effects.

CANCER INFORMATION:

Contains acetone, which did not cause cancer in laboratory animals. Lung tumors have been observed in laboratory animals exposed to aerosol droplets of MDI/Polymeric MDI (6 mg/m³) for their lifetime. Tumors occurred concurrently

(Continued on page 3)

* OR (R) INDICATES A TRADEMARK OF THE DOW CHEMICAL COMPANY

Product: URETHANE PINCHWELD PRIMER NO 3 U413

Product Code: 34002

Effective Date: 01/15/04

Date Printed: 01/16/04

MSD: 005632

with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

TERATOLOGY (BIRTH DEFECTS): Contains methyl ethyl ketone and acetone which did not cause birth defects; other fetal effects occurred only at doses toxic to the mother. In laboratory animals, MDI/polymeric MDI did not produce birth defects; other fetal effects occurred only at high doses which were toxic to the mother.

REPRODUCTIVE EFFECTS: Contains acetone, which did not interfere with reproduction in animal studies.

4. FIRST AID

EYE: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

SKIN: Wash off in flowing water or shower.

INGESTION: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

NOTE TO PHYSICIAN: May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. No specific antidote. Treatment based on judgment of the physician in response to reactions of the patient.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: 12 F

METHOD USED: Setaflash

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, foam.

SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters should wear self-

(Continued on page 4 , over)

* OR (R) INDICATES A TRADEMARK OF THE DOW CHEMICAL COMPANY

Product: URETHANE PINCHWELD PRIMER NO 3 U413
Product Code: 34002

Effective Date: 01/15/04 Date Printed: 01/16/04 MSD: 005632

contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors are heavier than air and may travel along the ground or by ventilation duct to ignition sources far from material handling point. Extremely flammable.

6. ACCIDENTAL RELEASE MEASURES (See Section 15 for Regulatory Information)

PROTECT PEOPLE: Clear non-emergency personnel from area. Use appropriate safety equipment. Eliminate all sources of ignition in vicinity of spill to avoid fire or explosion. For additional information, refer to "Exposure Controls/Personal Protection", MSDS section 8.

PROTECT THE ENVIRONMENT: Contain material to prevent contamination of soil, surface water or ground water.

CLEAN-UP: Contain spill if possible. Absorb with material such as cat litter, sand or sawdust. Clean up using tools which will not produce sparks. See "Disposal Considerations", MSDS section 13 for information on disposal.

7. HANDLING AND STORAGE

HANDLING & STORAGE: Extremely flammable. Keep from heat, sparks, and flame. Use appropriate grounding equipment while handling this material. Store indoors in tightly closed containers between 50-95 F.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

These precautions are suggested for conditions with high potential for exposure. If handling procedures are such that there is only a low potential for exposure, less protection may be needed. Emergency conditions may require additional precautions.

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Use only with adequate ventilation. The odor and irritancy of this material are inadequate to warn of excessive exposure. Exhaust systems should be designed to move the air away from the source of vapor-aerosol generation and people working at this point.

PERSONAL PROTECTIVE EQUIPMENT:

(Continued on page 5)

* OR (R) INDICATES A TRADEMARK OF THE DOW CHEMICAL COMPANY

Product: URETHANE PINCHWELD PRIMER NO 3 U413
Product Code: 34002

Effective Date: 01/15/04 Date Printed: 01/16/04 MSD: 005632

EYE/FACE PROTECTION: Use chemical goggles. If vapor exposure causes eye discomfort, use a full-face respirator.

SKIN PROTECTION: Use protective clothing impervious to this material. Selection of specific items such as faceshield, gloves, boots, apron, or full body suit will depend on operation. Remove contaminated clothing immediately, wash skin area with soap and water, (warm water if available) and launder clothing before reuse. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and destroyed.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (airline or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus.

EXPOSURE GUIDELINES: Methyl ethyl ketone (2-BUTANONE): ACGIH TLV is 200 ppm TWA, 300 ppm STEL. OSHA PEL is 200 ppm TWA.

ACETONE: ACGIH TLV is 500 ppm (1188 mg/m³) TWA, 750 ppm (1782 mg/m³) STEL. OSHA PEL is 1000 ppm (2400 mg/m³) TWA.

METHYLENE BISPHENYL ISOCYANATE (MDI): ACGIH TLV is 0.005 ppm TWA and OSHA PEL is 0.02 ppm ceiling.

PELs are in accord with those recommended by OSHA, as in the 1989 revision of PELs.

Although some of the fillers used in this product may have exposure guidelines, no exposure would be expected under normal handling conditions because of the physical state of the material.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Black liquid

(Continued on page 6 , over)

* OR (R) INDICATES A TRADEMARK OF THE DOW CHEMICAL COMPANY

Product: URETHANE PINCHWELD PRIMER NO 3 U413
Product Code: 34002

Effective Date: 01/15/04 Date Printed: 01/16/04 MSD: 005632

ODOR: Ketone odor

VAPOR PRESSURE: 104 @ 20 C
VAPOR DENSITY: > 1

BOILING POINT: 133 F (ACETONE)

SOLUBILITY IN WATER/MISCIBILITY: Partial

SPECIFIC GRAVITY OR DENSITY: 1.02 (+/-0.03)

VOLATILE ORGANIC COMPOUNDS (VOC) (LBS/GAL): 4.65 nominal
EPA Method 24 Procedure B

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable

INCOMPATIBILITY WITH OTHER MATERIALS: Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide, carbon monoxide,
smoke, fumes.

HAZARDOUS POLYMERIZATION: Will not occur

11. TOXICOLOGICAL INFORMATION (See Section 3 for Potential Health Effects. For detailed toxicological data, write or call the address or non-emergency number shown in Section 1)

SKIN: The dermal LD50 has not been determined.

INGESTION: Single dose oral LD50 has not been determined.

MUTAGENICITY: For the components tested, animal mutagenicity studies were negative. For MDI and acetone, in vitro mutagenicity studies were negative in some cases and positive in other cases. For methyl ethyl ketone, in vitro mutagenicity studies were predominantly negative.

12. ECOLOGICAL INFORMATION (For detailed Ecological data, write or call the address or non-emergency number shown in Section 1)

For detailed ecological data, write or call the Dow Chemical Company.

13. DISPOSAL CONSIDERATIONS (See Section 15 for Regulatory Information)

(Continued on page 7)

* OR (R) INDICATES A TRADEMARK OF THE DOW CHEMICAL COMPANY

Product: URETHANE PINCHWELD PRIMER NO 3 U413
Product Code: 34002

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DISPOSAL: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.

All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterization and compliance with applicable law are the responsibility solely of the waste generator.

THE DOW CHEMICAL COMPANY HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL.

THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information On Ingredients).

FOR UNUSED AND UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted incinerator or other thermal destruction device.

As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics and that manage used drums. Telephone Dow's Customer Information Center at 800-258-2436 or 989-832-1556 for further details.

14. TRANSPORT INFORMATION

U.S. DOT CLASSIFICATION/DESCRIPTION: For DOT regulatory information, if required, consult transportation regulations or product shipping papers.

CANADIAN TDG INFORMATION: For TDG regulatory information, if required, consult transportation regulations or product shipping papers.

15. REGULATORY INFORMATION (Not meant to be all-inclusive--selected regulations represented)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another;

(Continued on page 8 , over)

* OR (R) INDICATES A TRADEMARK OF THE DOW CHEMICAL COMPANY

Product: URETHANE PINCHWELD PRIMER NO 3 U413
 Product Code: 34002

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it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

U.S. REGULATIONS

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION		
METHYL ETHYL KETONE	000078-93-3	35	-45	%
METHYLENE BIS(PHENYLISOCYANATE) (MDI)	000101-68-8		<5	%
POLYMERIC DIPHENYLMETHANE DIISOCYANATE	009016-87-9	15	-25	%

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

- An immediate health hazard
- A delayed health hazard
- A fire hazard

TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

(Continued on page 9)

* OR (R) INDICATES A TRADEMARK OF THE DOW CHEMICAL COMPANY

Product: URETHANE PINCHWELD PRIMER NO 3 U413
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REGULATORY INFORMATION (CONTINUED)

CHEMICAL NAME	CAS NUMBER	LIST
ACETONE	000067-64-1	NJ1 NJ2 PA3 NJ3 PA1
METHYL ETHYL KETONE	000078-93-3	NJ2 PA3 NJ3 PA1
METHYLENE BIS(PHENYLISOCYANATE) (MDI)	000101-68-8	NJ2 PA3 NJ3 PA1
CARBON BLACK	001333-86-4	NJ3 PA1
TALC	014807-96-6	NJ3 PA1
SILICA - CRYSTALLINE, QUARTZ	014808-60-7	NJ3 PA1

NJ1=New Jersey Special Health Hazard Substance (present at greater than or equal to 0.1%).
 NJ2=New Jersey Environmental Hazardous Substance (present at greater than or equal to 1.0%).
 NJ3=New Jersey Workplace Hazardous Substance (present at greater than or equal to 1.0%).
 PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%).
 PA3=Pennsylvania Environmental Hazardous Substance (present at greater than or equal to 1.0%).

OSHA HAZARD COMMUNICATION STANDARD:

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND):

This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA which may require reporting of releases:

Category:

Chemical Name	CAS#	RQ	% in Product
METHYL ETHYL KETONE	000078-93-3	5000 lbs	35-45%
ACETONE	000067-64-1	5000 lbs	10-20%
MDI, 4,4'-isomer, free	000101-68-8	5000 lbs	< 5%

CANADIAN REGULATIONS

=====

Product: URETHANE PINCHWELD PRIMER NO 3 U413

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Effective Date: 01/15/04

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REGULATORY INFORMATION (CONTINUED)

WHMIS INFORMATION: The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:

- B2 - flammable liquid with a flash point less than 37.8C
- D2A - possible, probable or known human carcinogen according to classifications by IARC or ACGIH
- D2A - respiratory tract sensitizer
- D2B - eye or skin irritant
- D2B - skin sensitizer

Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program.

CPR STATEMENT: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

HAZARDOUS PRODUCTS ACT INFORMATION: This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 and 14):

COMPONENTS:	CAS #	AMOUNT (%w/w)
METHYL ETHYL KETONE	000078-93-3	35-45
ACETONE	000067-64-1	10-20
POLYMETHYLENEPOLYPHENYLENE ISOCYANATE	009016-87-9	15-25
MDI, 4,4'-ISOMER, FREE	000101-68-8	0.1-1,1-5
CARBON BLACK	001333-86-4	0.1-1,1-5
SILICA, QUARTZ	014808-60-7	0.1-1

Multiple ranges allow for variations in product composition due to variations in the manufacture of the product.

CAS#	LD50 Oral mg/kg	LD50 Dermal mg/kg	LC50 Inhal. ppm
000078-93-3	2660 rat	6456 rabbit	>11000 rat 4 hr
000067-64-1	>5800 rat	20000 rabbit	30000 rat 4 hr
009016-87-9	>10000 rat	>2000 rabbit	490 rat 4 hr, (mg/m3 aerosol)
000101-68-8	>10000 rat	>10000 rabbit	369 rat 4 hr, (mg/m3 aerosol)

16. OTHER INFORMATION

(Continued on page 11)

* OR (R) INDICATES A TRADEMARK OF THE DOW CHEMICAL COMPANY

Product: URETHANE PINCHWELD PRIMER NO 3 U413
Product Code: 34002

Effective Date: 01/15/04

Date Printed: 01/16/04

MSD: 005632

Section(s) changed: 8

* OR (R) INDICATES A TRADEMARK OF THE DOW CHEMICAL COMPANY
The Information Herein Is Given In Good Faith, But No Warranty,
Express Or Implied, Is Made. Consult The Dow Chemical Company
For Further Information.

Key to DuPont MSDS's

Product	MSDS #
250S MetaLok Base	10
255S MetaLok Activator	12
4531S Additive	13
19301S Blender	13
3900S Lacquer Thinner	3
4904S Primer	15
4940S	15
4975S	15
615S Variprime Activator	15
616S Varaprime Primer	15
7005S Activator	19-4
7065S Reducer	19-4
7175S Binder	19-3
8585S Reducer	11
HC-7600S	19-1
HC-7605S Isocyanate Activator	12
Imron Polyurethane Enamels	7
V-192S Isocyanate Activator	12

Product Name: CAT DEO 15W-40 (DIESEL ENGINE OIL)
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MATERIAL SAFETY DATA SHEET

SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: CAT DEO 15W-40 (DIESEL ENGINE OIL)
Product Description: Base Oil and Additives
Product Code: 478669-00, 97X127
Intended Use: Engine oil

COMPANY IDENTIFICATION

Supplier: EXXON MOBIL CORPORATION
3225 GALLOWS RD.
FAIRFAX, VA. 22037 USA

24 Hour Health Emergency: 609-737-4411
Transportation Emergency Phone: 800-424-9300
ExxonMobil Transportation No.: 281-834-3296
MSDS Requests: 713-613-3661
Product Technical Information: 800-662-4525, 800-947-9147
MSDS Internet Address: <http://www.exxon.com>, <http://www.mobil.com>

SECTION 2

COMPOSITION / INFORMATION ON INGREDIENTS

Reportable Hazardous Substance(s) or Complex Substance(s)

Name	CAS#	Concentration*
ZINC DITHIOPHOSPHATE	68649-42-3	< 2.5%

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

SECTION 3

HAZARDS IDENTIFICATION

This material is not considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

POTENTIAL HEALTH EFFECTS

Excessive exposure may result in eye, skin, or respiratory irritation. Low order of toxicity. High-pressure injection under skin may cause serious damage.

NFPA Hazard ID: Health: 0 Flammability: 1 Reactivity: 0
HMIS Hazard ID: Health: 0 Flammability: 1 Reactivity: 0

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 4

FIRST AID MEASURES

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INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

First aid is normally not required. Seek medical attention if discomfort occurs.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Hazardous Combustion Products: Incomplete combustion products, Aldehydes, Oxides of carbon, Smoke, Fume, Sulfur oxides

FLAMMABILITY PROPERTIES

Flash Point [Method]: >215°C (419°F) [ASTM D-92]

Flammable Limits (Approximate volume % in air): LEL: 0.9 UEL: 7.0

Autoignition Temperature: N/D

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. U.S. regulations require reporting releases of this material to the environment which exceed the reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National

Product Name: CAT DEO 15W-40 (DIESEL ENGINE OIL)
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Response Center can be reached at (800)424-8802.

SPILL MANAGEMENT

Land Spill: Stop leak if you can do it without risk. Recover by pumping or with suitable absorbent.

Water Spill: Confine the spill immediately with booms. Stop leak if you can do it without risk. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7	HANDLING AND STORAGE
------------------	-----------------------------

HANDLING

Avoid contact with used product. Prevent small spills and leakage to avoid slip hazard.

Static Accumulator: This material is a static accumulator.

STORAGE

Do not store in open or unlabelled containers.

SECTION 8	EXPOSURE CONTROLS / PERSONAL PROTECTION
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Exposure limits/standards for materials that can be formed when handling this product: When mists / aerosols can occur, the following are recommended: 5 mg/m³ - ACGIH TLV, 10 mg/m³ - ACGIH STEL, 5 mg/m³ - OSHA PEL.

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:
No special requirements under ordinary conditions of use and with adequate ventilation.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use

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with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No special requirements under ordinary conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Work conditions can greatly effect glove durability; inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

No protection is ordinarily required under normal conditions of use.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

See Sections 6, 7, 12, 13.

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

GENERAL INFORMATION

Physical State: Liquid

Color: Amber

Odor: Characteristic

Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15 °C): 0.826

Flash Point [Method]: >215°C (419°F) [ASTM D-92]

Flammable Limits (Approximate volume % in air): LEL: 0.9 UEL: 7.0

Autoignition Temperature: N/D

Boiling Point / Range: > 316°C (600°F)

Vapor Density (Air = 1): N/D

Vapor Pressure: [N/D at 20 °C]

Product Name: CAT DEO 15W-40 (DIESEL ENGINE OIL)

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Evaporation Rate (n-butyl acetate = 1): N/D

pH: N/A

Log Pow (n-Octanol/Water Partition Coefficient): > 3.5

Solubility in Water: Negligible

Viscosity: 115.5 cSt (115.5 mm²/sec) at 40 °C | 15 cSt (15 mm²/sec) at 100°C

Oxidizing Properties: See Sections 3, 15, 16.

OTHER INFORMATION

Freezing Point: N/D

Melting Point: N/A

Pour Point: < -27°C (-17°F)

DMSO Extract (mineral oil only), IP-346: < 3 %wt

SECTION 10	STABILITY AND REACTIVITY
-------------------	---------------------------------

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Excessive heat. High energy sources of ignition.

MATERIALS TO AVOID: Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11	TOXICOLOGICAL INFORMATION
-------------------	----------------------------------

ACUTE TOXICITY

Route of Exposure	Conclusion / Remarks
Inhalation	
Toxicity (Rat): LC50 > 5000 mg/m ³	Minimally Toxic. Based on test data for structurally similar materials.
Irritation: No end point data.	Negligible hazard at ambient/normal handling temperatures. Based on assessment of the components.
Ingestion	
Toxicity (Rat): LD50 > 2000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Skin	
Toxicity (Rabbit): LD50 > 2000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Irritation (Rabbit): Data available.	Negligible irritation to skin at ambient temperatures. Based on test data for structurally similar materials.
Eye	
Irritation (Rabbit): Data available.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.

CHRONIC/OTHER EFFECTS

For the product itself:

Diesel engine oils: Not carcinogenic in animals tests. Used and unused diesel engine oils did not produce any carcinogenic effects in chronic mouse skin painting studies.

Product Name: CAT DEO 15W-40 (DIESEL ENGINE OIL)

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Oils that are used in gasoline engines may become hazardous and display the following properties: Carcinogenic in animal tests. Caused mutations in vitro. Possible allergen and photoallergen. Contains polycyclic aromatic compounds (PAC) from combustion products of gasoline and/or thermal degradation products.

Contains:

Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or other screening tests. Dermal and inhalation studies showed minimal effects; lung non-specific infiltration of immune cells, oil deposition and minimal granuloma formation. Not sensitizing in test animals.

Additional information is available by request.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = NTP CARC

3 = IARC 1

5 = IARC 2B

2 = NTP SUS

4 = IARC 2A

6 = OSHA CARC

SECTION 12

ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Not expected to be harmful to aquatic organisms.

MOBILITY

Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Base oil component -- Expected to be inherently biodegradable

BIOACCUMULATION POTENTIAL

Base oil component -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

SECTION 13

DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised

Product Name: CAT DEO 15W-40 (DIESEL ENGINE OIL)

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incineration at very high temperatures to prevent formation of undesirable combustion products.

REGULATORY DISPOSAL INFORMATION

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

Empty Container Warning PRECAUTIONARY LABEL TEXT: Empty containers may retain residue and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to refill or clean container since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

SECTION 14	TRANSPORT INFORMATION
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LAND (DOT): Not Regulated for Land Transport

LAND (TDG): Not Regulated for Land Transport

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

AIR (IATA): Not Regulated for Air Transport

SECTION 15	REGULATORY INFORMATION
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OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

NATIONAL CHEMICAL INVENTORY LISTING: TSCA

EPCRA: This material contains no extremely hazardous substances.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: None.

SARA (313) TOXIC RELEASE INVENTORY:

Chemical Name	CAS Number	Typical Value
ZINC DITHIOPHOSPHATE	68649-42-3	< 2.5%

The Following Ingredients are Cited on the Lists Below:*

Chemical Name	CAS Number	List Citations
PHOSPHORUS	7723-14-0	1, 4

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ZINC DITHIOPHOSPHATE	68649-42-3	13, 15, 17
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--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

* EPA recently added new chemical substances to its TSCA Section 4 test rules. Please contact the supplier to confirm whether the ingredients in this product currently appear on a TSCA 4 or TSCA 12b list.

SECTION 16	OTHER INFORMATION
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N/D = Not determined, N/A = Not applicable

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

No revision information is available.

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PPEC: A

DGN: 2026963XUS (543511)

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PRODUCT SAFETY DATASHEET

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Carbon Zinc Batteries
08/12/04

The information contained within is provided for your information only. This battery is an article pursuant to 29 CFR 1910.1200 and, as such, is not subject to the OSHA Hazard Communication Standard requirement for preparation of a material safety data sheet. The information and recommendations set forth herein are made in good faith and are believed to be accurate as of the date of preparation. However, EVEREADY BATTERY COMPANY, INC., MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM RELIANCE ON IT.

PRODUCT SAFETY DATA SHEET

PRODUCT NAME: EVEREADY Battery

Type No.: **Volts:**

TRADE NAME: CLASSIC; SUPER HEAVY DUTY; INDUSTRIAL; HERCULES

Approximate Weight:

CHEMICAL SYSTEM: Carbon-Zinc

Designed for Recharge: No

SECTION I - MANUFACTURER INFORMATION

Eveready Battery Company, Inc.
25225 Detroit Road
Westlake, OH 44145

Telephone Numbers for Information:
440-835-7368
800-383-7323 (USA)

Date Prepared: August 12, 2004

SECTION II - HAZARDOUS INGREDIENTS

IMPORTANT NOTE: The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

MATERIAL OR INGREDIENT	PEL (OSHA)	TLV (ACGIH)	%/wt.
Acetylene Black (CAS# 1333-86-4)	3.5 mg/m ³ TWA (as carbon black)	3.5 mg/m ³ TWA (as carbon black)	3-7
Ammonium Chloride (CAS# 12125-02-9)	None established	10 mg/m ³ TWA (fume) 20 mg/m ³ STEL (fume)	0-10
Manganese Dioxide (CAS# 1313-13-9)	5 mg/m ³ CEILING (as Mn)	0.2 mg/m ³ TWA (as Mn)	15-31
Zinc (CAS# 7440-66-6)	15 mg/m ³ TWA (total dust as particulates not otherwise regulated) 5 mg/m ³ TWA (respirable fraction as particulates not otherwise regulated)	10 mg/m ³ TWA (inhalable particulate) 3 mg/m ³ TWA (respirable particulate)	7-42
Zinc Chloride (CAS# 7646-85-7)	1 mg/m ³ TWA (fume)	1 mg/m ³ TWA (fume) 2 mg/m ³ STEL (fume)	2-10

SECTION III - FIRE AND EXPLOSION HAZARD DATA

In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.

Fire fighters should wear self-contained breathing apparatus.

SECTION IV - HEALTH HAZARD DATA

Under normal conditions of use, the battery is hermetically sealed.

Ingestion: Swallowing a battery can be harmful.

Contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract. If battery or open battery is ingested, do not induce vomiting or give food or drink. Seek medical attention immediately. CALL NATIONAL BATTERY INGESTION HOTLINE for advice and follow-up (202-625-3333) collect, day or night.

Inhalation: Contents of an open battery can cause respiratory irritation. Provide fresh air and seek medical attention.

Skin Contact: Contents of an open battery can cause skin irritation and/or chemical burns. Remove contaminated clothing and wash skin with soap and water. If a chemical burn occurs or irritation persists, seek medical attention.

Eye Contact: Contents of an open battery can cause severe irritation and chemical burns. Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of the chemical remains. Seek medical attention.

Note: Acetylene Black is listed as a possible carcinogen by International Agency for Research on Cancer (IARC).

SECTION V - PRECAUTIONS FOR SAFE HANDLING AND USE

Storage: Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life.

Mechanical Containment: If potting or sealing the battery in an airtight or watertight container is required, consult your Eveready Battery Company representative for precautionary suggestions. Batteries normally evolve hydrogen which, when combined with oxygen from the air, can produce a combustible or explosive mixture unless vented. If such a mixture is present, short circuits, high temperature, or static sparks can cause an ignition.

Do not obstruct safety release vents on batteries. Encapsulation (potting) of batteries will not allow cell venting and can cause high pressure rupture.

Handling: Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuits will cause the battery to lose energy, and can cause the safety release vent to open. Sources of short circuits include jumbled batteries in bulk containers, metal jewelry, metal covered tables or metal belts used for assembly of batteries in devices.

If soldering or welding to the battery is required, consult your Eveready Battery Company representative for proper precautions to prevent seal damage or short circuit.

Charging: This battery is manufactured in a charged state. It is not designed for recharging. Recharging can cause battery leakage or, in some cases, high pressure rupture. Inadvertent charging can occur if a battery is installed backwards.

Labeling: If the Eveready label or package warnings are not visible, it is important to provide a package and/or device label stating:

WARNING: DO NOT DISPOSE OF IN FIRE, RECHARGE, PUT IN BACKWARDS, MIX WITH USED OR OTHER BATTERY TYPES - MAY EXPLODE OR LEAK AND CAUSE PERSONAL INJURY.

Where accidental ingestion of small batteries is possible, the label should state:

WARNING: (1) KEEP AWAY FROM SMALL CHILDREN. IF SWALLOWED, PROMPTLY SEE DOCTOR: HAVE DOCTOR PHONE (202) 625-3333 COLLECT. (2) DO NOT DISPOSE OF IN FIRE, RECHARGE, PUT IN BACKWARDS, MIX WITH USED OR OTHER BATTERY TYPES - MAY EXPLODE OR LEAK AND CAUSE PERSONAL INJURY.

Disposal: Dispose in accordance with all applicable federal, state, and local regulations. Appropriate disposal technologies include incineration and land filling.

SECTION VI - SPECIAL PROTECTION INFORMATION

Ventilation Requirements: Not necessary under normal conditions.

Respiratory Protection: Not necessary under normal conditions.

Eye Protection: Not necessary under normal conditions. Wear safety glasses with side shields if handling an open or leaking battery.

Gloves: Not necessary under normal conditions. Use neoprene or natural rubber gloves if handling an open or leaking battery

SECTION VII - REGULATORY INFORMATION

The transportation of dry cell batteries manufactured or sold by Eveready Battery Company is not regulated by the U.S. Department of Transportation or the major international regulatory bodies.

SARA/TITLE III - As an article, this battery and its contents are not subject to the requirements of the Emergency Planning and Community Right-To-Know Act.

PRODUCT SAFETY DATASHEET

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PRODUCT SAFETY DATA SHEET

PRODUCT NAME: EVEREADY Battery

Type No.: **Volts:**

TRADE NAMES: ENERGIZER, ENERGIZER e², INDUSTRIAL ZMA, HERCULES, EVEREADY

Approximate Weight:

CHEMICAL SYSTEM: Alkaline Manganese Dioxide-Zinc

Designed for Recharge: No

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Date Prepared: August 12, 2004

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MATERIAL OR INGREDIENT	PEL (OSHA)	TLV (ACGIH)	%/wt.
Graphite (CAS# 7782-42-5)	15 mg/m ³ TWA (total dust) 5 mg/m ³ TWA (respirable fraction)	2 mg/m ³ TWA (respirable fraction)	2-6
Manganese Dioxide (CAS# 1313-13-9)	5 mg/m ³ Ceiling (as Mn)	0.2 mg/m ³ TWA (as Mn)	30-45
Potassium Hydroxide (CAS# 1310-58-3)	None established	2 mg/m ³ Ceiling	4-8
Zinc (CAS# 7440-66-6)	15 mg/m ³ TWA PNOR* (total dust) 5 mg/m ³ TWA PNOR* (respirable fraction)	10 mg/m ³ TWA PNOC** (Inhalable particulate) 3 mg/m ³ TWA PNOC** (respirable particulate)	12-25

* PNOR: Particulates not otherwise regulated

**PNOC: Particulates not otherwise classified

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If soldering or welding to the battery is required, consult your Eveready Battery Company representative for proper precautions to prevent seal damage or short circuit.

Charging: This battery is manufactured in a charged state. It is not designed for recharging. Recharging can cause battery leakage or, in some cases, high pressure rupture. Inadvertent charging can occur if a battery is installed backwards.

Labeling: If the Eveready label or package warnings are not visible, it is important to provide a package and/or device label stating:

WARNING: do not install backwards, charge, put in fire, or mix with other battery types. May explode or leak causing injury. **Replace all batteries at the same time.**

Where accidental ingestion of small batteries is possible, the label should include:

Keep away from small children. If swallowed, promptly see doctor; have doctor phone (202) 625-3333 collect.

Disposal: Dispose in accordance with all applicable federal, state and local regulations. Appropriate disposal technologies include incineration and land filling.

SECTION VI - SPECIAL PROTECTION INFORMATION

Ventilation Requirements: Not necessary under normal conditions.

Respiratory Protection: Not necessary under normal conditions.

Eye Protection: Not necessary under normal conditions. Wear safety glasses with side shields if handling an open or leaking battery.

Gloves: Not necessary under normal conditions. Use neoprene or natural rubber gloves if handling an open or leaking battery.

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SARA/TITLE III - As an article, this battery and its contents are not subject to the requirements of the Emergency Planning and Community Right-To-Know Act.



MATERIAL SAFETY DATA SHEET

MANUFACTURER:

ESCO CORPORATION
 2141 N.W. 25th Avenue
 Portland, OR 97210-2578

INFORMATION TELEPHONE NUMBER:

J. Carter Webb, Manager
 Environmental/Safety Affairs
 (503) 778-6670

PRODUCT DESIGNATION

Product Name: **STEEL FOUNDRY PRODUCTS**
 Chemical Name: N/A

Synonyms: N/A
 Formula: N/A

SECTION I - TYPICAL CHEMICAL COMPOSITION

<u>Ingredient (2)</u>	<u>CAS NO.</u>	<u>Permissible Air Level</u>		<u>ACGIH TLV (mg/m3)</u>
		<u>WT. %</u>	<u>OSHA PEL (mg/m3)</u>	
Iron	7439-89-6	Balance	10.0(3)	5.0(3)
Chromium	7440-47-3	0.1-30	0.1(4)	.05(4)
Manganese	7439-96-5	0.1-20	5.0(5)	1.0(6)
Nickel	7440-02-0	0.1-30	1.0(7)	1.0(7)
Molybdenum	7439-98-7	0.1-10	5.0	5.0
			(Soluble Compounds)	
			15.0	10.0
			(Insoluble Compounds)	
Silicon	7440-21-3	0.1-3.5	15.0	10.0
			(Total Dust)	
			5.0	5.0
			(Respirable Dust)	
Aluminum	7429-90-5	0.01-5	0.1	0.05
Cobalt	7440-48-4	0.1-5	N/A	N/A
Carbon	7440-44-0	0.01-4	N/A	N/A
Trace Elements	N/A	LT 1.0	N/A	N/A

Concentrations may vary somewhat between batches or lots. Various grades of steel will contain different combinations of these elements. Trace elements may also be present in minute amounts. No permissible exposure limits (PEL) or threshold limit values (TLV) exist for steel. Values shown are applicable to component elements.

SECTION II - PHYSICAL DATA

Physical State:	Solid	Flash Point:	N/A
Appearance and Odor:	Grey metal; odorless	Auto-Ignition Temperature:	N/A
Boiling Point:	N/A	Flammable Limits in Air:	N/A
Melting Point:	2450-2730°F		
Evaporation Rate:	N/A		
Vapor Pressure:	N/A		
Vapor Density:	N/A		
Specific Gravity:	7.6-7.8		
Solubility in Water:	N/A		

SECTION III - FIRE, REACTIVITY AND EXPLOSION DATA

EXTINGUISHING MEDIA:

Steel castings in their usual physical forms do not present fire or explosion hazards under normal conditions. Use fire fighting methods and materials that are appropriate for surrounding area.

Molten metal may explode on contact with water. For these fires, use dry powder or sand.

CONDITIONS TO AVOID:

Steel at temperatures above the melting point may emit fumes of iron and alloying elements. Avoid generation of airborne fume and dust.

SECTION IV - HEALTH HAZARD DATA

HEALTH HAZARDS:

Steel products in their solid state present no inhalation, ingestion, or contact health hazard. Operations such as burning, welding, sawing, brazing, grinding, and machining, which result in elevating the temperature of the product to or above its melting point, or result in the generation of airborne particulates, may present hazards. The major exposure hazard is inhalation.

Effects of Skin Contact: Remove particles by washing thoroughly with soap and water. Seek medical attention if condition persists.

Inhalation: Remove to fresh air. If condition continues, consult a physician.

Effect of Eye Contact: Flush thoroughly with running water to remove particle. Seek medical attention.

Ingestion: If significant amounts of metal are ingested, consult a physician.

Effects of overexposure to fume and dust are as follows:

Acute: Excessive inhalation of metallic fumes and dust may result in irritation of eyes, nose, and throat. High concentrations of fumes and dusts of iron oxide, manganese, copper, zinc and lead may result in metal fume fever. Typical symptoms last from 12 to 48 hours and consist of a metallic taste in the mouth, dryness and irritation of the throat, chills and fever.

Chronic: Chronic and prolonged inhalation of high concentrations of fumes or dust of the following elements may lead to the conditions listed opposite the element:

IRON (Fe)	Siderosis Pulmonary effects
CHROMIUM (Cr)...	Lesions of the skin and mucous membranes. Possible cancer of the nose or lungs - Bronchogenic Carcinoma.
MANGANESE (Mn)..	Bronchitis, Penumonitis, Lack of Coordination.
NICKEL (Ni).....	Lesions of the skin and mucous membranes. Possible cancer of the nose or lungs - Bronchogenic Carcinoma.
MOLYBDENUM (Mo)....	Respiratory tract irritation. Possible liver and kidney damage, bone deformity.
SILICON (Si)....	Considered a nuisance particulate by ACGIH.
ALUMINUM (Al)....	Possible lesions of skin and mucous membranes, Possible bone disease, Respiratory tract irritation, Asthma

COBALT (Co)...

Bronchitis, Asthma, Cough, Dyspnea, Chest Pain, Nausea, Vomiting and Abdominal Colic

SECTION V - PERMISSIBLE EXPOSURE LIMITS

Occupational Exposure Limits:

See Product Ingredients (Section I). Chromium and Nickel have been identified by the International Agency for Research on Cancer (IARC) and/or the National Toxicology Program (NTP) as potential cancer causing agents.

SECTION VI - CANCER HAZARD

Chromium and Nickel have been identified by the International Agency for Research on Cancer (IARC) and/or the National Toxicology Program (NTP) as potential cancer causing agents.

SECTION VII - CONTROLS, PROTECTION

Respiratory Protection:

Appropriate dust/mist/fume respirator should be used to avoid excessive inhalation of particulates. If exposure limits are reached or exceeded, use NIOSH approved equipment.

Hands, Arms, and Body:

Protective gloves should be worn as required for welding, burning, or handling operations.

Eyes and Face:

Safety glasses should be worn when grinding or cutting. Face shields are recommended when welding or burning.

Other Clothing and Equipment:

As required, depending on operations and safety codes.

SECTION VIII - SPILL, LEAK, AND DISPOSAL INFORMATION

Procedures to Follow if Material is Released or Spilled: N/A

Waste Disposal Method(s):

Any excess product can be recycled for further use, disposed in a permitted hazardous waste landfill, or disposed by other methods which are in accordance with local, state, and federal regulations.

SECTION IX - REACTIVITY INFORMATION

STABILITY: Stable under normal conditions of use, storage, and transportation.

INCOMPATIBILITY (Materials to Avoid): Reacts with strong acids to form Hydrogen gas.

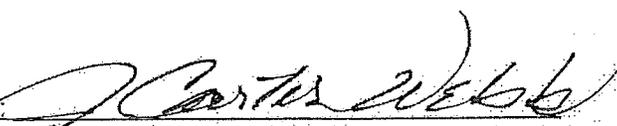
ADDITIONAL PRECAUTIONS: Provide adequate exhaust ventilation and maintain good housekeeping practices

ABBREVIATIONS:

- N/A = Not Applicable
- (2) All values, unless otherwise specified, refer to 8-hour time-weighted average concentrations and units are in mg/M³.
- (3) As iron oxide fume.
- (4) As hexavalent chromium compounds.
- (5) Ceiling value for manganese.
- (6) As manganese fume.
- (7) As nickel metal and insoluble compounds.

SECTION X - MSDS PREPARATION

DATE PREPARED: May 2006 (Rev. 11)
(Original Issue: December 1985)

PREPARER: 
J. Carter Webb, Manager
Environmental/Safety Affairs

This document has been prepared solely for the intent of compliance with the provisions of Subpart 2 of Part 1910 of Title 29 of the Code of Federal Regulations, paragraph 1910.1200. ESCO CORP. MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY, ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE AND ANY IMPLIED WARRANTIES OTHERWISE ARISING FROM COURSE OF DEALING OR TRADE.

Manufacturer:



For more information call:
 Ph: (800) 258-5998
 Fax: (508) 540-4428

E Paint Company
 25 Research Road
 Falmouth, MA 02536

In case of emergency call:
 (800) 424-9300

1. Identification

Product Name: **EP2000**
 Registration #: 64684-6

2. Hazardous Components

Ingredient Name:	CAS #	Weight %	Occupational Exposure		Vap. Press mm Hg
			TLV	PEL	
Proprietary Algaecide		4.7%	100ppm	100ppm	23@25°C
1-Methyl-2-Pyrrolidinone	872-50-4	5%	100ppm	100ppm	0.29@20°C
N,N-Diethylethanamine Triethylamine	1121-44-8	.5%	10ppm	10ppm	54@20°C

OSHA Carcinogens: None known

Primary Routes of Entry:

Inhalation, Skin, eyes, ingestion

Potential Health Hazards:

Skin and Eyes Acute:

It is a mild eye and dermal irritant, but is nontoxic according to the results of acute dermal and acute eye testing.

Skin and Eyes Chronic:

Long term exposure may cause defatting of the skin and skin sensitization.

Skin Absorption Acute:

EP2000 is considered a mild dermal irritant based upon Acute Dermal testing.

Skin Absorption Chronic:

No effects would be expected from this route of entry.

Inhalation Acute:

May cause mild irritation to nose, throat, and lungs.

Inhalation Chronic:

Irritation to respiratory tract. There is no evidence that exposure will produce impairment of lung function.

Ingestion Acute:

EP2000 was found to have an LD50 of 1.6 g/kg in an Acute Oral Toxicity study with Sprague-Dawley rats.

Ingestion Chronic:

Prolonged occupational overexposure to this material (or one its components) when administered to pregnant female rats, at a high dose level of 750 mg/kg body weight, caused maternal and feto toxicity in some animals.

4. First Aid Measures

Skin:

Promptly remove contaminated clothing and wash with soap and water. Seek medical assistance if irritation persists.

yes:

Move individual away from exposure into fresh air. Flush eyes with copious amounts of water while holding eyelids apart for at least 15 minutes. If symptoms persist, seek medical attention.

Inhalation:

Remove individual to fresh air. Keep person warm and quiet. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek medical attention.

Ingestion:

Seek medical attention, keep person warm and quiet.

Medical Conditions Generally Aggravated by Exposure:

Not Determined.

Note to Physician:

5. Fire Fighting Measures

Flammable Properties:

Flash Point over 200°F

Flash Point Method Pensky-Martens C.C.

Extinguishing Media:

CO₂, dry chemical, water fog

Unusual Fire and Explosion Hazards:

Material will not support combustion unless the water has evaporated.

Special Firefighting Precautions/Instructions:

Water may be used to cool closed containers, to prevent pressure buildup.

6. Accidental Release Measures

ALWAYS WEAR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT!

In Case of Spill or Other Release:

Evacuate area. Eliminate all ignition sources. Stop spill at the source. Prevent from entering drains, sewers, streams or other bodies of water. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product and transfer contaminated absorbent into containers for disposal. This material is heavier than water and subject to emulsification.

7. Handling, Storage, and Disposal

Dispose of in accordance with all local, state, and federal regulations. Store in a cool dry place. Keep out of reach of children.

8. Control Measures and Personal Protection

Ventilation:

Provide sufficient mechanical ventilation to maintain exposure below TLV.

Skin Protection:

Wear chemical resistant gloves and coveralls.

Eye Protection:

Wear face shield or chemical goggles.

Respiratory Protection:

A NIOSH/MSHA approved respirator must be worn to prevent the inhalation of vapors or spray mists when the TLV or PEL is exceeded.

Additional Recommendations:

Wear protective equipment.

9. Physical and Chemical Properties

Appearance White viscous liquid
Odor slight amine odor
Specific Gravity 1.4
Solubility Not Determined
Boiling Point 192-396°F
Vapor Density Heavier than air
Evaporation Rate slower than ether
Flash Point over 200°F
Flash Point Method Pensky-Martens C.C.

10. Stability and Reactivity

Stability stable
Conditions to Avoid Do not store in direct sunlight, or above 130°F or below 50°F.
Incompatibilities Strong oxidizing agents, ferrous metals, copper, copper alloys.
Hazardous Decomposition Products Carbon Monoxide, Carbon Dioxide, Oxides of Nitrogen
Hazardous Polymerization Will not occur.

11. Transportation Information

DOT/UPS/ IATA:

Proper Ship Name. paint
DOT Haz. Class non-hazardous
DOT ID#.
Packing Group.
Label Required.

12. Disclaimer

We believe the recommendations and technical information contained herein to be accurate. However, they are given without warranty or guarantee, expressed or implied, and we assume no responsibility for losses or damages, direct or indirect, as a result of their use.



EP2000
Antifouling Paint
EPA Reg#64684-6

FEATURES	RECOMMENDED USES
----------	------------------

- Water-based and VOC compliant
- Contains no copper or TBT
- High performance antifouling paint
- Available in WHITE
- Environmentally friendly
- Offers easy clean up
- Smooth, Strong and Flexible

For use on all hull types including aluminum and inflatable watercraft .

For those who desire the fastest, cleanest, and whitest bottom!

SPECIFICATION DATA	
--------------------	--

Coating Type	Copper and TBT-free water-based antifouling
Colors	E Paint Number
White	EP-401
Gray	EP-701
Safety Orange	EP-901
Packaging	Single component material 5, 1 Gallon and 1 Quart containers.
Flash Point	N/A
Thinner	Thinning is not recommended. Clean up with water.
Shelf Life	1 year
Weight Per Volume	13.6 lbs/gallon
Solids by Weight	64%
Solids by Volume	44%

Dry-to-Recoat
Minimum 8 hours at 70°F (21°C) @50%RH
Maximum not critical

Dry-to-Launch
Minimum 24 hours at 70°F (21°C)@50%RH
Maximum not critical

Theoretical Spreading Rate
240 Sq. Ft/Gal at 3-4 mil dft

Recommended Film Thickness Per Coat
6-8 wet mils to obtain 3-4 dry mils

Recommended Number of Coats
2 coats
w/ additional coat along the waterline.

Application
See application instructions on back.

APPLICATION INSTRUCTIONS

EP 2000 is a high performance, hard, water-based antifouling paint that is recommended for use on all substrates exposed to marine biofouling. EP 2000 is not compatible with other existing antifouling coatings. EP2000 is self-priming when applied to properly prepared substrates. To provide complete protection from water migration to the hull apply EP2000 over an epoxy barrier. Apply EP2000 at the dry-to-recoat interval. Consult your E Paint Company Representative for recommendations regarding specific epoxy primers.

NOTE: Due to the nature of photoactive paints, darker colors may require periodic maintenance scrubbing.

SURFACE PREPARATION

Previously Painted Surfaces

To renew old EP 2000, sand lightly to abrade the surface. Wash hull to remove sanding debris. Allow hull to fully dry. Apply new EP 2000 antifouling paint as per the instructions contained in this bulletin. All other existing antifouling coatings must be removed.

Unpainted Surfaces

Fiberglass, gel-coat and wood

E Paint Company recommends that an epoxy barrier coat be used as a tie coat for best performance. Consult your E Paint Company Representative for recommendations regarding specific epoxy primers. Follow the manufacturers' recommendations for dry times and film thickness. Apply EP2000 at the dry-to-recoat interval. Do not apply if a strong solvent odor emanates from the film. Remove sanding dust and debris by cleaning with water. Apply new EP 2000 antifouling paint as per the instructions contained in this bulletin.

Rubber

Degrease surface by cleaning with soapy water. Abrade surface with 80 grit sand paper. Remove sanding dust and debris by washing with water. Allow surface to dry. Apply new EP 2000 antifouling paint as per the instructions contained in this bulletin.

Metal surfaces should be properly prepared before applying EP 2000. Aluminum should be prepared to a 2mil profile prior to application of EP2000. Corrosion-inhibiting epoxy primers are recommended to afford protection to the hull. Consult your E Paint Company Representative for recommendations regarding epoxy primers. Follow the manufacturers' recommendations for dry times and film thickness. Apply EP2000 to **fully cured** epoxy. Remove sanding dust and debris by cleaning with water. Apply new EP 2000 antifouling paint as per the instructions contained in this bulletin.

MIXING AND THINNING

STIR EP 2000 until a homogenous blend results. **DO NOT POWER SHAKE** the product. Thinning is not recommended. If thinning is desired, thin up to 5% only with bottled water.

APPLICATION

EP 2000 may be applied by spray, roller or brush. Only apply EP 2000 to clean, dry, well-prepared surfaces. Apply two coats of EP 2000 with an additional coat at the waterline. **IMPORTANT:** Be sure to follow dry-to-recoat and launch instructions (see Specification Data). Failure to follow drying instructions will severely jeopardize adhesion and performance. **COOLER TEMPERATURES WILL REQUIRE INCREASING THE MINIMUM TIMES BETWEEN RECOATING AND LAUNCHING. DO NOT APPLY IF**, within the next 12 hours, the temperature may drop below 55°F, or rain or heavy dew is expected. **NOTE: EP2000 is a water-base coating, solvent residue in spray equipment will render the product unusable!** Always use first quality equipment. Clean up with water.

PRECAUTIONS

See the material safety data sheet and product label for complete safety and precaution requirements.

Any recommendations of E Paint Company contained herein, covering use, utilization, chemical or physical properties and other qualities of the products sold are believed to be reliable; however, E Paint Company makes no warranty or representation with respect thereto. Use or application of any E Paint Company products are at the discretion of the Buyer without liability or obligation whatsoever of E Paint Company, Inc.

E Paint Company, Inc.
25 Research Road
Falmouth, MA 02536
USA
800-258-5998/ 508-540-4412



www.emeraldhw.com

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910 1200. Standard must be consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health Administration
Form Approved
OMB No. 1218-0072

IDENTITY

**Emerald Wash
Recycled gun wash solvent blend**

Section I

Manufacturer's name **Emerald Services, Inc.**

Emergency Telephone Number **1-800-424-9300**

Address **1825 ALEXANDER Ave.
Tacoma, WA 98421**

Telephone Number for Information **206-832-3225**

Date Prepared **Revised 7/24/06**

Signature of Preparer (optional) **Devin D. Boyles**

Section II—Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))

	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Toluene CAS 108-88-3	TWA 200 ppm	50 ppm		10 – 15%
Methyl Ethyl Ketone CAS 78-93-3	TWA 200 ppm	200 ppm		30 – 40%
Acetone CAS 67-64-1	TWA 1000 ppm	500 ppm		20 – 25%
Xylenes CAS 1330-20-7	NOT ESTABLISHED			5 – 10%
Ethyl Acetate CAS 141-78-6	TWA 400 ppm	400 ppm		5 – 10%
Ethanol CAS 64-17-5	TWA 1000 ppm	1000 ppm		3 – 5%

May contain methanol (CAS 67-56-2), Isopropanol (67-63-0), Methyl Isobutyl Ketone (CAS 108-10-1), Butyl Acetate (CAS 123-86-4), and Ethylene Glycol Monobutyl Ether (CAS 111-76-2) each <2% and no more than 5% in aggregate.

Section III—Physical/Chemical Characteristics

Boiling Point	131F	Specific Gravity (H ₂ O = 1)	0.81 – 0.97
Vapor Pressure (mm Hg)	No data	Melting Point	No data
Vapor Density (AIR = 1)	No data	Evaporation Rate (Butyl Acetate = 1)	No data
Solubility in Water	Slight		
Appearance and Odor	Clear watery liquid with ketone odor		

Section IV—Fire and Explosion Hazard Data

Flash Point (Method Used)	-4°F (TCC)	Flammable Limits	LEL 1.2%	UEL
Extinguishing Media	Regular foam, Carbon Dioxide, Dry Chemical			

Special Fire Fighting Procedures Water may be ineffective. Water may be used to keep fire-exposed containers cool until fire is out. Use fog nozzles if water is used. DO NOT enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots). Use NIOSH approved positive-pressure self-contained breathing apparatus.

Unusual Fire and Explosion Hazards Vapors are heavier than air and may travel along the ground or may be moved by ventilation

Waste Disposal Method Dispose of in accordance with all applicable local, state and federal regulations.

Precautions to Be Taken in Handling and Storing For handling, containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. All five gallon pails and larger metal containers including tank cars and tank trucks should be grounded and/or bonded when materials is transferred. Warning. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "auto-ignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. Isolate from oxidizers, heat, sparks, electric equipment and open flame. Use only with adequate ventilation. Avoid breathing vapor or spray mist. Avoid contact with skin and eyes. For storage, vapors may ignite explosively and spread long distances. Prevent vapor buildup. Put out pilot lights and turn off heaters, electric equipment and other ignition sources during use and until all vapors are gone. Do not store above 49°C/120°F. Store large amounts in structures made for OSHA Class I B liquids. Keep container tightly closed and upright when not in use to prevent leakage.

Other Precautions

Section VII—Control Measures

Respiratory Protection (*Specify Type*) Filter respirator for organic gases and vapors.

Ventilation	Local Exhaust	Yes	Special
	Mechanical (<i>General</i>)	Yes	Other

Protective Gloves Nitrile, neoprene

Eye Protection OSHA compliant chemical splash goggles

Other Protective Clothing or Equipment Impervious clothing and boots to prevent repeated or prolonged skin contact.

Work/Hygienic Practices Always wear proper PPE, thoroughly clean self before eating, going on breaks and going home.



Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910 1200. Standard must be consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY	<p>#1 Acetone</p> <p><i>Note: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.</i></p>
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Section I	
Manufacturer's name Emerald Services, Inc.	Emergency Telephone Number 1-800-424-9300
Address 1825 ALEXANDER Ave. Tacoma, WA 98421	Telephone Number for Information 206-832-3225
	Date Prepared Revised 7/15/06
	Signature of Preparer (optional) Devin D. Boyles

Section II—Hazardous Ingredients/Identity Information				
Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Acetone CAS 67-64-1	TWA 1000 ppm	500 ppm		=>98%
Toluene CAS 108-88-3	TWA 200 ppm	50 ppm		<1%
Methyl Ethyl Ketone CAS 78-93-3	TWA 200 ppm	200 ppm		<1%
Xylenes CAS 1330-20-7	Not Established			<1%

Section III—Physical/Chemical Characteristics			
Boiling Point	131°F	Specific Gravity (H ₂ O = 1)	.81
Vapor Pressure (mm Hg)	No Data	Melting Point	-95°C
Vapor Density (AIR = 1)	2.0	Evaporation Rate (Butyl Acetate = 1)	Not Determined
Solubility in Water	Miscible		
Appearance and Odor	Colorless liquid, with characteristic odor.		

Section IV—Fire and Explosion Hazard Data			
Flash Point (Method Used)	-4°F (TCC) Lowest Component	Flammable Limits	LEL 2.6% UEL 12.8%
Extinguishing Media	Regular Foam, Carbon Dioxide, Dry Chemical		
Special Fire Fighting Procedures	Water may be ineffective. Water may be used to keep fire-exposed containers cool until fire is out. Use fog nozzles if water is used. DO NOT enter confined fire space without full bunker gear. Use NIOSH approved positive-pressure self-contained breathing apparatus.		

Unusual Fire and Explosion Hazards Vapors are heavier than air and may travel along the ground or may be moved by ventilation

and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Do not pressurize. Extremely flammable, vapors can cause flash fire.

(Reproduce locally)

OSHA 174 Sept. 1985

Section V—Reactivity Data

Stability	Unstable		Conditions to Avoid Avoid contact with: heat, sparks, electrical equipment, open flames, and strong oxidizing agents.
	Stable	X	

Incompatibility (Materials to Avoid) The substance can form explosive peroxides on contact with strong oxidants such as acetic acid, nitric acid, and hydrogen peroxide. Reacts with chloroform and bromoform under basic conditions, causing fire and explosion hazard. Attacks plastic.

Hazardous Decomposition or Byproducts May form carbon dioxide and carbon monoxide.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

Section VI—Health Hazard Data

Route(s) of Entry	Inhalation? Yes	Skin? Yes	Ingestion? Yes
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Health Hazards (Acute and Chronic) *Acute* – The vapor irritates the eyes and respiratory tract. The substance may cause effects on the central nervous system, liver, kidneys, and gastrointestinal tract. *Chronic* – Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the blood and bone marrow.

Carcinogenicity	NTP? None	IARC Monographs? None	OSHA Regulated? None
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Signs and Symptoms of Exposure Gastrointestinal irritation (nausea, vomiting, diarrhea), irritation (nose, throat, respiratory tract), cough, central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), leg cramps, blurred vision, abdominal and low back pain, shortness of breath, cyanosis (characterized by bluish discoloration of skin and nails), coma and death.

Medical Conditions
Generally Aggravated by Exposure May aggravate pre-existing disorders of these organs: anemia, kidney damage, lung damage, and effects on hearing.

Emergency and First Aid Procedures For eye contact, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention. For skin, remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse. If swallowed, do not induce vomiting. Vomiting may lead to pneumonitis, which may be fatal. If individual is drowsy or unconscious, place on left side with head down. Seek medical attention. If possible, do not leave individual unattended. For inhalation, if symptoms develop, immediately move individual away from exposure and into fresh. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, give oxygen.

Section VII—Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled For small spill, absorb liquid on vermiculite, floor absorbent or other absorbent material. Persons NOT wearing proper personal protective equipment should be excluded from area of spill. For large spill, eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering or run-off to drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff

occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recover. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Notify proper authorities as required, that a spill has occurred.

Waste Disposal Method Dispose of in accordance with all applicable local, state and federal regulations.

Precautions to Be Taken in Handling and Storing For handling, containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid) all hazard precautions given in the data sheet must be observed. All five-gallon pails and larger metal containers including tank cars and tank trucks should be grounded and/or bonded when material is transferred. Warning. Sudden release of hot organic chemical vapors or mists from process equipment operation at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "auto ignition" or "ignition" temperature values cannot be treated as safe operation temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. Isolate from oxidizers, heat, sparks, electric equipment and open flame. Use only with adequate ventilation. Avoid breathing vapor or spray mist. Avoid contact with skin and eyes. For storage, vapors may ignite explosively and spread long distances. Prevent vapor buildup. Put out pilot lights and turn off heaters, electric equipment and other ignition sources during use and until all vapors are gone. Do not store above 49°C / 120°F. Store large amounts in structures made for OSHA Class I B liquids. Keep container tightly closed and upright when not in use to prevent leakage.

Other Precautions

Section VII—Control Measures

Respiratory Protection (Specify Type) Filter respirator for organic gases and vapors.

Ventilation	Local Exhaust	Yes	Special	
	Mechanical (General)	Yes	Other	
Protective Gloves	Nitrile, neoprene		Eye Protection	OSHA compliant chemical splash goggles
Other Protective Clothing or Equipment		Impervious clothing and boots to prevent repeated or prolonged skin contact.		
Work/Hygienic Practices		Always wear proper PPE, thoroughly clean self before eating, going on breaks and going home.		

Franklin International

MATERIAL SAFETY DATA SHEET

MSDS Name: Titebond White Glue
 MSDS Number: 5027
 Revision Date: 11/15/00

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Titebond White Glue
 CAS Number: none
 HMIS Hazard Rating: Health: 1 Fire: 1 Reactivity: 0

Company Identification: Franklin International
 2020 Bruck Street
 Columbus OH 43207

Contact: Franklin Technical Services
 Telephone/Fax: (800) 877-4583 (614) 445-1493
 Emergency Phone (24 Hour): Franklin Security
 (614) 445-1300
 Chemtrec (24 Hour): (800) 424-9300
 Chemtrec International: (703) 527-3887

Product Class: polyvinyl acetate emulsion
 Product Use: wood glue
 Product Code: 1106

Division: Construction Adhesives & Sealants

SECTION 2 - COMPOSITION AND INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS Number	Percent
Product contains no hazardous ingredients or they are below reportable levels.		

OSHA PELs & ACGIH TLVs are listed in Section 8 where applicable.

SECTION 3 - HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:

White colored water-based adhesive. Slippery in the wet state.

ROUTES OF ENTRY:

Ingestion: Yes
 Inhalation: Yes
 Skin: Yes
 Eye: Yes

INHALATION:

Vapors and/or aerosols which may be formed at elevated temperature may be irritating to eyes and respiratory tract.

No reported incidents of adverse health affects resulting from inhalation of vapors at room temperature.

INGESTION:

No hazard expected in normal industrial use. Ingestion is not a likely route of exposure.

SKIN:

Prolonged or repeated skin contact can cause irritation.

EYE:

Substance may cause moderate eye irritation.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

None identified.

CARCINOGENICITY:

IARC: No

NTP: No

OSHA: No

REPRODUCTIVE TOXICITY:

This product has not been evaluated for reproductive toxicity.

SECTION 4 - FIRST AID MEASURES

INHALATION:

Remove patient to fresh air, if discomfort persists seek medical attention.

INGESTION:

Call poison control center immediately. Follow their specific instructions. Do not induce vomiting.

SKIN:

Wash with soap and water. Contact a physician if irritation develops or persists.

EYE:

Hold eyelids apart and flush with plenty of water for at least 15 minutes. Seek medical attention.

SECTION 5 - FIRE-FIGHTING MEASURES

Flammability Class (OSHA) IIIB

Flash Point: Not Applicable

Explosive Range: Not Applicable

EXTINGUISHING MEDIA:

Use alcohol foam, carbon dioxide, water spray, or ABC dry chemical when fighting fires involving this product.

HAZARDOUS COMBUSTION PRODUCTS:

Oxides of carbon.

FIRE FIGHTING PROCEDURES:

Wear a NIOSH approved self-contained breathing apparatus.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

CONTAINMENT TECHNIQUES:

Use inert absorbent to dike the spill. Keep away from drains.

CLEAN-UP:

If possible pump liquid into an approved container or spread absorbent over spill and shovel product/absorbent mixture into an approved container. If product has dried scrape up and place in an approved container.

SECTION 7 - HANDLING AND STORAGE

HANDLING:

Empty drums should be completely drained, properly bunged and promptly returned to a reconditioner, or properly disposed of.

Use only in well ventilated area.

STORAGE:

Keep from freezing.

Store at temperatures between 50 F and 90 F.

PRECAUTIONARY STATEMENT:

Keep out of the reach of children.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational Exposure Limits

ACGIH TLV	ACGIH TLV-C	ACGIH STEL	OSHA STEL	OSHA PEL
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ENGINEERING CONTROLS:

Use local exhaust as needed to maintain occupational exposure limits.

OTHER:

Facilities storing or utilizing any chemical should be equipped with an eyewash facility and a safety shower.

RESPIRATORY PROTECTION:

Where exposure limits may be exceeded select a NIOSH approved respirator with appropriate Protection Factor and cartridge for the specific contaminants. Follow requirements for respiratory protection in OSHA 1910.134.

EYE PROTECTION:

Chemical splash goggles (ANSI Z87.1 or approved equivalent).

SKIN PROTECTION:

Where skin contact can occur, wear impervious gloves.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Appearance/Color:	white
Odor:	Mild
Solubility (in water):	Dispersible in water
pH Value:	4.8
Boiling Range/Point:	210.øF
Evaporation Rate:	Slower than n-Butyl Acetate
% Volatile:	54.1%
Specific Gravity:	1.09
VOC:	10.7 g/l

SECTION 10 - STABILITY AND REACTIVITY

Stability:	This product is stable
Hazardous Polymerization:	Hazardous polymerization will not occur

CONDITIONS TO AVOID:

None.

INCOMPATIBILITY:

Strong acids and bases.

HAZARDOUS DECOMPOSITION PRODUCTS:

Oxides of carbon may be released during combustion.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute and chronic health effects are not expected as long as good industrial hygiene and safety precautions are followed.

SECTION 12 - ECOLOGICAL INFORMATION

This formulation has not been tested for environmental effects.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:

Disposal of this product must comply with all applicable federal, state and local regulations.

CONTAINER DISPOSAL:

Disposal of this container should comply with all applicable federal,

state and local regulations.

SECTION 14 - TRANSPORT INFORMATION

UN Number	none
UN Pack Group	N/A
UN Class	Nonhaz
ICAO/IATA Class	Nonhazardous
IMDG Class	Nonhazardous
Shipping Name	Nonhazardous

Packaging may not be approved for shipping by air. Please contact Franklin International for further information.

SECTION 15 - REGULATORY INFORMATION

TSCA (Toxic Substances Control Act Inventory):

All components of this product are listed on the TSCA inventory except as exempted.

PENNSYLVANIA:

Non-hazardous components required to be listed at 3% or more:

polyvinyl acetate emulsion 9003-20-7; polyvinyl alcohol 25213-24-5

NEW JERSEY:

polyvinyl acetate emulsion 9003-20-7; water 7732-18-5; polyvinyl alcohol 25213-24-5; petroleum hydrocarbon 64741-89-5; trade secret 80100233-5015p

SECTION 16 - OTHER INFORMATION

DISCLAIMER:

While the information and recommendations set forth herein are believed to be accurate as of the data hereof, Franklin International makes no warranty, express or implied, with respect thereto and disclaims all liability from reliance thereon.

SAFETY DATA SHEET



1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

NAME OF MANUFACTURER/SUPPLIER:

FUCHS LUBRICANTS (UK) PLC

Sheet 1 of 4

Revision Number 2

Last revision 15 January 2002

Issue date 15/04/2002

ADDRESS:

New Century Street, Hanley, Stoke-on-Trent ST1 5HU

Business Telephone: 08701 200400 Fax: 01782
202072

PRODUCT NAME:

Product Code: 2602

RENOLIT 762 HIGH TEMPERATURE JOINT COMPOUND

APPLICATION:

Anti-Seize and jointing compound

2. COMPOSITIONAL INFORMATION:

Comprises an aqueous blend of sodium silicate, clays and talc.

Hazardous ingredient	Risk codes	Cas number	% range
Sodium silicate solution	Xi: R38, R41	15859-24-2	>50%

3. HAZARDS IDENTIFICATION:

Alkaline irritant

Special hazards of
product after use:

Dried material may produce a dust during dismantling equipment which contains talc, and which may lead to respiratory irritation.

PRODUCT NAME:**RENOLIT 762 HIGH TEMPERATURE JOINT COMPOUND**

Sheet 2 of 4

Revision Number

2

Last revision 15 January 2002

Issue date 15/04/2002

4. FIRST AID MEASURES:

- Eyes: Hold eyes open for at least 15 minutes under running water. Obtain immediate medical attention.
- Skin: Wash thoroughly with soap and water. Apply emollient cream
- Inhalation: Remove to fresh air. If effects persist, seek medical advice
- Ingestion: Rinse mouth with water. If conscious give water to drink. Transport to hospital and show this data sheet.
- Pressure injection: ALWAYS OBTAIN IMMEDIATE MEDICAL ATTENTION EVEN THOUGH THE INJURY MAY APPEAR MINOR.

5. FIRE FIGHTING MEASURES

- Flammability: Not classified as flammable
- Flash point (°C,PMCC): None.
- Extinguishing media: Dry chemical, CO₂, foam, sand and water
- Products of combustion: Not applicable

6. ACCIDENTAL RELEASE MEASURES.

- Personal precautions: Complete eye and face protection
- Environmental precautions: If substance has entered a water course or sewer or been spilt on soil or vegetation, advise appropriate authorities
- Decontamination: Wash residues away by dilution with water

7. HANDLING AND STORAGE.

Store in clearly marked containers under cover at a maximum temperature of 40°C. Keep away from food and drink. Compatible with most common metals.

Storage temperature: Ambient

8. EXPOSURE CONTROLS/PERSONAL PROTECTION.

Occupational exposure limits	Substance	LT _{EL}	ST _{EL}	Source/other information
	None assigned			
Engineering control measures	Local exhaust ventilation is not anticipated necessary for the use of this product			
Personal protection	Select PPE appropriate for the product properties/operations taking place. No eating, drinking or smoking in the work area. Wash before breaks and at end of shift/day. Do not keep contaminated cloths in pockets. Launder coveralls at regular intervals.			

PRODUCT NAME:

Sheet 3 of 4

Revision Number

2

RENOLIT 762 HIGH TEMPERATURE JOINT COMPOUND

Last revision 15 January 2002

Issue date 15/04/2002

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Smooth, off-white paste	Odour:	Almost
Specific gravity @ 15.6°C:	1.3	pH:	>12
Vapour pressure (mm Hg)@ 20°C:	<0.01	Vapour density (air=1)	> 1
Boiling point (°C):		Pour point/Melting point (°	None.
Flash point (°C, PMCC):	None.	Autoignition temperature, °	
Flammability limit in air, % by volume:	LEL:	UEL:	
Volatile organic compounds, %:			
Kinematic viscosity(cSt) @ 40°C:			
Solubility:	Miscible with water in all ratios		

PLEASE NOTE: THESE PROPERTIES ARE FOR GUIDANCE ONLY. THEY DO NOT CONSTITUTE A SPECIFICATION

10. STABILITY AND REACTIVITY

Stability:	The product is stable and not subject to polymerisation
Conditions to avoid:	Reactive metals, e.g. aluminium, zinc, magnesium.
Materials to avoid:	Incompatible with strong oxidising agents
Hazardous decomposition products:	Not applicable

11. TOXICOLOGICAL INFORMATION

The following toxicological assessment is based on a knowledge of the toxicity of the product's components

Estimated oral LD50 Rat, >2000mg/Kg.

HEALTH EFFECTS

On eyes:	Irritating to eyes
On skin:	Irritating to skin
By inhalation:	Harmful concentrations of vapour do not normally arise except under high temperature or high atomisation. High concentrations of mist may give rise to respiratory irritation.
By ingestion:	Alkaline irritant
Chronic:	None determined
Other:	None determined

12. ECOLOGICAL INFORMATIONBiodegradability: Not determined. Chemical oxygen demand (mgO₂/l): Not determined

Alkaline Material: will have a harmful effect on aquatic flora and fauna without suitable dilution

13. DISPOSAL CONSIDERATIONS

Used, degraded or contaminated product must be classified as special waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international regulations.

PRODUCT NAME

Sheet 4 of 4

**RENOLIT 762 HIGH TEMPERATURE JOINT
COMPOUND**

Revision Number 2

Last revision 15 January 2002

Issue date 15/04/2002

14. TRANSPORT INFORMATION

Classification for transport: Not classified for transport

Shipping name: n.a.

UN number: n.a.

Packing Group: n.a.

UN Class: n.a.

Marine pollutant: No

ADR/RID: n.a.

EmS number:

ICAO/IATA: n.a.

MFAG number:

15. REGULATORY INFORMATION

Hazard label data IRRITANT

R S Phrases R36/38:Irritating to eyes and skin

S24/25: Avoid contact with skin and eyes. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

EC Directives Framework waste directive, 91/156/EEC

Statutory information HASWA, Control Of Substances Hazardous to Health Regulations. Chemicals (Hazard Information and Packaging) Regs., as amended (CHIP3). Environmental Protection Act. Waste Management Duty of Care Regs. Special Waste Regs.

European Waste Catalogue No: 12 01 99

16. OTHER INFORMATION

The data and advice given apply when the product is sold for the stated application(s). The product is not sold as suitable for any other application. Use of the product for applications other than as stated in this sheet may give rise to risks not mentioned in this sheet. You should not use the product other than for the stated application or applications without seeking advice from us.

If you have purchased the product for supply to a third party for use at work, it is your duty to take all necessary steps to secure that any person handling or using the product is provided with the information in this sheet

If you are an employer, it is your duty to tell your employees and others who may be affected of any hazards described in this sheet and of any precautions which should be taken.

Approved Codes of Practice

Guidance notes

Guidance Note EH 40. "Occupational Exposure Limits" Guidance Note EH 58. "The Carcinogenicity of Mineral Oils" IND (G) 165-169: Metalworking fluids. SHW 397 Effects of Mineral Oil on the Skin. MS/B/5 "Skin cancer caused by oil" MS 24: Health surveillance

FARWEST PAINT MANUFACTURING CO.
4522 SOUTH 133RD STREET
TUKWILA, WASHINGTON 98168

MATERIAL SAFETY DATA SHEET
FOR COATINGS AND RELATED MATERIALS
PREP: SEPT. 1991 UPDATE: AUG. 2001

SECTION I PRODUCT IDENTIFICATION

PRODUCT NUMBER: 1400, 1410
PRODUCT NAME: WHITE, DEEP BASE
SKYTHANE (COMPONENT A)
PRODUCT CLASS: MODIFIED POLYESTER
SOLUTION
(ALSO NEED X-5729 MSDS - COMPONENT B)

24 HOUR EMERGENCY ASSISTANCE

EMERGENCY (CHEMTREC) (800) 424-9300
INFORMATION (FARWEST) (206) 244-8844

HAZARD RATING	THIS PRODUCT
0 LOWEST	HEALTH 3
1	FLAMMABILITY 2
2	REACTIVITY 1
3	PERSONAL
4 EXTREME	PROTECTION G

SECTION II HAZARDOUS INGREDIENTS

INGREDIENT	CAS NUMBER	PERCENT (BY WEIGHT)	OCCUPATIONAL EXPOSURE TLV (ACGIH)	PEL (OSHA)
PROPYLENE GLYCOL METHYL ETHER ACETATE	108-65-6	3.7%	50ppm	N/A
XYLENE	1330-20-7	13.7%	100ppm	100ppm
MINERAL SPIRITS 410	64742-47-8	4.7%	100ppm	100ppm
n-BUTYL ACETATE	123-86-4	5.7%	150ppm	150ppm
METHYL ISOBUTYL KETONE	108-10-1	13.4%	50ppm	100ppm
ETHYL ETHOXY PROPIONATE	763-69-9	17.8%	N/A	N/A

"PURSUANT TO TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) AND 40 CFR PART 372, THIS PRODUCT CONTAINS OR MAY CONTAIN A TOXIC CHEMICAL IN A QUANTITY SUBJECT TO THE REPORTING REQUIREMENTS UNDER SECTION 313"

SECTION III PHYSICAL DATA

BOILING RANGE: 237-400 F. WEIGHT/GALLON: 9.5 lbs. VAPOR PRESSURE: 16mmHg@20C
VAPOR DENSITY: HEAVIER THAN AIR: XX LIGHTER THAN AIR: _____
EVAPORATION RATE: FASTER THAN ETHER: _____ SLOWER THAN ETHER: XX
PERCENT ORGANIC VOLATILE BY VOLUME: 77% SOLUBILITY IN WATER: NIL
VOC: 611 GRAMS/LITER (LESS WATER) REACTIVITY IN WATER: NIL
APPEARANCE: White liquid, or color of tint, with pungent odor.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA: FLAMMABLE FLASH POINT: 60 F. TCC
CLASS: 3 % LEL: 1.7
DOT: FLAMMABLE UN NUMBER: 1263

EXTINGUISHING MEDIA: Foam, CO2, Dry Chemical, or Water Fog.
USE THE ABOVE OR ANY CLASS B EXTINGUISHING AGENT. WATER MAY BE UNSUITABLE AS AN EXTINGUISHING MEDIUM, BUT HELPFUL IN KEEPING ADJACENT CONTAINERS COOL.
SPECIAL FIREFIGHTING PROCEDURES: Firefighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus.
Evacuate area of unprotected personnel. Wear protective clothing.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors may form an explosive mixture in air and may be ignited by sparks, pilot lights, etc. Closed containers may rupture when exposed to extreme heat.

SECTION V: HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

SKIN: THIS MATERIAL MAY CAUSE IRRITATION, SENSITIZATION, OR DEFATTING OF SKIN UPON PROLONGED OR REPEATED CONTACT.
INHALATION: EXCESSIVE EXPOSURE TO VAPORS OR SPRAY MIST CAN RESULT IN HEADACHE, DIZZINESS, NAUSEA AND LOSS OF CONSCIOUSNESS. SOME REPORTS HAVE ASSOCIATED REPEATED & PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN & NERVOUS SYSTEM DAMAGE.
EYES: THIS MATERIAL MAY BE AN EYE IRRITANT.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: NONE, WHEN USED IN ACCORDANCE WITH SAFE HANDLING INSTRUCTIONS. (SEE SECTION VIII)

EMERGENCY AND FIRST AID PROCEDURES:

SKIN: PROMPTLY WASH WITH SOAP AND WATER. REMOVE AND WASH ANY CONTAMINATED CLOTHING BEFORE REUSE.
EYES: FLUSH WITH LARGE QUANTITIES OF WATER FOR 15 MINUTES AND SEEK MEDICAL ATTENTION.
SWALLOWING: IF INGESTED DO NOT INDUCE VOMITING; KEEP PERSON WARM AND QUIET AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL INTO LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.
INHALATION: REMOVE VICTIM TO FRESH AIR IMMEDIATELY. IF RESPIRATORY SYMPTOMS DEVELOP, SEEK MEDICAL ATTENTION AT ONCE.

PRIMARY ROUTE(S) OF ENTRY: INHALATION, DERMAL, INGESTION.

MUTAGENICITY: THIS PRODUCT CONTAINS NO KNOWN CARCINOGENS IN REPORTABLE QUANTITIES AS DEFINED BY ACGIH, OSHA, NTP, IARC.

SECTION VI: REACTIVITY DATA

STABILITY: UNSTABLE: _____ STABLE: XX HAZARDOUS POLYMERIZATION: MAY OCCUR: _____ WILL NOT OCCUR: XX

HAZARDOUS DECOMPOSITION PRODUCTS: INCOMPLETE COMBUSTION CAN YIELD CARBON MONOXIDE AND TOXIC VAPORS.

CONDITIONS TO AVOID: HEAT, SPARKS & OPEN FLAME. IF PRODUCT CONTAINS ALUMINUM, MOISTURE IN CLOSED CONTAINERS WILL GENERATE HYDROGEN GAS.

INCOMPATIBILITY: AVOID CONTACT WITH STRONG OXIDANTS, ACIDS, BASES AND EPOXY HARDENERS UNDER UNCONTROLLED CONDITIONS.

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA. ABSORB SPILL WITH AN ABSORBENT MATERIAL SUCH AS SAWDUST, VERMICULITE OR SAND AND PLACE MATERIAL INTO A CLOSED CONTAINER. IF LARGE SPILL, DIKE AREA TO PREVENT THIS MATERIAL FROM ENTERING WATER SYSTEMS OR SEWERS. WEAR PROTECTIVE EQUIPMENT DURING CLEANUP.

WASTE DISPOSAL METHOD: IF DISCARDED, THIS MATERIAL AND CONTAINERS SHOULD BE TREATED AS HAZARDOUS WASTE BASED ON THE CHARACTERISTICS OF IGNITABILITY AS DEFINED UNDER FEDERAL RCRA REGULATIONS (40 CFR 261). DISPOSAL OF THIS MATERIAL OR ITS CONTAINERS REQUIRES COMPLIANCE WITH APPLICABLE LABELING, PACKAGING AND RECORDKEEPING STANDARDS.

WASTE DISPOSAL: DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL AGENCIES. GROUND HANDLING EQUIPMENT TO PREVENT SPARKS.
FOR FURTHER INFORMATION: CONTACT YOUR STATE OR LOCAL WASTE AGENCY OR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S RCRA HOTLINE (1-800-424-9346 OR 1-202-382-3000).

SECTION VIII: SAFE HANDLING AND USE INFORMATION

KEEP OUT OF THE REACH OF CHILDREN

RESPIRATORY PROTECTION: A CANISTER-TYPE RESPIRATOR MUST BE WORN TO PREVENT THE INHALATION OF VAPORS OR SPRAY MIST WHEN THE TLV OR PEL IS EXCEEDED.

VENTILATION: GENERAL VENTILATION IS REQUIRED DURING NORMAL USE. LOCAL VENTILATION MAY BE REQUIRED DURING CERTAIN OPERATIONS TO KEEP EXPOSURE LEVEL BELOW THE LIMITS LISTED IN SECTION II OF THIS DATA SHEET.

PROTECTIVE GLOVES: CHEMICAL RESISTANT NITRILE, NEOPRENE OR RUBBER GLOVES REQUIRED.

EYE PROTECTION: WEAR FACE SHIELD OR CHEMICAL GOGGLES.

OTHER PROTECTIVE EQUIPMENT: WEAR PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT. EYE WASH STATION AND SAFETY SHOWER SHOULD BE AVAILABLE.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR SMOKING.

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: AVOID PROLONGED OR REPEATED INHALATION OF HEATED VAPORS OR SPRAY MIST. KEEP AWAY FROM HEAT OR OPEN FLAME. THIS MATERIAL MAY CAUSE SENSITIZATION. DO NOT GET IN EYES, ON SKIN OR CLOTHING. DO NOT ALLOW CONTAMINATED CLOTHING TO CONTACT SKIN. DO NOT WELD ON FULL OR EMPTY CONTAINERS. KEEP CONTAINERS CLOSED WHEN NOT IN USE, AND PROPERLY LABELED.

SECTION X: SUPPLEMENTAL INFORMATION

THIS MATERIAL HAS BEEN CATEGORIZED AS HAVING THE FOLLOWING HAZARD(S) AS DEFINED BY SARA TITLE III REGULATIONS (40 CFR 370): ACUTE, F.

THE INFORMATION IN THIS DATA SHEET IS BELIEVED TO BE ACCURATE AND TRUE AT THE TIME OF PREPARATION OF THIS DOCUMENT. THIS IS NOT A WARRANTY OF PRODUCT OR PRODUCT SPECIFICATION. THE END-USER OF THIS PRODUCT IS ADVISED TO VERIFY IN ADVANCE THAT THE INFORMATION IN THIS SHEET IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCE.

(solvent)

FARWEST PAINT MANUFACTURING CO.
4522 SOUTH 133RD STREET
WIKWILA, WASHINGTON 98168

MATERIAL SAFETY DATA SHEET
FOR COATINGS AND RELATED MATERIALS
PREP: OCT. 1990 UPDATE: JULY 1999

SECTION I PRODUCT IDENTIFICATION

PRODUCT NUMBER: 620

PRODUCT NAME: SKYTHANE REDUCER (Solvent)

PRODUCT CLASS: SOLVENT BLEND

24 HOUR EMERGENCY ASSISTANCE

EMERGENCY (CHEMTREC) (800) 424-9300
INFORMATION (FARWEST) (206) 244-8844

HAZARD RATING

0 LOWEST

1

2

3

4

EXTREME

THIS PRODUCT

HEALTH 2

FLAMMABILITY 4

REACTIVITY 0

PERSONAL

PROTECTION G

HAZARDOUS MATERIAL: YES XX NO

SECTION II HAZARDOUS INGREDIENTS

INGREDIENT	CAS NUMBER	PERCENT (BY WEIGHT)	OCCUPATIONAL EXPOSURE TLV (ACGIH)	PEL (OSHA)
XYLENE	1330-20-7	34.1%	100ppm	100ppm
n-BUTYL ACETATE	123-86-4	34.3%	150ppm	150ppm
METHYL ETHYL KETONE	78-93-3	31.5%	200ppm	200ppm

"PURSUANT TO TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) AND 40 CFR PART 372, THIS PRODUCT CONTAINS OR MAY CONTAIN A TOXIC CHEMICAL IN A QUANTITY SUBJECT TO THE REPORTING REQUIREMENTS UNDER SECTION 313"

SECTION III PHYSICAL DATA

BOILING RANGE: 176-290 F. WEIGHT/GALLON: 7.08 lbs. VAPOR PRESSURE: 70mmHg@20C
VAPOR DENSITY: HEAVIER THAN AIR: XX LIGHTER THAN AIR: _____
EVAPORATION RATE: FASTER THAN ETHER: _____ SLOWER THAN ETHER: XX
PERCENT VOLATILE BY VOLUME: 100% REACTIVITY IN WATER: NIL
VOC: 850 GRAMS/LITER (LESS WATER) SOLUBILITY IN WATER: NO
MELTING POINT: N/A pH: N/A VISCOSITY: N/A FREEZING POINT: N/A
APPEARANCE & ODOR: Colorless liquid, pleasant odor. DECOMPOSITION TEMP: N/A

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA: FLAMMABLE FLASH POINT: 16 F. TCC
CLASS: 3 % LEL: 1.5 % UEL: 7.6
DOT: FLAMMABLE UN NUMBER: 1193

EXTINGUISHING MEDIA: Foam, CO2, Dry Chemical, or Water Fog.
USE THE ABOVE OR ANY CLASS B EXTINGUISHING AGENT. WATER MAY BE UNSUITABLE AS AN EXTINGUISHING MEDIUM, BUT HELPFUL IN KEEPING ADJACENT CONTAINERS COOL.
SPECIAL FIREFIGHTING PROCEDURES: Firefighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus.
Evacuate area of unprotected personnel. Wear protective clothing.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors may form an explosive mixture in air and may be ignited by sparks, pilot lights, etc. Closed containers may rupture when exposed to extreme heat.

620 (solvent)

SECTION V: HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

SKIN: THIS MATERIAL MAY CAUSE IRRITATION, SENSITIZATION, OR DEFATTING OF SKIN UPON PROLONGED OR REPEATED CONTACT.
INHALATION: EXCESSIVE EXPOSURE TO VAPORS OR SPRAY MIST CAN RESULT IN HEADACHE, DIZZINESS, NAUSEA AND LOSS OF CONSCIOUSNESS.
EYES: THIS MATERIAL MAY BE AN EYE IRRITANT.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: NONE, WHEN USED IN ACCORDANCE WITH SAFE HANDLING INSTRUCTIONS. (SEE SECTION VIII)

EMERGENCY AND FIRST AID PROCEDURES:

SKIN: PROMPTLY WASH WITH SOAP AND WATER. REMOVE AND WASH ANY CONTAMINATED CLOTHING BEFORE REUSE.
EYES: FLUSH WITH LARGE QUANTITIES OF WATER FOR 15 MINUTES AND SEEK MEDICAL ATTENTION.
SWALLOWING: IF INGESTED DO NOT INDUCE VOMITING; KEEP PERSON WARM AND QUIET AND GET MEDICAL ATTENTION.
INHALATION: REMOVE VICTIM TO FRESH AIR IMMEDIATELY. IF RESPIRATORY SYMPTOMS DEVELOP, SEEK MEDICAL ATTENTION AT ONCE.

PRIMARY ROUTE(S) OF ENTRY: INHALATION, DERMAL, INGESTION.

CARCINOGENICITY: THIS PRODUCT CONTAINS NO KNOWN CARCINOGENS IN REPORTABLE QUANTITIES AS DEFINED BY ACGIH, OSHA, NTP, IARC.

SECTION VI: REACTIVITY DATA

STABILITY: UNSTABLE: STABLE: XX HAZARDOUS POLYMERIZATION: MAY OCCUR: WILL NOT OCCUR: XX

HAZARDOUS DECOMPOSITION PRODUCTS: INCOMPLETE COMBUSTION CAN YIELD CARBON MONOXIDE AND TOXIC VAPORS.

CONDITIONS TO AVOID: HEAT, SPARKS & OPEN FLAME. IF PRODUCT CONTAINS ALUMINUM, MOISTURE IN CLOSED CONTAINERS WILL GENERATE HYDROGEN GAS.

INCOMPATIBILITY: AVOID CONTACT WITH STRONG OXIDANTS, ACIDS, BASES AND EPOXY HARDENERS UNDER UNCONTROLLED CONDITIONS.

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA. ABSORB SPILL WITH AN ABSORBENT MATERIAL SUCH AS SAWDUST, VERMICULITE OR SAND AND PLACE MATERIAL INTO A CLOSED CONTAINER.

WASTE DISPOSAL METHOD: IF DISCARDED, THIS MATERIAL AND CONTAINERS SHOULD BE TREATED AS HAZARDOUS WASTE BASED ON THE CHARACTERISTICS OF IGNITABILITY AS DEFINED UNDER FEDERAL RCRA REGULATIONS (40 CFR 261).

WASTE DISPOSAL: DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL AGENCIES. GROUND HANDLING EQUIPMENT TO PREVENT SPARKS. FOR FURTHER INFORMATION: CONTACT YOUR STATE OR LOCAL WASTE AGENCY OR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S RCRA HOTLINE (1-800-424-9346 OR 1-202-382-3000).

SECTION VIII: SAFE HANDLING AND USE INFORMATION KEEP OUT OF THE REACH OF CHILDREN

RESPIRATORY PROTECTION: A CANISTER-TYPE RESPIRATOR MUST BE WORN TO PREVENT THE INHALATION OF VAPORS OR SPRAY MIST WHEN THE TLV OR PEL IS EXCEEDED.

VENTILATION: GENERAL VENTILATION IS REQUIRED DURING NORMAL USE. LOCAL VENTILATION MAY BE REQUIRED DURING CERTAIN OPERATIONS TO KEEP EXPOSURE LEVEL BELOW THE LIMITS LISTED IN SECTION II OF THIS DATA SHEET.

PROTECTIVE GLOVES: CHEMICAL RESISTANT NITRILE, NEOPRENE OR RUBBER GLOVES REQUIRED.

EYE PROTECTION: WEAR FACE SHIELD OR CHEMICAL GOGGLES.

OTHER PROTECTIVE EQUIPMENT: WEAR PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT. EYE WASH STATION AND SAFETY SHOWER SHOULD BE AVAILABLE.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR SMOKING.

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: AVOID PROLONGED OR REPEATED INHALATION OF HEATED VAPORS OR SPRAY MIST. KEEP AWAY FROM HEAT OR OPEN FLAME. THIS MATERIAL MAY CAUSE SENSITIZATION. DO NOT GET IN EYES, ON SKIN OR CLOTHING. DO NOT ALLOW CONTAMINATED CLOTHING TO CONTACT SKIN.

SECTION X: SUPPLEMENTAL INFORMATION

THIS MATERIAL HAS BEEN CATEGORIZED AS HAVING THE FOLLOWING HAZARD(S) AS DEFINED BY SARA TITLE III REGULATIONS (40 CFR 370): ACUTE,

THE INFORMATION IN THIS DATA SHEET IS BELIEVED TO BE ACCURATE AND TRUE AT THE TIME OF PREPARATION OF THIS DOCUMENT. THIS IS NOT A WARRANTY OF PRODUCT OR PRODUCT SPECIFICATION. THE END-USER OF THIS PRODUCT IS ADVISED TO VERIFY IN ADVANCE THAT THE INFORMATION IN THIS SHEET IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

(solvent)

FARWEST PAINT MANUFACTURING CO.
4522 SOUTH 133RD STREET
TUKWILA, WASHINGTON 98168

MATERIAL SAFETY DATA SHEET
FOR COATINGS AND RELATED MATERIALS
PREP: JULY 1992 UPDATE: CURRENT

SECTION I PRODUCT IDENTIFICATION

SPECIFICATION NO: DOD-P-15328
MIL-P-15328
A-5-61 FORMULA 117

PRODUCT NAME: VINYL PRE-TREATMENT
WASH PRIMER (COMPONENT A)

PRODUCT CLASS: ZINC CHROMATE/POLYVINYL
BUTYRAL SOLUTION IN ALCOHOL

24 HOUR EMERGENCY ASSISTANCE

EMERGENCY (CHEMTREC) (800) 424-9300
INFORMATION (FARWEST) (206) 244-8844

HAZARD RATING		THIS PRODUCT	
0	LOWEST	HEALTH	2
1		FLAMMABILITY	2
2		REACTIVITY	1
3		PERSONAL	
4	EXTREME	PROTECTION	H

HAZARDOUS MATERIAL: YES XX NO

SECTION II HAZARDOUS INGREDIENTS

INGREDIENT	CAS NUMBER	PERCENT (BY WEIGHT)	OCCUPATIONAL EXPOSURE TLV (ACGIH) PEL (OSHA)	
ISOPROPYL ALCOHOL	67-63-0	57.80%	400ppm	400ppm
n-BUTYL ALCOHOL	71-36-3	20.36%	100ppm	100ppm
ZINC CHROMATE	13530-65-9	8.72%		
Chromium VI Compound (Chromate Acid & Chromate) (Zinc Oxide Fume)			.05mg/m3 5mg/m3	.1mg/m3 (8hr) REF. to

NIOSH PUBLICATION #78-210. Considered hazardous under 29CFR 1910.1200.
This chemical is not listed under 29CFR 1910.1000.

"PURSUANT TO TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) AND 40 CFR PART 372, THIS PRODUCT CONTAINS OR MAY CONTAIN A TOXIC CHEMICAL IN A QUANTITY SUBJECT TO THE REPORTING REQUIREMENTS UNDER SECTION 313"

SECTION III PHYSICAL DATA

BOILING RANGE: 180-229 F. WEIGHT/GALLON: 7.40 lbs. VAPOR PRESSURE: 31.2mmHg@20C
VAPOR DENSITY: HEAVIER THAN AIR: XX LIGHTER THAN AIR:
EVAPORATION RATE: FASTER THAN ETHER: SLOWER THAN ETHER: XX
PERCENT VOLATILE BY VOLUME: 88.16% REACTIVITY IN WATER: NONE
VOC: 693 GRAMS/LITER (LESS WATER) SOLUBILITY IN WATER: PARTIALLY
MELTING POINT: Unknown pH: N/A VISCOSITY: 70-72 KU FREEZING POINT: -89.5 C.
APPEARANCE & ODOR: Muddy green liquid, alcohol odor. DECOMPOSITION TEMP: Unknown

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA: FLAMMABLE LIQUID CLASS: 3
FLASH POINT: 53 F. TCC
LEL: 1.45%
DOT: FLAMMABLE LIQUID UN NUMBER: 1263

EXTINGUISHING MEDIA: Foam, CO2, Dry Chemical, or Water Fog.

USE THE ABOVE OR ANY CLASS B EXTINGUISHING AGENT. WATER MAY BE UNSUITABLE AS AN EXTINGUISHING MEDIUM, BUT HELPFUL IN KEEPING ADJACENT CONTAINERS COOL.

SPECIAL FIREFIGHTING PROCEDURES: Firefighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus.

Evacuate area of unprotected personnel. Wear protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors may form an explosive mixture in air and may be ignited by sparks, pilot lights, etc. Closed containers may rupture when exposed to extreme heat.

15328A (solcarc)

SECTION V: HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

SKIN: THIS MATERIAL MAY CAUSE IRRITATION, SENSITIZATION, OR DEFATTING OF SKIN UPON PROLONGED OR REPEATED CONTACT.
INHALATION: EXCESSIVE EXPOSURE TO VAPORS OR SPRAY MIST CAN RESULT IN HEADACHE, DIZZINESS, NAUSEA AND LOSS OF CONSCIOUSNESS.
SOME REPORTS HAVE ASSOCIATED REPEATED & PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN & NERVOUS SYSTEM DAMAGE.
EYES: THIS MATERIAL MAY BE AN EYE IRRITANT.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: NONE, WHEN USED IN ACCORDANCE WITH SAFE HANDLING INSTRUCTIONS: (SEE SECTION VIII)

EMERGENCY AND FIRST AID PROCEDURES:

SKIN: PROMPTLY WASH WITH SOAP AND WATER. REMOVE AND WASH ANY CONTAMINATED CLOTHING BEFORE REUSE.
EYES: FLUSH WITH LARGE QUANTITIES OF WATER FOR 15 MINUTES AND SEEK MEDICAL ATTENTION.
SWALLOWING: IF INGESTED DO NOT INDUCE VOMITING; KEEP PERSON WARM AND QUIET AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL INTO LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.
INHALATION: REMOVE VICTIM TO FRESH AIR IMMEDIATELY. IF RESPIRATORY SYMPTOMS DEVELOP, SEEK MEDICAL ATTENTION AT ONCE.

PRIMARY ROUTE(S) OF ENTRY: INHALATION, DERMAL, INGESTION.

CARCINOGENICITY: THIS PRODUCT CONTAINS NO KNOWN CARCINOGENS IN REPORTABLE QUANTITIES AS DEFINED BY ACGIH, OSHA, NTP, IARC.

SECTION VI: REACTIVITY DATA

STABILITY: UNSTABLE:___ STABLE: XX HAZARDOUS POLYMERIZATION: MAY OCCUR:___ WILL NOT OCCUR: XX

HAZARDOUS DECOMPOSITION PRODUCTS: INCOMPLETE COMBUSTION CAN YIELD CARBON MONOXIDE AND TOXIC VAPORS.

CONDITIONS TO AVOID: HEAT, SPARKS & OPEN FLAME. IF PRODUCT CONTAINS ALUMINUM, MOISTURE IN CLOSED CONTAINERS WILL GENERATE HYDROGEN GAS.

INCOMPATIBILITY: AVOID CONTACT WITH STRONG OXIDANTS, ACIDS, BASES AND EPOXY HARDENERS UNDER UNCONTROLLED CONDITIONS.

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA. ABSORB SPILL WITH AN ABSORBENT MATERIAL SUCH AS SAWDUST, VERMICULITE OR SAND AND PLACE MATERIAL INTO A CLOSED CONTAINER. IF LARGE SPILL, DIKE AREA TO PREVENT THIS MATERIAL FROM ENTERING WATER SYSTEMS OR SEWERS. WEAR PROTECTIVE EQUIPMENT DURING CLEANUP.

WASTE DISPOSAL METHOD: IF DISCARDED, THIS MATERIAL AND CONTAINERS SHOULD BE TREATED AS HAZARDOUS WASTE BASED ON THE CHARACTERISTIC IGNITABILITY AS DEFINED UNDER FEDERAL RCRA REGULATIONS (40 CFR 261). DISPOSAL OF THIS MATERIAL OR ITS CONTAINERS REQUIRES COMPLIANCE WITH APPLICABLE LABELING, PACKAGING AND RECORDKEEPING STANDARDS.

WASTE DISPOSAL: DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL AGENCIES. GROUND HANDLING EQUIPMENT TO PREVENT SPARKS.
FOR FURTHER INFORMATION: CONTACT YOUR STATE OR LOCAL WASTE AGENCY OR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S RCRA HOTLINE (1-800-424-9346 OR 1-202-382-3000).

SECTION VIII: SAFE HANDLING AND USE INFORMATION

KEEP OUT OF THE REACH OF CHILDREN

RESPIRATORY PROTECTION: A CANISTER-TYPE RESPIRATOR MUST BE WORN TO PREVENT THE INHALATION OF VAPORS OR SPRAY MIST WHEN THE TLV OR PEL IS EXCEEDED.

VENTILATION: GENERAL VENTILATION IS REQUIRED DURING NORMAL USE. LOCAL VENTILATION MAY BE REQUIRED DURING CERTAIN OPERATIONS TO KEEP EXPOSURE LEVEL BELOW THE LIMITS LISTED IN SECTION II OF THIS DATA SHEET.

PROTECTIVE GLOVES: CHEMICAL RESISTANT NITRILE, NEOPRENE OR RUBBER GLOVES REQUIRED.

EYE PROTECTION: WEAR FACE SHIELD OR CHEMICAL GOGGLES.

OTHER PROTECTIVE EQUIPMENT: WEAR PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT. EYE WASH STATION AND SAFETY SHOWER SHOULD BE AVAILABLE.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR SMOKING.

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: AVOID PROLONGED OR REPEATED INHALATION OF HEATED VAPORS OR SPRAY MIST. KEEP AWAY FROM HEAT OR OPEN FLAME. THIS MATERIAL MAY CAUSE SENSITIZATION. DO NOT GET IN EYES, ON SKIN OR CLOTHING. DO NOT ALLOW CONTAMINATED CLOTHING TO CONTACT SKIN. DO NOT WELD ON FULL OR EMPTY CONTAINERS. KEEP CONTAINERS CLOSED WHEN NOT IN USE, AND PROPERLY LABELED.

SECTION X: SUPPLEMENTAL INFORMATION

THIS MATERIAL HAS BEEN CATEGORIZED AS HAVING THE FOLLOWING HAZARD(S) AS DEFINED BY SARA TITLE III REGULATIONS (40 CFR 370): ACUTE, ...

THE INFORMATION IN THIS DATA SHEET IS BELIEVED TO BE ACCURATE AND TRUE AT THE TIME OF PREPARATION OF THIS DOCUMENT. THIS IS NOT A WARRANTY OF PRODUCT OR PRODUCT SPECIFICATION. THE END-USER OF THIS PRODUCT IS ADVISED TO VERIFY IN ADVANCE THAT THE INFORMATION IN THIS SHEET IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

(solcarb)

FARWEST PAINT MANUFACTURING CO.
4522 SOUTH 133RD STREET
TUKWILA, WASHINGTON 98168

MATERIAL SAFETY DATA SHEET
FOR COATINGS AND RELATED MATERIALS
PREP: JULY 1992 UPDATE: CURRENT

SECTION I PRODUCT IDENTIFICATION

SPECIFICATION NO: DOD-P-15328
MIL-P-15328
A-5-61 FORMULA 117

PRODUCT NAME: VINYL PRE-TREATMENT
WASH PRIMER (COMPONENT B)

PRODUCT CLASS: AQUEOUS ACIDIC SOLUTION

24 HOUR EMERGENCY ASSISTANCE

EMERGENCY (CHEMTREC) (800) 424-9300
INFORMATION (FARWEST) (206) 244-8844

HAZARD RATING		THIS PRODUCT	
0	LOWEST	HEALTH	2
1		FLAMMABILITY	0
2		REACTIVITY	0
3		PERSONAL	
4	EXTREME	PROTECTION	J

SECTION II HAZARDOUS INGREDIENTS

INGREDIENT	CAS NUMBER	PERCENT (BY WEIGHT)	OCCUPATIONAL EXPOSURE TLV (ACGIH)	PEL (OSHA)
PHOSPHORIC ACID	7664-38-2	18.43%	1mg/m3	1mg/m3
ISOPROPYL ALCOHOL	67-63-0	65.12%	400ppm	400ppm

"PURSUANT TO TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) AND 40 CFR PART 372, THIS PRODUCT CONTAINS OR MAY CONTAIN A TOXIC CHEMICAL IN A QUANTITY SUBJECT TO THE REPORTING REQUIREMENTS UNDER SECTION 313"

SECTION III PHYSICAL DATA

BOILING RANGE: 180-181 F. pH: 4.0 VAPOR PRESSURE: 31.2mmHg@20C
VAPOR DENSITY: HEAVIER THAN AIR: XX LIGHTER THAN AIR: _____
EVAPORATION RATE: FASTER THAN ETHER: _____ SLOWER THAN ETHER: XX
% ORGANIC VOLATILE BY VOLUME: 75.48% REACTIVITY IN WATER: NONE
VOC: 691 GRAMS/LITER (LESS WATER) SOLUBILITY IN WATER: INFINITE
APPEARANCE & ODOR: Clear aqueous acidic liquid.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

DOT PROPER SHIPPING NAME: Corrosive Liquid FLASH POINT: N/A LEL: N/A
FLAMMABILITY CLASSIFICATION: OSHA: NONFLAMMABLE DOT: NONFLAMMABLE
HAZARD CLASS: Corrosive Liquid
EXTINGUISHING MEDIA: Foam, Dry Chemical, Water, or Water Fog.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Will not burn; closed containers may burst exposed to extreme heat or fire.

SPECIAL FIREFIGHTING PROCEDURES: Water may be used to cool and protect exposed containers. Phosphoric acid in contact with most metals may generate hydrogen gas.

15328B (acidic)

=====
SECTION V: HEALTH HAZARD DATA
=====

PRIMARY ROUTE(S) OF EXPOSURE: INHALATION, SKIN OR EYE CONTACT.

EFFECTS OF OVEREXPOSURE:

INHALATION: INHALATION OF MIST CAN CAUSE DAMAGE TO NASAL AND RESPIRATORY PASSAGES.

SKIN CONTACT: CAUSES BURNS.

EYE CONTACT: CAUSES BURNS TO THE EYES.

INGESTION: RESULTS IN SEVERE DAMAGE TO MUCOUS MEMBRANES.

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: REMOVE VICTIM TO FRESH AIR IMMEDIATELY. IF RESPIRATORY SYMPTOMS DEVELOP, SEEK MEDICAL ATTENTION AT ONCE.

SKIN CONTACT: WASH OFF QUICKLY WITH PLENTY OF WATER, THEN SOAP & WATER. GET MEDICAL ATTENTION. REMOVE & WASH CONTAMINATED CLOTHING BEFORE REUSE.

EYE CONTACT: FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER, ESPECIALLY UNDER LIDS, FOR AT LEAST 30 MINUTES. OBTAIN EMERGENCY MEDICAL TREATMENT.

INGESTION: IF SWALLOWED, OBTAIN MEDICAL TREATMENT IMMEDIATELY. DO NOT INDUCE VOMITING. GIVE LOTS OF WATER.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: NONE, WHEN USED IN ACCORDANCE WITH SAFE HANDLING INSTRUCTIONS. (SEE SECTION VIII).

CARCINOGENICITY: THIS PRODUCT CONTAINS NO KNOWN CARCINOGENS IN REPORTABLE QUANTITIES AS DEFINED BY NTP, IARC, OSHA, EPA.

=====
SECTION VI: REACTIVITY DATA
=====

STABILITY: UNSTABLE:___ STABLE: XX HAZARDOUS POLYMERIZATION: MAY OCCUR:___ WILL NOT OCCUR: XX

HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC AND PHOSPHOROUS COMPOUNDS.

CONDITIONS TO AVOID: ELEVATED TEMPERATURES.

INCOMPATIBILITY: ALKALINE AGENTS, COMBUSTIBLE MATERIALS, OXIDIZERS AND REDUCING AGENTS.

=====
SECTION VII: SPILL OR LEAK PROCEDURES
=====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: COMPLY WITH ALL APPLICABLE HEALTH AND ENVIRONMENTAL REGULATIONS* VENTILATE AREA. SPILLS MAY BE COLLECTED WITH ABSORBENT MATERIALS.

WASTE DISPOSAL: DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. AVOID DISCHARGE TO NATURAL WATERS.

=====
SECTION VIII: SAFE HANDLING AND USE INFORMATION
=====

USE ONLY WITH ADEQUATE VENTILATION. AVOID BREATHING VAPOR AND SPRAY MIST. AVOID CONTACT WITH SKIN AND EYES.

VENTILATION: LOCAL EXHAUST PREFERABLE. GENERAL EXHAUST ACCEPTABLE IF THE EXPOSURE TO MATERIALS IN SECTION II IS MAINTAINED BELOW APPLICABLE EXPOSURE LIMITS.

RESPIRATORY PROTECTION: IF PERSONAL EXPOSURE CANNOT BE CONTROLLED BELOW APPLICABLE LIMITS BY VENTILATION, WEAR A PROPERLY FITTED ORGANIC VAPOR/PARTICULATE RESPIRATOR APPROVED BY NIOSH/OSHA FOR PROTECTION AGAINST MATERIALS IN SECTION II.

PROTECTIVE GLOVES: WEAR GLOVES WHICH ARE RECOMMENDED BY GLOVE SUPPLIER FOR PROTECTION AGAINST MATERIALS IN SECTION II.

EYE PROTECTION: WEAR SAFETY SPECTACLES WITH UNPERFORATED SIDESHIELDS.

PERSONAL PROTECTIVE EQUIPMENT: EYE WASH - SAFETY SHOWERS - GOGGLES - SAFETY GLASSES - IMPERVIOUS GLOVES.

HYGIENIC PRACTICES: KEEP WORK AREA CLEAN AND FREE FROM SPILLS AND LEAKS. ALWAYS WASH HANDS THOROUGHLY WITH SOAP AND WATER BEFORE HANDLING FOOD, DRINK OR SMOKING.

=====
SECTION IX: SPECIAL PRECAUTIONS
=====

KEEP OUT OF THE REACH OF CHILDREN

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: KEEP FROM FREEZING. STORE CONTAINERS WITH LIDS TIGHTLY CLOSED AND APPROPRIATELY LABELED.

=====
SECTION X: SUPPLEMENTAL INFORMATION
=====

NOTE: THIS PRODUCT CONTAINS NO MERCURY IN REPORTABLE QUANTITIES AS DEFINED BY OSHA AND EPA.

THE INFORMATION IN THIS DATA SHEET IS BELIEVED TO BE ACCURATE AND TRUE AT THE TIME OF PREPARATION OF THIS DOCUMENT. THIS IS NO WARRANTY OF PRODUCT OR PRODUCT SPECIFICATION. THE END-USER OF THIS PRODUCT IS ADVISED TO VERIFY IN ADVANCE THAT THE INFORMATION IN THIS SHEET IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

(acidic)

FARWEST PAINT MANUFACTURING CO.
 2 SOUTH 133RD STREET
 WILKILA, WASHINGTON 98168

MATERIAL SAFETY DATA SHEET
 FOR COATINGS AND RELATED MATERIALS
 PREP: SEPT. 1991 UPDATE: DEC. 1991

SECTION I PRODUCT IDENTIFICATION

PRODUCT NUMBER: X-5729
 PRODUCT NAME: SKYTHANE ACTIVATOR
 (COMPONENT B)
 PRODUCT CLASS: POLYISOCYANATE
 SOLUTION
 (USE WITH 1400 & 1700 SERIES SKYTHANE)

24 HOUR EMERGENCY ASSISTANCE

EMERGENCY (CHEMTREC) (800) 424-9300
 INFORMATION (FARWEST) (206) 244-8844

HAZARD RATING
 0 LOWEST
 1
 2
 3
 4 EXTREME

THIS PRODUCT
 HEALTH 2
 FLAMMABILITY 2
 REACTIVITY 2
 PERSONAL PROTECTION G

SECTION II HAZARDOUS INGREDIENTS

INGREDIENT	CAS NUMBER	PERCENT (BY WEIGHT)	OCCUPATIONAL EXPOSURE TLV (ACGIH)	PEL (OSHA)
KYLENE	64742-47-8	12.5%	100ppm	100ppm
n-BUTYL ACETATE	123-86-4	12.5%	150ppm	150ppm

"PURSUANT TO TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) AND 40 CFR PART 372, THIS PRODUCT CONTAINS OR MAY CONTAIN A TOXIC CHEMICAL IN A QUANTITY SUBJECT TO THE REPORTING REQUIREMENTS UNDER SECTION 313"

SECTION III PHYSICAL DATA

BOILING RANGE: 248-284 F. WEIGHT/GALLON: 8.8 lbs. VAPOR PRESSURE: 10.0mmHg@20C
 VAPOR DENSITY: HEAVIER THAN AIR: XX LIGHTER THAN AIR: _____
 EVAPORATION RATE: FASTER THAN ETHER: _____ SLOWER THAN ETHER: XX
 PERCENT ORGANIC VOLATILE BY VOLUME: 30.0% SOLUBILITY IN WATER: NIL
 VOC: 265 GRAMS/LITER (LESS WATER) REACTIVITY IN WATER: SLOW FORMATION OF CARBON DIOXID
 APPEARANCE: Amber liquid.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA: FLAMMABLE CLASS: 3 DOT: FLAMMABLE
 FLASH POINT: 80 F. TCC
 % LEL: 1.5
 UN NUMBER: 1263

EXTINGUISHING MEDIA: Foam, CO2, Dry Chemical, or Water Fog.
 USE THE ABOVE OR ANY CLASS B EXTINGUISHING AGENT. WATER MAY BE UNSUITABLE AS AN EXTINGUISHING MEDIUM, BUT HELPFUL IN KEEPING ADJACENT CONTAINERS COOL.
 SPECIAL FIREFIGHTING PROCEDURES: Firefighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus.
 Evacuate area of unprotected personnel. Wear protective clothing.
 UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors may form an explosive mixture in air and may be ignited by sparks, pilot lights, etc. Closed containers may rupture when exposed to extreme heat.

SECTION V: HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

SKIN: THIS MATERIAL MAY CAUSE IRRITATION, SENSITIZATION, OR DEFATTING OF SKIN UPON PROLONGED OR REPEATED CONTACT.
INHALATION: EXCESSIVE EXPOSURE TO VAPORS OR SPRAY MIST CAN RESULT IN HEADACHE, DIZZINESS, NAUSEA AND LOSS OF CONSCIOUSNESS.
EYES: THIS MATERIAL MAY BE AN EYE IRRITANT.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: NONE, WHEN USED IN ACCORDANCE WITH SAFE HANDLING INSTRUCTIONS. (SEE SECTION VIII)

EMERGENCY AND FIRST AID PROCEDURES:

SKIN: PROMPTLY WASH WITH SOAP AND WATER. REMOVE AND WASH ANY CONTAMINATED CLOTHING BEFORE REUSE.
EYES: FLUSH WITH LARGE QUANTITIES OF WATER FOR 15 MINUTES AND SEEK MEDICAL ATTENTION.
SWALLOWING: IF INGESTED DO NOT INDUCE VOMITING; KEEP PERSON WARM AND QUIET AND GET MEDICAL ATTENTION.
INHALATION: REMOVE VICTIM TO FRESH AIR IMMEDIATELY. IF RESPIRATORY SYMPTOMS DEVELOP, SEEK MEDICAL ATTENTION AT ONCE.

PRIMARY ROUTE(S) OF ENTRY: INHALATION, DERMAL, INGESTION.

CARCINOGENICITY: THIS PRODUCT CONTAINS NO KNOWN CARCINOGENS IN REPORTABLE QUANTITIES AS DEFINED BY ACGIH, OSHA, NTP, IARC.

SECTION VI: REACTIVITY DATA

STABILITY: UNSTABLE: STABLE: XX HAZARDOUS POLYMERIZATION: MAY OCCUR: WILL NOT OCCUR: XX

HAZARDOUS DECOMPOSITION PRODUCTS: INCOMPLETE COMBUSTION CAN YIELD CARBON MONOXIDE AND TOXIC VAPORS.

CONDITIONS TO AVOID: HEAT, SPARKS & OPEN FLAME. IF PRODUCT CONTAINS ALUMINUM, MOISTURE IN CLOSED CONTAINERS WILL GENERATE HYDROGEN GAS.

INCOMPATIBILITY: AVOID CONTACT WITH STRONG OXIDANTS, ACIDS, BASES AND EPOXY HARDENERS UNDER UNCONTROLLED CONDITIONS.

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA. ABSORB SPILL WITH AN ABSORBENT MATERIAL SUCH AS SAWDUST, VERMICULITE OR SAND AND PLACE MATERIAL INTO A CLOSED CONTAINER. IF LARGE SPILL, DIKE OFF AND PREVENT THIS MATERIAL FROM ENTERING WATER SYSTEMS OR SEWERS. WEAR PROTECTIVE EQUIPMENT DURING CLEANUP.

WASTE DISPOSAL METHOD: IF DISCARDED, THIS MATERIAL AND CONTAINERS SHOULD BE TREATED AS HAZARDOUS WASTE BASED ON THE CHARACTERISTICS OF IGNITABILITY AS DEFINED UNDER FEDERAL RCRA REGULATIONS (40 CFR 261). DISPOSAL OF THIS MATERIAL OR ITS CONTAINERS REQUIRES COMPLIANCE WITH APPLICABLE LABELING, PACKAGING AND RECORDKEEPING STANDARDS.

WASTE DISPOSAL: DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL AGENCIES. GROUND HANDLING EQUIPMENT TO PREVENT SPARKS. FOR FURTHER INFORMATION: CONTACT YOUR STATE OR LOCAL WASTE AGENCY OR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S RCRA HOTLINE (1-800-424-9346 OR 1-202-382-3000).

SECTION VIII: SAFE HANDLING AND USE INFORMATION KEEP OUT OF THE REACH OF CHILDREN

RESPIRATORY PROTECTION: A CANISTER-TYPE RESPIRATOR MUST BE WORN TO PREVENT THE INHALATION OF VAPORS OR SPRAY MIST WHEN THE TLV OR PEL IS EXCEEDED.

VENTILATION: GENERAL VENTILATION IS REQUIRED DURING NORMAL USE. LOCAL VENTILATION MAY BE REQUIRED DURING CERTAIN OPERATIONS TO KEEP EXPOSURE LEVEL BELOW THE LIMITS LISTED IN SECTION II OF THIS DATA SHEET.

PROTECTIVE GLOVES: CHEMICAL RESISTANT NITRILE, NEOPRENE OR RUBBER GLOVES REQUIRED.

EYE PROTECTION: WEAR FACE SHIELD OR CHEMICAL GOGGLES.

OTHER PROTECTIVE EQUIPMENT: WEAR PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT. EYE WASH STATION AND SAFETY SHOWER SHOULD BE AVAILABLE.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR SMOKING.

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: AVOID PROLONGED OR REPEATED INHALATION OF HEATED VAPORS OR SPRAY MIST. KEEP AWAY FROM HEAT OR OPEN FLAME. THIS MATERIAL MAY CAUSE SENSITIZATION. DO NOT GET IN EYES, ON SKIN OR CLOTHING. DO NOT ALLOW CONTAMINATED CLOTHING TO CONTACT SKIN. DO NOT WELD ON FULL OR EMPTY CONTAINERS. KEEP CONTAINERS CLOSED WHEN NOT IN USE, AND PROPERLY LABELED.

SECTION X: SUPPLEMENTAL INFORMATION

THIS MATERIAL HAS BEEN CATEGORIZED AS HAVING THE FOLLOWING HAZARD(S) AS DEFINED BY SARA TITLE III REGULATIONS (40 CFR 370): ACUTE, HAZARDOUS

THE INFORMATION IN THIS DATA SHEET IS BELIEVED TO BE ACCURATE AND TRUE AT THE TIME OF PREPARATION OF THIS DOCUMENT. THIS IS NOT A WARRANTY OF PRODUCT OR PRODUCT SPECIFICATION. THE END-USER OF THIS PRODUCT IS ADVISED TO VERIFY IN ADVANCE THAT THE INFORMATION IN THIS SHEET IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

FARWEST PAINT MANUFACTURING CO.
4522 SOUTH 133RD STREET
TUKWILA, WASHINGTON 98168

MATERIAL SAFETY DATA SHEET
FOR COATINGS AND RELATED MATERIALS
PREP: NOV. 1991 UPDATE: JULY 1999

SECTION I PRODUCT IDENTIFICATION

PRODUCT NUMBER: 605
PRODUCT NAME: SYNTHETIC THINNER
(XYLOL)
PRODUCT CLASS: AROMATIC SOLVENT

24 HOUR EMERGENCY ASSISTANCE

EMERGENCY (CHEMTREC) (800)424-9300
INFORMATION (FARWEST) (206)244-8844

HAZARD RATING		THIS PRODUCT	
0	LOWEST	HEALTH	2
1		FLAMMABILITY	2
2		REACTIVITY	0
3		PERSONAL	
4	EXTREME	PROTECTION	G

HAZARDOUS MATERIAL: YES XX NO

SECTION II HAZARDOUS INGREDIENTS

INGREDIENT	CAS NUMBER	PERCENT (BY WEIGHT)	OCCUPATIONAL EXPOSURE TLV (ACGIH) PEL (OSHA)
XYLENE	1330-20-7	100%	100ppm 100ppm

"PURSUANT TO TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) AND 40 CFR PART 372, THIS PRODUCT CONTAINS OR MAY CONTAIN A TOXIC CHEMICAL IN A QUANTITY SUBJECT TO THE REPORTING REQUIREMENTS UNDER SECTION 313"

SECTION III PHYSICAL DATA

BOILING RANGE: 281-284 F. WEIGHT/GALLON: 7.25 lbs. VAPOR PRESSURE: 9.5mmHg@20C
VAPOR DENSITY: HEAVIER THAN AIR: XX LIGHTER THAN AIR:
EVAPORATION RATE: FASTER THAN ETHER: SLOWER THAN ETHER: XX
PERCENT VOLATILE BY VOLUME: 100% REACTIVITY IN WATER: NIL
VOC: GRAMS/LITER (LESS WATER) SOLUBILITY IN WATER: NIL
MELTING POINT: N/A pH: N/A VISCOSITY: N/A
APPEARANCE: Clear liquid with mild aromatic odor.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA: Flammable Liquid FLASH POINT: 80 F. TCC
CLASS: 3 % LEL: 1.0 % UEL: 7.0
DOT: Flammable Liquid UN NUMBER: 1307

EXTINGUISHING MEDIA: Foam, CO2, Dry Chemical, or Water Fog.
USE THE ABOVE OR ANY CLASS B EXTINGUISHING AGENT. WATER MAY BE UNSUITABLE AS AN EXTINGUISHING MEDIUM, BUT HELPFUL IN KEEPING ADJACENT CONTAINERS COOL.
SPECIAL FIREFIGHTING PROCEDURES: Firefighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus. Evacuate area of unprotected personnel. Wear protective clothing.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors may form an explosive mixture in air and may be ignited by sparks, pilot lights, etc. Closed containers may rupture when exposed to extreme heat.

SECTION V: HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

SKIN: THIS MATERIAL MAY CAUSE IRRITATION, SENSITIZATION, OR DEFATTING OF SKIN UPON PROLONGED OR REPEATED CONTACT.
INHALATION: EXCESSIVE EXPOSURE TO VAPORS OR SPRAY MIST CAN RESULT IN HEADACHE, DIZZINESS, NAUSEA AND LOSS OF CONSCIOUSNESS.
SOME REPORTS HAVE ASSOCIATED REPEATED & PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN & NERVOUS SYSTEM DAMAGE.
EYES: THIS MATERIAL MAY BE AN EYE IRRITANT.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: NONE, WHEN USED IN ACCORDANCE WITH SAFE HANDLING INSTRUCTIONS. (SEE SECTION VIII)

EMERGENCY AND FIRST AID PROCEDURES:

SKIN: PROMPTLY WASH WITH SOAP AND WATER. REMOVE AND WASH ANY CONTAMINATED CLOTHING BEFORE REUSE.
EYES: FLUSH WITH LARGE QUANTITIES OF WATER FOR 15 MINUTES AND SEEK MEDICAL ATTENTION.
SWALLOWING: IF INGESTED DO NOT INDUCE VOMITING; KEEP PERSON WARM AND QUIET AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL INTO LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.
INHALATION: REMOVE VICTIM TO FRESH AIR IMMEDIATELY. IF RESPIRATORY SYMPTOMS DEVELOP, SEEK MEDICAL ATTENTION AT ONCE.

PRIMARY ROUTE(S) OF ENTRY: INHALATION, DERMAL, INGESTION.

MUTAGENICITY: THIS PRODUCT CONTAINS NO KNOWN CARCINOGENS IN REPORTABLE QUANTITIES AS DEFINED BY ACGIH, OSHA, NTP, IARC.

SECTION VI: REACTIVITY DATA

STABILITY: UNSTABLE: ___ STABLE: XX HAZARDOUS POLYMERIZATION: MAY OCCUR: ___ WILL NOT OCCUR: XX

HAZARDOUS DECOMPOSITION PRODUCTS: INCOMPLETE COMBUSTION CAN YIELD CARBON MONOXIDE AND TOXIC VAPORS.

CONDITIONS TO AVOID: HEAT, SPARKS & OPEN FLAME. IF PRODUCT CONTAINS ALUMINUM, MOISTURE IN CLOSED CONTAINERS WILL GENERATE HYDROGEN GAS.

INCOMPATIBILITY: AVOID CONTACT WITH STRONG OXIDANTS, ACIDS, BASES AND EPOXY HARDENERS UNDER UNCONTROLLED CONDITIONS.

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA. ABSORB SPILL WITH AN ABSORBENT MATERIAL SUCH AS SAND, VERMICULITE OR SAND AND PLACE MATERIAL INTO A CLOSED CONTAINER. IF LARGE SPILL, DIKE AREA TO PREVENT THIS MATERIAL FROM ENTERING WATER SYSTEMS OR SEWERS. WEAR PROTECTIVE EQUIPMENT DURING CLEANUP.

WASTE DISPOSAL METHOD: IF DISCARDED, THIS MATERIAL AND CONTAINERS SHOULD BE TREATED AS HAZARDOUS WASTE BASED ON THE CHARACTERISTICS OF IGNITABILITY AS DEFINED UNDER FEDERAL RCRA REGULATIONS (40 CFR 261). DISPOSAL OF THIS MATERIAL OR ITS CONTAINERS REQUIRES COMPLIANCE WITH APPLICABLE LABELING, PACKAGING AND RECORDKEEPING STANDARDS.

WASTE DISPOSAL: DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL AGENCIES. GROUND HANDLING EQUIPMENT TO PREVENT SPARKS.
FOR FURTHER INFORMATION: CONTACT YOUR STATE OR LOCAL WASTE AGENCY OR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S RCRA HOTLINE (1-800-424-9346 OR 1-202-382-3000).

SECTION VIII: SAFE HANDLING AND USE INFORMATION KEEP OUT OF THE REACH OF CHILDREN

RESPIRATORY PROTECTION: A CANISTER-TYPE RESPIRATOR MUST BE WORN TO PREVENT THE INHALATION OF VAPORS OR SPRAY MIST WHEN THE TLV OR PEL IS EXCEEDED.

VENTILATION: GENERAL VENTILATION IS REQUIRED DURING NORMAL USE. LOCAL VENTILATION MAY BE REQUIRED DURING CERTAIN OPERATIONS TO KEEP EXPOSURE LEVEL BELOW THE LIMITS LISTED IN SECTION II OF THIS DATA SHEET.

PROTECTIVE GLOVES: CHEMICAL RESISTANT NITRILE, NEOPRENE OR RUBBER GLOVES REQUIRED.

EYE PROTECTION: WEAR FACE SHIELD OR CHEMICAL GOGGLES.

OTHER PROTECTIVE EQUIPMENT: WEAR PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT. EYE WASH STATION AND SAFETY SHOWER SHOULD BE AVAILABLE.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR SMOKING.

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: AVOID PROLONGED OR REPEATED INHALATION OF HEATED VAPORS OR SPRAY MIST. KEEP AWAY FROM HEAT OR OPEN FLAME. THIS MATERIAL MAY CAUSE SENSITIZATION. DO NOT GET IN EYES, ON SKIN OR CLOTHING. DO NOT ALLOW CONTAMINATED CLOTHING TO CONTACT SKIN. DO NOT WELD ON FULL OR EMPTY CONTAINERS. KEEP CONTAINERS CLOSED WHEN NOT IN USE, AND PROPERLY LABELED.

SECTION X: SUPPLEMENTAL INFORMATION

THIS MATERIAL HAS BEEN CATEGORIZED AS HAVING THE FOLLOWING HAZARD(S) AS DEFINED BY SARA TITLE III REGULATIONS (40 CFR 370): ACUTE, FI

THE INFORMATION IN THIS DATA SHEET IS BELIEVED TO BE ACCURATE AND TRUE AT THE TIME OF PREPARATION OF THIS DOCUMENT. THIS IS NOT A WARRANTY OF PRODUCT OR PRODUCT SPECIFICATION. THE END-USER OF THIS PRODUCT IS ADVISED TO VERIFY IN ADVANCE THAT THE INFORMATION IN THIS SHEET IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

(solvent)

FARWEST PAINT MANUFACTURING CO.
4522 SOUTH 133RD STREET
TUKWILA, WASHINGTON 98168

MATERIAL SAFETY DATA SHEET
FOR COATINGS AND RELATED MATERIALS
PREP: JUNE 1993 UPDATE: CURRENT

SECTION I PRODUCT IDENTIFICATION

PRODUCT NUMBER: X-6390 COMPONENT B

(Also need X-6392 Component A MSDS)

PRODUCT NAME: FAST-DRI EPOXY PRIMER
COMPONENT B

PRODUCT CLASS: 2 COMPONENT ORGANIC
COATING SYSTEM

24 HOUR EMERGENCY ASSISTANCE

EMERGENCY (CHEMTREC) (800)424-9300
INFORMATION (FARWEST) (206)244-8844

HAZARD RATING	THIS PRODUCT
0 LOWEST	HEALTH 2
1	FLAMMABILITY 3
2	REACTIVITY 0
3	PERSONAL
4 EXTREME	PROTECTION G

HAZARDOUS MATERIAL: YES XX NO

SECTION II HAZARDOUS INGREDIENTS

INGREDIENT	CAS NUMBER	PERCENT (BY WEIGHT)	OCCUPATIONAL EXPOSURE TLV (ACGIH) PEL (OSHA)	
XYLENE	1330-20-7	12.21%	100ppm	100ppm
PHENYLETHANE	100-41-4	2.16%	100ppm	100ppm
AROMATIC HYDROCARBON	64742-94-5	16.16%	50ppm	50ppm
1-METHOXY-2-PROPANOL ACETATE	108-65-6	26.35%	Not Established	

"PURSUANT TO TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) AND 40 CFR PART 372, THIS PRODUCT CONTAINS OR MAY CONTAIN A TOXIC CHEMICAL IN A QUANTITY SUBJECT TO THE REPORTING REQUIREMENTS UNDER SECTION 313"

SECTION III PHYSICAL DATA

BOILING RANGE: 281-420 F. WEIGHT/GALLON: 8.45 LBS. VAPOR PRESSURE: 9.5mmHg@20C
VAPOR DENSITY: HEAVIER THAN AIR: XX LIGHTER THAN AIR:
EVAPORATION RATE: FASTER THAN ETHER: SLOWER THAN ETHER: XX
PERCENT VOLATILE BY VOLUME: 59% REACTIVITY IN WATER: NIL
VOC: 576 GRAMS/LITER (LESS WATER) SOLUBILITY IN WATER: NIL
MELTING POINT: N/A pH: N/A VISCOSITY: 22-26 Sec. #4 Ford Cup
APPEARANCE & ODOR: Grayish liquid with mild aromatic odor.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA: FLAMMABLE LIQUID FLASH POINT: 80 F. TCC
CLASS: 3 % LEL: 1.0 % UEL: 7.0
DOT: FLAMMABLE LIQUID UN NUMBER: 1263

EXTINGUISHING MEDIA: Foam, CO2, Dry Chemical, or Water Fog.
USE THE ABOVE OR ANY CLASS B EXTINGUISHING AGENT. WATER MAY BE UNSUITABLE AS AN EXTINGUISHING MEDIUM, BUT HELPFUL IN KEEPING ADJACENT CONTAINERS COOL.
SPECIAL FIREFIGHTING PROCEDURES: Firefighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus.
Evacuate area of unprotected personnel. Wear protective clothing.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors may form an explosive mixture in air and may be ignited by sparks, pilot lights, etc. Closed containers may rupture when exposed to extreme heat.

X-6390 (solvent)

SECTION V: HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

SKIN: THIS MATERIAL MAY CAUSE IRRITATION, SENSITIZATION, OR DEFATTING OF SKIN UPON PROLONGED OR REPEATED CONTACT.
INHALATION: EXCESSIVE EXPOSURE TO VAPORS OR SPRAY MIST CAN RESULT IN HEADACHE, DIZZINESS, NAUSEA AND LOSS OF CONSCIOUSNESS.
EYES: THIS MATERIAL MAY BE AN EYE IRRITANT.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: NONE, WHEN USED IN ACCORDANCE WITH SAFE HANDLING INSTRUCTIONS. (SEE SECTION VIII)

EMERGENCY AND FIRST AID PROCEDURES:

SKIN: PROMPTLY WASH WITH SOAP AND WATER. REMOVE AND WASH ANY CONTAMINATED CLOTHING BEFORE REUSE.
EYES: FLUSH WITH LARGE QUANTITIES OF WATER FOR 15 MINUTES AND SEEK MEDICAL ATTENTION.
SWALLOWING: IF INGESTED DO NOT INDUCE VOMITING; KEEP PERSON WARM AND QUIET AND GET MEDICAL ATTENTION.
INHALATION: REMOVE VICTIM TO FRESH AIR IMMEDIATELY. IF RESPIRATORY SYMPTOMS DEVELOP, SEEK MEDICAL ATTENTION AT ONCE.

PRIMARY ROUTE(S) OF ENTRY: INHALATION, DERMAL, INGESTION.

CARCINOGENICITY: THIS PRODUCT CONTAINS NO KNOWN CARCINOGENS IN REPORTABLE QUANTITIES AS DEFINED BY ACGIH, OSHA, NTP, IARC.

SECTION VI: REACTIVITY DATA

STABILITY: UNSTABLE:___ STABLE:XX HAZARDOUS POLYMERIZATION: MAY OCCUR:___ WILL NOT OCCUR:XX

HAZARDOUS DECOMPOSITION PRODUCTS: INCOMPLETE COMBUSTION CAN YIELD CARBON MONOXIDE AND TOXIC VAPORS.

CONDITIONS TO AVOID: HEAT, SPARKS & OPEN FLAME. IF PRODUCT CONTAINS ALUMINUM, MOISTURE IN CLOSED CONTAINERS WILL GENERATE HYDROGEN GAS.

INCOMPATIBILITY: AVOID CONTACT WITH STRONG OXIDANTS, ACIDS, BASES AND EPOXY HARDENERS UNDER UNCONTROLLED CONDITIONS.

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA. ABSORB SPILL WITH AN ABSORBENT MATERIAL SUCH AS SAWDUST, VERMICULITE OR SAND AND PLACE MATERIAL INTO A CLOSED CONTAINER.

WASTE DISPOSAL METHOD: IF DISCARDED, THIS MATERIAL AND CONTAINERS SHOULD BE TREATED AS HAZARDOUS WASTE BASED ON THE CHARACTERISTICS OF IGNITABILITY AS DEFINED UNDER FEDERAL RCRA REGULATIONS (40 CFR 261). DISPOSAL OF THIS MATERIAL OR ITS CONTAINERS REQUIRES COMPLIANCE WITH APPLICABLE LABELING, PACKAGING AND RECORDKEEPING STANDARDS.

WASTE DISPOSAL: DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL AGENCIES. GROUND HANDLING EQUIPMENT TO PREVENT SPARKS. FOR FURTHER INFORMATION: CONTACT YOUR STATE OR LOCAL WASTE AGENCY OR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S RCRA HOTLINE (1-800-424-9346 OR 1-202-382-3000).

SECTION VIII: SAFE HANDLING AND USE INFORMATION KEEP OUT OF THE REACH OF CHILDREN

RESPIRATORY PROTECTION: A CANISTER-TYPE RESPIRATOR MUST BE WORN TO PREVENT THE INHALATION OF VAPORS OR SPRAY MIST WHEN THE TLV OR PEL IS EXCEEDED.

VENTILATION: GENERAL VENTILATION IS REQUIRED DURING NORMAL USE. LOCAL VENTILATION MAY BE REQUIRED DURING CERTAIN OPERATIONS TO KEEP EXPOSURE LEVEL BELOW THE LIMITS LISTED IN SECTION II OF THIS DATA SHEET.

PROTECTIVE GLOVES: CHEMICAL RESISTANT NITRILE, NEOPRENE OR RUBBER GLOVES REQUIRED.

EYE PROTECTION: WEAR FACE SHIELD OR CHEMICAL GOGGLES.

OTHER PROTECTIVE EQUIPMENT: WEAR PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT. EYE WASH STATION AND SAFETY SHOWER SHOULD BE AVAILABLE.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR SMOKING.

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: AVOID PROLONGED OR REPEATED INHALATION OF HEATED VAPORS OR SPRAY MIST. KEEP AWAY FROM HEAT OR OPEN FLAME. THIS MATERIAL MAY CAUSE SENSITIZATION. DO NOT GET IN EYES, ON SKIN OR CLOTHING. DO NOT ALLOW CONTAMINATED CLOTHING TO CONTACT SKIN. DO NOT WELD ON FULL OR EMPTY CONTAINERS. KEEP CONTAINERS CLOSED WHEN NOT IN USE, AND PROPERLY LABELED.

SECTION X: SUPPLEMENTAL INFORMATION

THIS MATERIAL HAS BEEN CATEGORIZED AS HAVING THE FOLLOWING HAZARD(S) AS DEFINED BY SARA TITLE III REGULATIONS (40 CFR 370): ACUTE, ...

THE INFORMATION IN THIS DATA SHEET IS BELIEVED TO BE ACCURATE AND TRUE AT THE TIME OF PREPARATION OF THIS DOCUMENT. THIS IS NOT A WARRANTY OF PRODUCT OR PRODUCT SPECIFICATION. THE END-USER OF THIS PRODUCT IS ADVISED TO VERIFY IN ADVANCE THAT THE INFORMATION IN THIS SHEET IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

(solvent)

FARWEST PAINT MANUFACTURING CO.
4522 SOUTH 133RD STREET
UKWILA, WASHINGTON 98168

MATERIAL SAFETY DATA SHEET
FOR COATINGS AND RELATED MATERIALS
PREP: JAN. 1985 UPDATE: JULY 1999

SECTION I PRODUCT IDENTIFICATION

PRODUCT NAME: ISOPROPYL ALCOHOL
CAGE CODE: 6F266
PRODUCT CLASS: ANHYDROUS ISOPROPYL
ALCOHOL

24 HOUR EMERGENCY ASSISTANCE

EMERGENCY (CHEMTREC) (800) 424-9300
INFORMATION (FARWEST) (206) 244-8844

HAZARD RATING		THIS PRODUCT	
0	LOWEST	HEALTH	2
1		FLAMMABILITY	3
2		REACTIVITY	0
3		PERSONAL	
4	EXTREME	PROTECTION	G

HAZARDOUS MATERIAL: YES XX NO: _____
EPA REGISTRATION NUMBER (IF APPLICABLE): N/A

SECTION II HAZARDOUS INGREDIENTS

INGREDIENT	CAS NUMBER	PERCENT (BY WEIGHT)	OCCUPATIONAL EXPOSURE	
			TLV (ACGIH)	PEL (OSHA)

ISOPROPYL ALCOHOL	67-63-0	>99.0%	400ppm	400ppm
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"PURSUANT TO TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) AND 40 CFR PART 372, THIS PRODUCT CONTAINS OR MAY CONTAIN A TOXIC CHEMICAL IN A QUANTITY SUBJECT TO THE REPORTING REQUIREMENTS UNDER SECTION 313"

SECTION III PHYSICAL DATA

BOILING RANGE: 181 F. WEIGHT/GALLON: 6.50 lbs. VAPOR PRESSURE: 33mmHg@20C
VAPOR DENSITY: HEAVIER THAN AIR: XX LIGHTER THAN AIR: _____ 2.07 AIR=1
EVAPORATION RATE: FASTER THAN ETHER: _____ SLOWER THAN ETHER: XX 3.0 BUAC=1
PERCENT VOLATILE BY VOLUME: 100% REACTIVITY IN WATER: NONE pH: N/A
VOC: 785 GRAMS/LITER (LESS WATER) SOLUBILITY IN WATER: 100%
MELTING POINT: -127 F. VISCOSITY: N/A FREEZING POINT: N/A DECOMP. TEMP: N/A
APPEARANCE & ODOR: Clear, colorless liquid, medicinal alcoholic odor.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA: FLAMMABLE FLASH POINT: 53 F. TCC
CLASS: 3 % LEL: 2.0 % UEL: 12.7
DOT: FLAMMABLE UN NUMBER: 1219

EXTINGUISHING MEDIA: Foam, CO₂, Dry Chemical, or Water Fog.
USE THE ABOVE OR ANY CLASS B EXTINGUISHING AGENT. WATER MAY BE UNSUITABLE AS AN EXTINGUISHING MEDIUM, BUT HELPFUL IN KEEPING ADJACENT CONTAINERS COOL.
SPECIAL FIREFIGHTING PROCEDURES: Firefighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus.
Evacuate area of unprotected personnel. Wear protective clothing.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors may form an explosive mixture in air and may be ignited by sparks, pilot lights, etc. Closed containers may rupture when exposed to extreme heat.

ISO.ALC. (solvent)

=====
SECTION V: HEALTH HAZARD DATA
=====EFFECTS OF OVEREXPOSURE:

SKIN: THIS MATERIAL MAY CAUSE IRRITATION, SENSITIZATION, OR DEFATTING OF SKIN UPON PROLONGED OR REPEATED CONTACT.
INHALATION: EXCESSIVE EXPOSURE TO VAPORS OR SPRAY MIST CAN RESULT IN HEADACHE, DIZZINESS, NAUSEA AND LOSS OF CONSCIOUSNESS.
SOME REPORTS HAVE ASSOCIATED REPEATED & PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN & NERVOUS SYSTEM DAMAGE.
EYES: THIS MATERIAL MAY BE AN EYE IRRITANT.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: NONE, WHEN USED IN ACCORDANCE WITH SAFE HANDLING INSTRUCTIONS. (SEE SECTION VIII)

EMERGENCY AND FIRST AID PROCEDURES:

SKIN: PROMPTLY WASH WITH SOAP AND WATER. REMOVE AND WASH ANY CONTAMINATED CLOTHING BEFORE REUSE.
EYES: FLUSH WITH LARGE QUANTITIES OF WATER FOR 15 MINUTES AND SEEK MEDICAL ATTENTION.
SWALLOWING: IF INGESTED DO NOT INDUCE VOMITING; KEEP PERSON WARM AND QUIET AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL INTO LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.
INHALATION: REMOVE VICTIM TO FRESH AIR IMMEDIATELY. IF RESPIRATORY SYMPTOMS DEVELOP, SEEK MEDICAL ATTENTION AT ONCE.

PRIMARY ROUTE(S) OF ENTRY: INHALATION, DERMAL, INGESTION.

CARCINOGENICITY: THIS PRODUCT CONTAINS NO KNOWN CARCINOGENS IN REPORTABLE QUANTITIES AS DEFINED BY ACGIH, OSHA, NTP, IARC.

=====
SECTION VI: REACTIVITY DATA
=====

STABILITY: UNSTABLE: STABLE: HAZARDOUS POLYMERIZATION: MAY OCCUR: WILL NOT OCCUR:

HAZARDOUS DECOMPOSITION PRODUCTS: INCOMPLETE COMBUSTION CAN YIELD CARBON MONOXIDE AND TOXIC VAPORS.

CONDITIONS TO AVOID: HEAT, SPARKS & OPEN FLAME. IF PRODUCT CONTAINS ALUMINUM, MOISTURE IN CLOSED CONTAINERS WILL GENERATE HYDROGEN GAS.

INCOMPATIBILITY: AVOID CONTACT WITH STRONG OXIDANTS, ACIDS, BASES AND EPOXY HARDENERS UNDER UNCONTROLLED CONDITIONS.

=====
SECTION VII: SPILL OR LEAK PROCEDURES
=====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA. ABSORB SPILL WITH AN ABSORBENT MATERIAL SUCH AS SAWDUST, VERMICULITE OR SAND AND PLACE MATERIAL INTO A CLOSED CONTAINER. IF LARGE SPILL, DIKE OFF PREVENT THIS MATERIAL FROM ENTERING WATER SYSTEMS OR SEWERS. WEAR PROTECTIVE EQUIPMENT DURING CLEANUP.

WASTE DISPOSAL METHOD: IF DISCARDED, THIS MATERIAL AND CONTAINERS SHOULD BE TREATED AS HAZARDOUS WASTE BASED ON THE CHARACTERISTICS OF IGNITABILITY AS DEFINED UNDER FEDERAL RCRA REGULATIONS (40 CFR 261). DISPOSAL OF THIS MATERIAL OR ITS CONTAINERS REQUIRES COMPLIANCE WITH APPLICABLE LABELING, PACKAGING AND RECORDKEEPING STANDARDS.

WASTE DISPOSAL: DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL AGENCIES. GROUND HANDLING EQUIPMENT TO PREVENT SPARKS.
FOR FURTHER INFORMATION: CONTACT YOUR STATE OR LOCAL WASTE AGENCY OR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S RCRA HOTLINE (1-800-424-9346 OR 1-202-382-3000).

=====
SECTION VIII: SAFE HANDLING AND USE INFORMATION
=====

KEEP OUT OF THE REACH OF CHILDREN

RESPIRATORY PROTECTION: A CANISTER-TYPE RESPIRATOR MUST BE WORN TO PREVENT THE INHALATION OF VAPORS OR SPRAY MIST WHEN THE TLV OR PEL IS EXCEEDED.

VENTILATION: GENERAL VENTILATION IS REQUIRED DURING NORMAL USE. LOCAL VENTILATION MAY BE REQUIRED DURING CERTAIN OPERATIONS TO KEEP EXPOSURE LEVEL BELOW THE LIMITS LISTED IN SECTION II OF THIS DATA SHEET.

PROTECTIVE GLOVES: CHEMICAL RESISTANT NITRILE, NEOPRENE OR RUBBER GLOVES REQUIRED.

EYE PROTECTION: WEAR FACE SHIELD OR CHEMICAL GOGGLES.

OTHER PROTECTIVE EQUIPMENT: WEAR PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT. EYE WASH STATION AND SAFETY SHOWER SHOULD BE AVAILABLE.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR SMOKING.

=====
SECTION IX: SPECIAL PRECAUTIONS
=====

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: AVOID PROLONGED OR REPEATED INHALATION OF HEATED VAPORS OR SPRAY MIST. KEEP AWAY FROM HEAT OR OPEN FLAME. THIS MATERIAL MAY CAUSE SENSITIZATION. DO NOT GET IN EYES, ON SKIN OR CLOTHING. DO NOT ALLOW CONTAMINATED CLOTHING TO CONTACT SKIN. DO NOT WELD ON FULL OR EMPTY CONTAINERS. KEEP CONTAINERS CLOSED WHEN NOT IN USE, AND PROPERLY LABELED.

=====
SECTION X: SUPPLEMENTAL INFORMATION
=====

THIS MATERIAL HAS BEEN CATEGORIZED AS HAVING THE FOLLOWING HAZARD(S) AS DEFINED BY SARA TITLE III REGULATIONS (40 CFR 370): ACUTE, ...

THE INFORMATION IN THIS DATA SHEET IS BELIEVED TO BE ACCURATE AND TRUE AT THE TIME OF PREPARATION OF THIS DOCUMENT. THIS IS NOT A WARRANTY OF PRODUCT OR PRODUCT SPECIFICATION. THE END-USER OF THIS PRODUCT IS ADVISED TO VERIFY IN ADVANCE THAT THE INFORMATION IN THIS SHEET IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

(solvent)

FARWEST PAINT MANUFACTURING CO.
4522 SOUTH 133RD STREET
TUKWILA, WASHINGTON 98168

MATERIAL SAFETY DATA SHEET
FOR COATINGS AND RELATED MATERIALS
PREP: NOVEMBER 2007 UPDATE: CURRENT

SECTION I PRODUCT IDENTIFICATION

SPECIFICATION NO: TT-E-527
PRODUCT NAME: LUSTERLESS ALKYD ENAMEL
PRODUCT CLASS: PIGMENTED ALKYD
RESIN SOLUTION

24 HOUR EMERGENCY ASSISTANCE

EMERGENCY (CHEMTREC) (800) 424-9300
INFORMATION (FARWEST) (206) 244-8844

HAZARD RATING		THIS PRODUCT	
0	LOWEST	HEALTH	1
1		FLAMMABILITY	2
2		REACTIVITY	0
3		PERSONAL	
4	EXTREME	PROTECTION	G

HAZARDOUS MATERIAL: YES XX NO

SECTION II HAZARDOUS INGREDIENTS

INGREDIENT	CAS NUMBER	PERCENT (BY WEIGHT)	OCCUPATIONAL EXPOSURE TLV (ACGIH)	PEL (OSHA)
PETROLEUM SOLVENT	64742-47-8	18.46%	100ppm	200ppm
XYLENE	1330-20-7	0.65%	100ppm	100ppm
PHENYLETHANE	100-41-4	0.12%	100ppm	100ppm
MINERAL SPIRITS	8032-32-4	17.10%	100ppm	100ppm

"PURSUANT TO TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) AND 40 CFR PART 372, THIS PRODUCT CONTAINS OR MAY CONTAIN A TOXIC CHEMICAL IN A QUANTITY SUBJECT TO THE REPORTING REQUIREMENTS UNDER SECTION 313"

SECTION III PHYSICAL DATA

BOILING RANGE: 281-387 F. WEIGHT/GALLON: 10.67 lbs. VAPOR PRESSURE: 6.0mmHg@68F
VAPOR DENSITY: HEAVIER THAN AIR: XX LIGHTER THAN AIR:
EVAPORATION RATE: FASTER THAN ETHER: SLOWER THAN ETHER: XX
PERCENT VOLATILE BY VOLUME: 57% SOLUBILITY IN WATER: NONE
VOC: 462 GRAMS/LITER (LESS WATER) REACTIVITY IN WATER: NIL
MELTING POINT: Unknown FREEZING POINT: Unknown DECOMPOSITION TEMP: Unknown
APPEARANCE & ODOR: White (or tinted) liquid with mild odor.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA: COMBUSTIBLE LIQUID FLASH POINT: 103 F. TCC
CLASS: 3 % LEL: 1.0 % UEL: 7.0
DOT: COMBUSTIBLE LIQUID UN NUMBER: 1263

EXTINGUISHING MEDIA: Foam, CO2, Dry Chemical, or Water Fog.

USE THE ABOVE OR ANY CLASS B EXTINGUISHING AGENT. WATER MAY BE UNSUITABLE AS AN EXTINGUISHING MEDIUM, BUT HELPFUL IN KEEPING ADJACENT CONTAINERS COOL.

SPECIAL FIREFIGHTING PROCEDURES: Firefighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus.

Evacuate area of unprotected personnel. Wear protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors may form an explosive mixture in air and may be ignited by sparks, pilot lights, etc. Closed containers may rupture when exposed to extreme heat.

TTE527 (solvent)

SECTION V: HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

SKIN: THIS MATERIAL MAY CAUSE IRRITATION, SENSITIZATION, OR DEFATTING OF SKIN UPON PROLONGED OR REPEATED CONTACT.
INHALATION: EXCESSIVE EXPOSURE TO VAPORS OR SPRAY MIST CAN RESULT IN HEADACHE, DIZZINESS, NAUSEA AND LOSS OF CONSCIOUSNESS.
SOME REPORTS HAVE ASSOCIATED REPEATED & PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN & NERVOUS SYSTEM DAMAGE.
EYES: THIS MATERIAL MAY BE AN EYE IRRITANT.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: NONE, WHEN USED IN ACCORDANCE WITH SAFE HANDLING INSTRUCTIONS. (SEE SECTION VIII)

EMERGENCY AND FIRST AID PROCEDURES:

SKIN: PROMPTLY WASH WITH SOAP AND WATER. REMOVE AND WASH ANY CONTAMINATED CLOTHING BEFORE REUSE.
EYES: FLUSH WITH LARGE QUANTITIES OF WATER FOR 15 MINUTES AND SEEK MEDICAL ATTENTION.
SWALLOWING: IF INGESTED DO NOT INDUCE VOMITING; KEEP PERSON WARM AND QUIET AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL INTO LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.
INHALATION: REMOVE VICTIM TO FRESH AIR IMMEDIATELY. IF RESPIRATORY SYMPTOMS DEVELOP, SEEK MEDICAL ATTENTION AT ONCE.

PRIMARY ROUTE(S) OF ENTRY: INHALATION, DERMAL, INGESTION.

MUTAGENICITY: THIS PRODUCT CONTAINS NO KNOWN CARCINOGENS IN REPORTABLE QUANTITIES AS DEFINED BY ACGIH, OSHA, NTP, IARC.

SECTION VI: REACTIVITY DATA

STABILITY: UNSTABLE:___ STABLE: XX HAZARDOUS POLYMERIZATION: MAY OCCUR:___ WILL NOT OCCUR: XX

HAZARDOUS DECOMPOSITION PRODUCTS: INCOMPLETE COMBUSTION CAN YIELD CARBON MONOXIDE AND TOXIC VAPORS.

CONDITIONS TO AVOID: HEAT, SPARKS & OPEN FLAME. IF PRODUCT CONTAINS ALUMINUM, MOISTURE IN CLOSED CONTAINERS WILL GENERATE HYDROGEN GAS.

COMPATIBILITY: AVOID CONTACT WITH STRONG OXIDANTS, ACIDS, BASES AND EPOXY HARDENERS UNDER UNCONTROLLED CONDITIONS.

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA. ABSORB SPILL WITH AN ABSORBENT MATERIAL SUCH AS SAWDUST, VERMICULITE OR SAND AND PLACE MATERIAL INTO A CLOSED CONTAINER. IF LARGE SPILL, DIKE AREA TO PREVENT THIS MATERIAL FROM ENTERING WATER SYSTEMS OR SEWERS. WEAR PROTECTIVE EQUIPMENT DURING CLEANUP.

WASTE DISPOSAL METHOD: IF DISCARDED, THIS MATERIAL AND CONTAINERS SHOULD BE TREATED AS HAZARDOUS WASTE BASED ON THE CHARACTERISTICS OF INSTABILITY AS DEFINED UNDER FEDERAL RCRA REGULATIONS (40 CFR 261). DISPOSAL OF THIS MATERIAL OR ITS CONTAINERS REQUIRES COMPLIANCE WITH APPLICABLE LABELING, PACKAGING AND RECORDKEEPING STANDARDS.

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FOR FURTHER INFORMATION: CONTACT YOUR STATE OR LOCAL WASTE AGENCY OR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S RCRA HOTLINE (1-800-424-9346 OR 1-202-382-3000).

SECTION VIII: SAFE HANDLING AND USE INFORMATION

KEEP OUT OF THE REACH OF CHILDREN

RESPIRATORY PROTECTION: A CANISTER-TYPE RESPIRATOR MUST BE WORN TO PREVENT THE INHALATION OF VAPORS OR SPRAY MIST WHEN THE TLV OR PEL IS EXCEEDED.

VENTILATION: GENERAL VENTILATION IS REQUIRED DURING NORMAL USE. LOCAL VENTILATION MAY BE REQUIRED DURING CERTAIN OPERATIONS TO KEEP EXPOSURE LEVEL BELOW THE LIMITS LISTED IN SECTION II OF THIS DATA SHEET.

PROTECTIVE GLOVES: CHEMICAL RESISTANT NITRILE, NEOPRENE OR RUBBER GLOVES REQUIRED.

FACE PROTECTION: WEAR FACE SHIELD OR CHEMICAL GOGGLES.

OTHER PROTECTIVE EQUIPMENT: WEAR PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT. EYE WASH STATION AND SAFETY SHOWER SHOULD BE AVAILABLE.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR SMOKING.

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: AVOID PROLONGED OR REPEATED INHALATION OF HEATED VAPORS OR SPRAY MIST. KEEP AWAY FROM HEAT OR OPEN FLAME. THIS MATERIAL MAY CAUSE SENSITIZATION. DO NOT GET IN EYES, ON SKIN OR CLOTHING. DO NOT ALLOW CONTAMINATED CLOTHING TO CONTACT SKIN. DO NOT WELD ON FULL OR EMPTY CONTAINERS. KEEP CONTAINERS CLOSED WHEN NOT IN USE, AND PROPERLY LABELED.

SECTION X: SUPPLEMENTAL INFORMATION

THIS MATERIAL HAS BEEN CATEGORIZED AS HAVING THE FOLLOWING HAZARD(S) AS DEFINED BY SARA TITLE III REGULATIONS (40 CFR 370): ACUTE, FIRE

THE INFORMATION IN THIS DATA SHEET IS BELIEVED TO BE ACCURATE AND TRUE AT THE TIME OF PREPARATION OF THIS DOCUMENT. THIS IS NOT A WARRANTY OF PRODUCT OR PRODUCT SPECIFICATION. THE END-USER OF THIS PRODUCT IS ADVISED TO VERIFY IN ADVANCE THAT THE INFORMATION IN THIS SHEET IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

(solvent)

FARWEST PAINT MANUFACTURING CO.
4522 SOUTH 133RD STREET
KWILA, WASHINGTON 98168

MATERIAL SAFETY DATA SHEET
FOR COATINGS AND RELATED MATERIALS
PREP: SEPT. 1991 UPDATE: AUG. 2001

SECTION I PRODUCT IDENTIFICATION

PRODUCT NUMBER: 1700
PRODUCT NAME: AUTOMOTIVE GLOSS WHITE
SKYTHANE (COMPONENT A)
PRODUCT CLASS: PIGMENTED POLYESTER
SOLUTION
(ALSO NEED X-5729 MSDS - COMPONENT B)

24 HOUR EMERGENCY ASSISTANCE

EMERGENCY (CHEMTREC) (800) 424-9300
INFORMATION (FARWEST) (206) 244-8844

HAZARD RATING	THIS PRODUCT
0 LOWEST	HEALTH 3
1	FLAMMABILITY 3
2	REACTIVITY 1
3	PERSONAL
4 EXTREME	PROTECTION G

SECTION II HAZARDOUS INGREDIENTS

INGREDIENT	CAS NUMBER	PERCENT (BY WEIGHT)	OCCUPATIONAL EXPOSURE	
			TLV (ACGIH)	PEL (OSHA)
PROPYLENE GLYCOL METHYL ETHER ACETATE	108-65-6	4.0%	25ppm	N/A
XYLENE	1330-20-7	5.5%	100ppm	100ppm
TOLUENE	108-88-3	9.5%	100ppm	200ppm
n-BUTYL ACETATE	123-86-4	17.7%	150ppm	150ppm
METHYL ETHYL KETONE	78-93-3	16.0%	200ppm	200ppm
ETHYL ETHOXY PROPIONATE	763-69-9	12.0%	N/A	N/A

"PURSUANT TO TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) AND 40 CFR PART 372, THIS PRODUCT CONTAINS OR MAY CONTAIN A TOXIC CHEMICAL IN A QUANTITY SUBJECT TO THE REPORTING REQUIREMENTS UNDER SECTION 313"

SECTION III PHYSICAL DATA

BOILING RANGE: 174-340 F. WEIGHT/GALLON: 9.0 lbs. VAPOR PRESSURE: 70.6mmHg@20C
VAPOR DENSITY: HEAVIER THAN AIR: XX LIGHTER THAN AIR: _____
EVAPORATION RATE: FASTER THAN ETHER: _____ SLOWER THAN ETHER: XX
PERCENT ORGANIC VOLATILE BY VOLUME: 80% SOLUBILITY IN WATER: NIL
VOC: 650 GRAMS/LITER (LESS WATER) REACTIVITY IN WATER: NIL
APPEARANCE: White liquid, or color of tint, with pungent odor.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA: FLAMMABLE FLASH POINT: 26 F. TCC
CLASS: 3 % LEL: 1.8
DOT: FLAMMABLE UN NUMBER: 1263

EXTINGUISHING MEDIA: Foam, CO2, Dry Chemical, or Water Fog.

USE THE ABOVE OR ANY CLASS B EXTINGUISHING AGENT. WATER MAY BE UNSUITABLE AS AN EXTINGUISHING MEDIUM, BUT HELPFUL IN KEEPING ADJACENT CONTAINERS COOL.

SPECIAL FIREFIGHTING PROCEDURES: Firefighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus.

Evacuate area of unprotected personnel. Wear protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors may form an explosive mixture in air and may be ignited by sparks, pilot lights, etc. Closed containers may rupture when exposed to extreme heat.

SECTION V: HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

SKIN: THIS MATERIAL MAY CAUSE IRRITATION, SENSITIZATION, OR DEFATTING OF SKIN UPON PROLONGED OR REPEATED CONTACT.
INHALATION: EXCESSIVE EXPOSURE TO VAPORS OR SPRAY MIST CAN RESULT IN HEADACHE, DIZZINESS, NAUSEA AND LOSS OF CONSCIOUSNESS.
EYES: THIS MATERIAL MAY BE AN EYE IRRITANT.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: NONE, WHEN USED IN ACCORDANCE WITH SAFE HANDLING INSTRUCTIONS. (SEE SECTION VIII)

EMERGENCY AND FIRST AID PROCEDURES:

SKIN: PROMPTLY WASH WITH SOAP AND WATER. REMOVE AND WASH ANY CONTAMINATED CLOTHING BEFORE REUSE.
EYES: FLUSH WITH LARGE QUANTITIES OF WATER FOR 15 MINUTES AND SEEK MEDICAL ATTENTION.
SHALLOWING: IF INGESTED DO NOT INDUCE VOMITING; KEEP PERSON WARM AND QUIET AND GET MEDICAL ATTENTION.
INHALATION: REMOVE VICTIM TO FRESH AIR IMMEDIATELY. IF RESPIRATORY SYMPTOMS DEVELOP, SEEK MEDICAL ATTENTION AT ONCE.

PRIMARY ROUTE(S) OF ENTRY: INHALATION, DERMAL, INGESTION.

CARCINOGENICITY: THIS PRODUCT CONTAINS NO KNOWN CARCINOGENS IN REPORTABLE QUANTITIES AS DEFINED BY ACGIH, OSHA, NTP, IARC.

SECTION VI: REACTIVITY DATA

STABILITY: UNSTABLE: STABLE: XX HAZARDOUS POLYMERIZATION: MAY OCCUR: WILL NOT OCCUR: XX

HAZARDOUS DECOMPOSITION PRODUCTS: INCOMPLETE COMBUSTION CAN YIELD CARBON MONOXIDE AND TOXIC VAPORS.

CONDITIONS TO AVOID: HEAT, SPARKS & OPEN FLAME. IF PRODUCT CONTAINS ALUMINUM, MOISTURE IN CLOSED CONTAINERS WILL GENERATE HYDROGEN GAS.

INCOMPATIBILITY: AVOID CONTACT WITH STRONG OXIDANTS, ACIDS, BASES AND EPOXY HARDENERS UNDER UNCONTROLLED CONDITIONS.

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA. ABSORB SPILL WITH AN ABSORBENT MATERIAL SUCH AS SAWDUST, VERMICULITE OR SAND AND PLACE MATERIAL INTO A CLOSED CONTAINER. IF LARGE SPILL, DIKE AREA TO PREVENT THIS MATERIAL FROM ENTERING WATER SYSTEMS OR SEWERS. WEAR PROTECTIVE EQUIPMENT DURING CLEANUP.

WASTE DISPOSAL METHOD: IF DISCARDED, THIS MATERIAL AND CONTAINERS SHOULD BE TREATED AS HAZARDOUS WASTE BASED ON THE CHARACTERISTICS OF IGNITABILITY AS DEFINED UNDER FEDERAL RCRA REGULATIONS (40 CFR 261). DISPOSAL OF THIS MATERIAL OR ITS CONTAINERS REQUIRES COMPLIANCE WITH APPLICABLE LABELING, PACKAGING AND RECORDKEEPING STANDARDS.

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SECTION VIII: SAFE HANDLING AND USE INFORMATION KEEP OUT OF THE REACH OF CHILDREN

RESPIRATORY PROTECTION: A CANISTER-TYPE RESPIRATOR MUST BE WORN TO PREVENT THE INHALATION OF VAPORS OR SPRAY MIST WHEN THE TLV OR PEL IS EXCEEDED.

VENTILATION: GENERAL VENTILATION IS REQUIRED DURING NORMAL USE. LOCAL VENTILATION MAY BE REQUIRED DURING CERTAIN OPERATIONS TO KEEP EXPOSURE LEVEL BELOW THE LIMITS LISTED IN SECTION II OF THIS DATA SHEET.

PROTECTIVE GLOVES: CHEMICAL RESISTANT NITRILE, NEOPRENE OR RUBBER GLOVES REQUIRED.

EYE PROTECTION: WEAR FACE SHIELD OR CHEMICAL GOGGLES.

OTHER PROTECTIVE EQUIPMENT: WEAR PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT. EYE WASH STATION AND SAFETY SHOWER SHOULD BE AVAILABLE.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR SMOKING.

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: AVOID PROLONGED OR REPEATED INHALATION OF HEATED VAPORS OR SPRAY MIST. KEEP AWAY FROM HEAT OR OPEN FLAME. THIS MATERIAL MAY CAUSE SENSITIZATION. DO NOT GET IN EYES, ON SKIN OR CLOTHING. DO NOT ALLOW CONTAMINATED CLOTHING TO CONTACT SKIN. DO NOT WELD ON FULL OR EMPTY CONTAINERS. KEEP CONTAINERS CLOSED WHEN NOT IN USE, AND PROPERLY LABELED.

SECTION X: SUPPLEMENTAL INFORMATION

THIS MATERIAL HAS BEEN CATEGORIZED AS HAVING THE FOLLOWING HAZARD(S) AS DEFINED BY SARA TITLE III REGULATIONS (40 CFR 370): ACUTE

THE INFORMATION IN THIS DATA SHEET IS BELIEVED TO BE ACCURATE AND TRUE AT THE TIME OF PREPARATION OF THIS DOCUMENT. THIS IS NOT A WARRANTY OF PRODUCT OR PRODUCT SPECIFICATION. THE END-USER OF THIS PRODUCT IS ADVISED TO VERIFY IN ADVANCE THAT THE INFORMATION IN THIS SHEET IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

(solvent)

FARWEST PAINT MANUFACTURING CO.
4522 SOUTH 133RD STREET
TUKWILA, WASHINGTON 98168

MATERIAL SAFETY DATA SHEET
FOR COATINGS AND RELATED MATERIALS
PREP: JUNE 1993 UPDATE: CURRENT

SECTION I PRODUCT IDENTIFICATION

PRODUCT NUMBER: X-6392 COMPONENT A

(Also need X-6390 Component B MSDS)

PRODUCT NAME: FAST-DRI EPOXY PRIMER
COMPONENT A

PRODUCT CLASS: 2 COMPONENT ORGANIC
COATING SYSTEM

24 HOUR EMERGENCY ASSISTANCE

EMERGENCY (CHEMTREC) (800) 424-9300
INFORMATION (FARWEST) (206) 244-8844

HAZARD RATING	THIS PRODUCT
0 LOWEST	HEALTH 2
1	FLAMMABILITY 1
2	REACTIVITY 0
3	PERSONAL
4 EXTREME	PROTECTION G

HAZARDOUS MATERIAL: YES XX NO

SECTION II HAZARDOUS INGREDIENTS

INGREDIENT	CAS NUMBER	PERCENT (BY WEIGHT)	OCCUPATIONAL EXPOSURE	
			TLV (ACGIH)	PEL (OSHA)
MINERAL SPIRITS 350	8052-41-3	0.04%	100ppm	100ppm
PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE	108-65-6	3.37%	Not Established	
AROMATIC HYDROCARBON	64742-94-5	18.03%	50ppm	50ppm

"PURSUANT TO TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) AND 40 CFR PART 372, THIS PRODUCT CONTAINS OR MAY CONTAIN A TOXIC CHEMICAL IN A QUANTITY SUBJECT TO THE REPORTING REQUIREMENTS UNDER SECTION 313"

SECTION III PHYSICAL DATA

BOILING RANGE: 354-420 F. WEIGHT/GALLON: 12.19 LBS. VAPOR PRESSURE: 5.2mmHg@100F
VAPOR DENSITY: HEAVIER THAN AIR: XX LIGHTER THAN AIR:
EVAPORATION RATE: FASTER THAN ETHER: SLOWER THAN ETHER: XX
PERCENT VOLATILE BY VOLUME: 35.0% REACTIVITY IN WATER: NIL
VOC: 423 GRAMS/LITER (LESS WATER) SOLUBILITY IN WATER: NIL
MELTING POINT: N/A pH: N/A VISCOSITY: 105 KU FREEZING POINT: N/A
APPEARANCE/ODOR: White, Buff or Gray liquid/mild odor. DECOMPOSITION TEMP: N/A

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA: COMBUSTIBLE FLASH POINT: 116 F. TCC
CLASS: 3 % LEL: 0.7 % UEL: 6.0
DOT: COMBUSTIBLE UN NUMBER: 1263

EXTINGUISHING MEDIA: Foam, CO2, Dry Chemical, or Water Fog.
USE THE ABOVE OR ANY CLASS B EXTINGUISHING AGENT. WATER MAY BE UNSUITABLE AS AN EXTINGUISHING MEDIUM, BUT HELPFUL IN KEEPING ADJACENT CONTAINERS COOL.
SPECIAL FIREFIGHTING PROCEDURES: Firefighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus.
Evacuate area of unprotected personnel. Wear protective clothing.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors may form an explosive mixture in air and may be ignited by sparks, pilot lights, etc. Closed containers may rupture when exposed to extreme heat.

X-6392 (solvent)

SECTION V: HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

SKIN: THIS MATERIAL MAY CAUSE IRRITATION, SENSITIZATION, OR DEFATTING OF SKIN UPON PROLONGED OR REPEATED CONTACT.
INHALATION: EXCESSIVE EXPOSURE TO VAPORS OR SPRAY MIST CAN RESULT IN HEADACHE, DIZZINESS, NAUSEA AND LOSS OF CONSCIOUSNESS.
EYES: THIS MATERIAL MAY BE AN EYE IRRITANT.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: NONE, WHEN USED IN ACCORDANCE WITH SAFE HANDLING INSTRUCTIONS. (SEE SECTION VIII)

EMERGENCY AND FIRST AID PROCEDURES:

SKIN: PROMPTLY WASH WITH SOAP AND WATER. REMOVE AND WASH ANY CONTAMINATED CLOTHING BEFORE REUSE.
EYES: FLUSH WITH LARGE QUANTITIES OF WATER FOR 15 MINUTES AND SEEK MEDICAL ATTENTION.
SWALLOWING: IF INGESTED DO NOT INDUCE VOMITING; KEEP PERSON WARM AND QUIET AND GET MEDICAL ATTENTION.
INHALATION: REMOVE VICTIM TO FRESH AIR IMMEDIATELY. IF RESPIRATORY SYMPTOMS DEVELOP, SEEK MEDICAL ATTENTION AT ONCE.

PRIMARY ROUTE(S) OF ENTRY: INHALATION, DERMAL, INGESTION.

CARCINOGENICITY: THIS PRODUCT CONTAINS NO KNOWN CARCINOGENS IN REPORTABLE QUANTITIES AS DEFINED BY ACGIH, OSHA, NTP, IARC.

SECTION VI: REACTIVITY DATA

STABILITY: UNSTABLE: UNSTABLE: STABLE: XX HAZARDOUS POLYMERIZATION: MAY OCCUR: WILL NOT OCCUR: XX

HAZARDOUS DECOMPOSITION PRODUCTS: INCOMPLETE COMBUSTION CAN YIELD CARBON MONOXIDE AND TOXIC VAPORS.

CONDITIONS TO AVOID: HEAT, SPARKS & OPEN FLAME. IF PRODUCT CONTAINS ALUMINUM, MOISTURE IN CLOSED CONTAINERS WILL GENERATE HYDROGEN GAS.

INCOMPATIBILITY: AVOID CONTACT WITH STRONG OXIDANTS, ACIDS, BASES AND EPOXY HARDENERS UNDER UNCONTROLLED CONDITIONS.

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA. ABSORB SPILL WITH AN ABSORBENT MATERIAL SUCH AS SAWDUST, VERMICULITE OR SAND AND PLACE MATERIAL INTO A CLOSED CONTAINER.

WASTE DISPOSAL METHOD: IF DISCARDED, THIS MATERIAL AND CONTAINERS SHOULD BE TREATED AS HAZARDOUS WASTE BASED ON THE CHARACTERISTICS OF THE MATERIAL AS DEFINED UNDER FEDERAL RCRA REGULATIONS (40 CFR 261).

WASTE DISPOSAL: DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL AGENCIES. GROUND HANDLING EQUIPMENT TO PREVENT SPARKS. FOR FURTHER INFORMATION: CONTACT YOUR STATE OR LOCAL WASTE AGENCY OR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S RCRA HOTLINE (1-800-424-9346 OR 1-202-382-3000).

SECTION VIII: SAFE HANDLING AND USE INFORMATION KEEP OUT OF THE REACH OF CHILDREN

RESPIRATORY PROTECTION: A CANISTER-TYPE RESPIRATOR MUST BE WORN TO PREVENT THE INHALATION OF VAPORS OR SPRAY MIST WHEN THE TLV OR PEL IS EXCEEDED.

VENTILATION: GENERAL VENTILATION IS REQUIRED DURING NORMAL USE. LOCAL VENTILATION MAY BE REQUIRED DURING CERTAIN OPERATIONS TO KEEP EXPOSURE LEVEL BELOW THE LIMITS LISTED IN SECTION II OF THIS DATA SHEET.

PROTECTIVE GLOVES: CHEMICAL RESISTANT NITRILE, NEOPRENE OR RUBBER GLOVES REQUIRED.

EYE PROTECTION: WEAR FACE SHIELD OR CHEMICAL GOGGLES.

OTHER PROTECTIVE EQUIPMENT: WEAR PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT. EYE WASH STATION AND SAFETY SHOWER SHOULD BE AVAILABLE.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR SMOKING.

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: AVOID PROLONGED OR REPEATED INHALATION OF HEATED VAPORS OR SPRAY MIST. KEEP AWAY FROM HEAT OR OPEN FLAME. THIS MATERIAL MAY CAUSE SENSITIZATION. DO NOT GET IN EYES, ON SKIN OR CLOTHING. DO NOT ALLOW CONTAMINATED CLOTHING TO CONTACT SKIN.

SECTION X: SUPPLEMENTAL INFORMATION

THIS MATERIAL HAS BEEN CATEGORIZED AS HAVING THE FOLLOWING HAZARD(S) AS DEFINED BY SARA TITLE III REGULATIONS (40 CFR 370): ACUTE

THE INFORMATION IN THIS DATA SHEET IS BELIEVED TO BE ACCURATE AND TRUE AT THE TIME OF PREPARATION OF THIS DOCUMENT. THIS IS NOT A WARRANTY OF PRODUCT OR PRODUCT SPECIFICATION. THE END-USER OF THIS PRODUCT IS ADVISED TO VERIFY IN ADVANCE THAT THE INFORMATION IN THIS SHEET IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

(solvent)

SECTION I PRODUCT IDENTIFICATION

PRODUCT NUMBER: 1007-X

PRODUCT NAME: FLOOR GRIP

PRODUCT CLASS: PIGMENTED ACRYLIC RESIN SOLUTION

24 HOUR EMERGENCY ASSISTANCE

EMERGENCY (CHEMTREC) (800) 424-9300
INFORMATION (FARWEST) (206) 244-8844

HAZARD RATING	THIS PRODUCT
0 LOWEST	HEALTH 2
1	FLAMMABILITY 2
2	REACTIVITY 1
3	PERSONAL
4 EXTREME	PROTECTION G

SECTION II HAZARDOUS INGREDIENTS

INGREDIENT	CAS NUMBER	PERCENT (BY WEIGHT)	OCCUPATIONAL TLV (ACGIH)	EXPOSURE PEL (OSHA)
XYLENE	1330-20-7	13.44%	100ppm	100ppm
NATURAL MINERAL QUARTZ (SAND)	14808-60-7	35.00%	8Hr-50Ug/m3	8Hr-.10mg/m3

"PURSUANT TO TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) AND 40 CFR PART 372, THIS PRODUCT CONTAINS OR MAY CONTAIN A TOXIC CHEMICAL IN A QUANTITY SUBJECT TO THE REPORTING REQUIREMENTS UNDER SECTION 313"

SECTION III PHYSICAL DATA

BOILING RANGE: 281-284 F. WEIGHT/GALLON: 14.12 lbs. VAPOR PRESSURE: 9.5mmHg@20C
 VAPOR DENSITY: HEAVIER THAN AIR: XX LIGHTER THAN AIR: _____
 EVAPORATION RATE: FASTER THAN ETHER: _____ SLOWER THAN ETHER: XX
 PERCENT ORGANIC VOLATILE BY VOLUME: 37.53% SOLUBILITY IN WATER: NIL
 VOC: 327 GRAMS/LITER (LESS WATER) REACTIVITY IN WATER: NIL
 APPEARANCE: Clear (or color of tint) thixotropic material, sweet aromatic odor.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA: FLAMMABLE CLASS: 3 DOT: FLAMMABLE
 FLASH POINT: 80 F. TCC
 % LEL: 1.5 % UEL: 7.0
 UN NUMBER: 1263

EXTINGUISHING MEDIA: Foam, CO2, Dry Chemical, or Water Fog.
 USE THE ABOVE OR ANY CLASS B EXTINGUISHING AGENT. WATER MAY BE UNSUITABLE AS AN EXTINGUISHING MEDIUM, BUT HELPFUL IN KEEPING ADJACENT CONTAINERS COOL.
 SPECIAL FIREFIGHTING PROCEDURES: Firefighters and others exposed to vapors or ducts of combustion should wear self-contained breathing apparatus.
 Isolate area of unprotected personnel. Wear protective clothing.
 UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors may form an explosive mixture in air and may be ignited by sparks, pilot lights, etc. Closed containers may rupture when exposed to extreme heat.

SECTION V: HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

SKIN: THIS MATERIAL MAY CAUSE IRRITATION, SENSITIZATION, OR DEFATTING OF SKIN UPON PROLONGED OR REPEATED CONTACT.
INHALATION: EXCESSIVE EXPOSURE TO VAPORS OR SPRAY MIST CAN RESULT IN HEADACHE, DIZZINESS, NAUSEA AND LOSS OF CONSCIOUSNESS.
EYES: SOME REPORTS HAVE ASSOCIATED REPEATED & PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN & NERVOUS SYSTEM DAMAGE. THIS MATERIAL MAY BE AN EYE IRRITANT.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: NONE, WHEN USED IN ACCORDANCE WITH SAFE HANDLING INSTRUCTIONS. (SEE SECTION VIII)

EMERGENCY AND FIRST AID PROCEDURES:

SKIN: PROMPTLY WASH WITH SOAP AND WATER. REMOVE AND WASH ANY CONTAMINATED CLOTHING BEFORE REUSE.
EYES: FLUSH WITH LARGE QUANTITIES OF WATER FOR 15 MINUTES AND SEEK MEDICAL ATTENTION.
SWALLOWING: IF INGESTED DO NOT INDUCE VOMITING; KEEP PERSON WARM AND QUIET AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL INTO LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.
INHALATION: REMOVE VICTIM TO FRESH AIR IMMEDIATELY. IF RESPIRATORY SYMPTOMS DEVELOP, SEEK MEDICAL ATTENTION AT ONCE.

PRIMARY ROUTE(S) OF ENTRY: INHALATION, DERMAL, INGESTION.

CARCINOGENICITY: THIS PRODUCT CONTAINS NO KNOWN CARCINOGENS IN REPORTABLE QUANTITIES AS DEFINED BY ACGIH, OSHA, NTP, IARC.

SECTION VI: REACTIVITY DATA

STABILITY: UNSTABLE: STABLE: **HAZARDOUS POLYMERIZATION:** MAY OCCUR: WILL NOT OCCUR:

HAZARDOUS DECOMPOSITION PRODUCTS: INCOMPLETE COMBUSTION CAN YIELD CARBON MONOXIDE AND TOXIC VAPORS.

CONDITIONS TO AVOID: HEAT, SPARKS & OPEN FLAME. IF PRODUCT CONTAINS ALUMINUM, MOISTURE IN CLOSED CONTAINERS WILL GENERATE HYDROGEN GAS.

INCOMPATIBILITY: AVOID CONTACT WITH STRONG OXIDANTS, ACIDS, BASES AND EPOXY HARDENERS UNDER UNCONTROLLED CONDITIONS.

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA. ABSORB SPILL WITH AN ABSORBENT MATERIAL SUCH AS SAWDUST, VERMICULITE OR SAND AND PLACE MATERIAL INTO A CLOSED CONTAINER. IF LARGE SPILL, DIKE AREA TO PREVENT THIS MATERIAL FROM ENTERING WATER SYSTEMS OR SEWERS. WEAR PROTECTIVE EQUIPMENT DURING CLEANUP.

WASTE DISPOSAL METHOD: IF DISCARDED, THIS MATERIAL AND CONTAINERS SHOULD BE TREATED AS HAZARDOUS WASTE BASED ON THE CHARACTERISTICS IGNITABILITY AS DEFINED UNDER FEDERAL RCRA REGULATIONS (40 CFR 261). DISPOSAL OF THIS MATERIAL OR ITS CONTAINERS REQUIRES COMPLIANCE WITH APPLICABLE LABELING, PACKAGING AND RECORDKEEPING STANDARDS.

WASTE DISPOSAL: DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL AGENCIES. GROUND HANDLING EQUIPMENT TO PREVENT SPARKS.
FOR FURTHER INFORMATION: CONTACT YOUR STATE OR LOCAL WASTE AGENCY OR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S RCRA HOTLINE (1-800-424-9346 OR 1-202-382-3000).

SECTION VIII: SAFE HANDLING AND USE INFORMATION

KEEP OUT OF THE REACH OF CHILDREN

RESPIRATORY PROTECTION: A CANISTER-TYPE RESPIRATOR MUST BE WORN TO PREVENT THE INHALATION OF VAPORS OR SPRAY MIST WHEN THE TLV OR PEL IS EXCEEDED.

VENTILATION: GENERAL VENTILATION IS REQUIRED DURING NORMAL USE. LOCAL VENTILATION MAY BE REQUIRED DURING CERTAIN OPERATIONS TO KEEP EXPOSURE LEVEL BELOW THE LIMITS LISTED IN SECTION II OF THIS DATA SHEET.

PROTECTIVE GLOVES: CHEMICAL RESISTANT NITRILE, NEOPRENE OR RUBBER GLOVES REQUIRED.

EYE PROTECTION: WEAR FACE SHIELD OR CHEMICAL GOGGLES.

OTHER PROTECTIVE EQUIPMENT: WEAR PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT. EYE WASH STATION AND SAFETY SHOWER SHOULD BE AVAILABLE.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR SMOKING.

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: AVOID PROLONGED OR REPEATED INHALATION OF HEATED VAPORS OR SPRAY MIST. KEEP AWAY FROM HEAT OR OPEN FLAME. THIS MATERIAL MAY CAUSE SENSITIZATION. DO NOT GET IN EYES, ON SKIN OR CLOTHING. DO NOT ALLOW CONTAMINATED CLOTHING TO CONTACT SKIN. DO NOT WELD ON FULL OR EMPTY CONTAINERS. KEEP CONTAINERS CLOSED WHEN NOT IN USE, AND PROPERLY LABELED.

SECTION X: SUPPLEMENTAL INFORMATION

THIS MATERIAL HAS BEEN CATEGORIZED AS HAVING THE FOLLOWING HAZARD(S) AS DEFINED BY SARA TITLE III REGULATIONS (40 CFR 370): ACUTE, FIRE

THE INFORMATION IN THIS DATA SHEET IS BELIEVED TO BE ACCURATE AND TRUE AT THE TIME OF PREPARATION OF THIS DOCUMENT. THIS IS NOT A WARRANTY OF PRODUCT OR PRODUCT SPECIFICATION. THE END-USER OF THIS PRODUCT IS ADVISED TO VERIFY IN ADVANCE THAT THE INFORMATION IN THIS SHEET IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

(solvent)

Farwest Paint Manufacturing Co.
 4522 South 133rd Street
 Tukwila, Washington, 98168
<http://www.farwestpaint.com>

Material Safety Data Sheet
For Coatings and Related Materials
Prep: Sept. 1986 Update: Current

Sections I-IV (This Page) / [Sections V-X \(Click Here\)](#)

Section I - Product Identification

Product Number: 222
Product Name: Light Gray Floor Grip
Product Class: Pigmented, Acrylic Resin Solution

24 Hour Emergency Assistance
 Emergency (Chemtrec) (800) 424-9300
 Information (Farwest) (206) 244-8844

Hazard Rating		This Product
0	Lowest	Health: 2
1		Flammability: 2
2		Reactivity: 1
3		Personal Protection: G
4	Extreme	

Section II - Hazardous Ingredients

Ingredient	CAS Number	Percent (By Weight)	Occupational Exposure	
			TLV (ACGIH)	PEL (OSHA)
Xylene	1330-20-7	22.0%	100ppm	100ppm
Natural Mineral Quartz (Sand)	14808-60-7	35.0%	8Hr-50Ug/m3	8Hr-.10mg/m3

"Pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372, this product contains or may contain a toxic chemical in a quantity subject to the reporting requirements under Section 313"

Section III - Physical Data

Boiling Range: 281-284 F.	Weight/Gallon: 14.02 lbs.	Vapor Pressure: 9.5mmHg@20C
Vapor Density:	Heavier than Air: XX	Lighter than Air:
Evaporation Rate:	Faster than Ether:	Slower than Ether: XX
Percent Organic Volatile by Volume: 40%		Solubility in Water: NIL
VOC: 354 Grams/Liter (Less Water)		Reactivity in Water: NIL
Appearance & Odor: Gray thixotropic material with mild, sweet aromatic odor.		

Section IV - Fire and Explosion Hazard Data

Flammability Classification:	OSHA: Flammable Class: 3	Flash Point: 80 F. TCC
	DOT: Flammable	LEL: 1.5% UEL: 7.0%
		UN Number: 1263

Extinguishing Media: Foam, CO2, Dry Chemical, or Water Fog.
 Use the above or any Class B extinguishing agent. Water may be unsuitable as an extinguishing medium, but helpful in keeping adjacent containers cool.
Special Firefighting Procedures: Firefighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus. Evacuate area of unprotected personnel. Wear protective clothing.
Unusual Fire and Explosion Hazards: Vapors may form an explosive mixture in air and may be ignited by sparks, pilot lights, etc. Closed containers may rupture when exposed to extreme heat.

222 (solvent)

SECTION V: HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

SKIN: THIS MATERIAL MAY CAUSE IRRITATION, SENSITIZATION, OR DEFATTING OF SKIN UPON PROLONGED OR REPEATED CONTACT.
INHALATION: EXCESSIVE EXPOSURE TO VAPORS OR SPRAY MIST CAN RESULT IN HEADACHE, DIZZINESS, NAUSEA AND LOSS OF CONSCIOUSNESS.
SOME REPORTS HAVE ASSOCIATED REPEATED & PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN & NERVOUS SYSTEM DAMAGE.
EYES: THIS MATERIAL MAY BE AN EYE IRRITANT.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: NONE, WHEN USED IN ACCORDANCE WITH SAFE HANDLING INSTRUCTIONS. (SEE SECTION VIII)

EMERGENCY AND FIRST AID PROCEDURES:

SKIN: PROMPTLY WASH WITH SOAP AND WATER. REMOVE AND WASH ANY CONTAMINATED CLOTHING BEFORE REUSE.
EYES: FLUSH WITH LARGE QUANTITIES OF WATER FOR 15 MINUTES AND SEEK MEDICAL ATTENTION.
SWALLOWING: IF INGESTED DO NOT INDUCE VOMITING; KEEP PERSON WARM AND QUIET AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL INTO LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.
INHALATION: REMOVE VICTIM TO FRESH AIR IMMEDIATELY. IF RESPIRATORY SYMPTOMS DEVELOP, SEEK MEDICAL ATTENTION AT ONCE.

PRIMARY ROUTE(S) OF ENTRY: INHALATION, DERMAL, INGESTION.

CARCINOGENICITY: THIS PRODUCT CONTAINS NO KNOWN CARCINOGENS IN REPORTABLE QUANTITIES AS DEFINED BY ACGIH, OSHA, NTP, IARC.

SECTION VI: REACTIVITY DATA

STABILITY: UNSTABLE: STABLE: XX

HAZARDOUS POLYMERIZATION: MAY OCCUR: WILL NOT OCCUR: XX

HAZARDOUS DECOMPOSITION PRODUCTS: INCOMPLETE COMBUSTION CAN YIELD CARBON MONOXIDE AND TOXIC VAPORS.

CONDITIONS TO AVOID: HEAT, SPARKS & OPEN FLAME. IF PRODUCT CONTAINS ALUMINUM, MOISTURE IN CLOSED CONTAINERS WILL GENERATE HYDROGEN GAS.

INCOMPATIBILITY: AVOID CONTACT WITH STRONG OXIDANTS, ACIDS, BASES AND EPOXY HARDENERS UNDER UNCONTROLLED CONDITIONS.

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA. ABSORB SPILL WITH AN ABSORBENT MATERIAL SUCH AS SAWDUST, VERMICULITE OR SAND AND PLACE MATERIAL INTO A CLOSED CONTAINER. IF LARGE SPILL, DIKE AREA TO PREVENT THIS MATERIAL FROM ENTERING WATER SYSTEMS OR SEWERS. WEAR PROTECTIVE EQUIPMENT DURING CLEANUP.

WASTE DISPOSAL METHOD: IF DISCARDED, THIS MATERIAL AND CONTAINERS SHOULD BE TREATED AS HAZARDOUS WASTE BASED ON THE CHARACTERISTICS OF IGNITABILITY AS DEFINED UNDER FEDERAL RCRA REGULATIONS (40 CFR 261). DISPOSAL OF THIS MATERIAL OR ITS CONTAINERS REQUIRES COMPLIANCE WITH APPLICABLE LABELING, PACKAGING AND RECORDKEEPING STANDARDS.

WASTE DISPOSAL: DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL AGENCIES. GROUND HANDLING EQUIPMENT TO PREVENT SPARKS.

FOR FURTHER INFORMATION: CONTACT YOUR STATE OR LOCAL WASTE AGENCY OR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S RCRA HOTLINE

(1-800-424-9346 OR 1-202-382-3000).

SECTION VIII: SAFE HANDLING AND USE INFORMATION KEEP OUT OF THE REACH OF CHILDREN

RESPIRATORY PROTECTION: A CANISTER-TYPE RESPIRATOR MUST BE WORN TO PREVENT THE INHALATION OF VAPORS OR SPRAY MIST WHEN THE TLV OR PEL IS EXCEEDED.

VENTILATION: GENERAL VENTILATION IS REQUIRED DURING NORMAL USE. LOCAL VENTILATION MAY BE REQUIRED DURING CERTAIN OPERATIONS TO KEEP EXPOSURE LEVEL BELOW THE LIMITS LISTED IN SECTION II OF THIS DATA SHEET.

PROTECTIVE GLOVES: CHEMICAL RESISTANT NITRILE, NEOPRENE OR RUBBER GLOVES REQUIRED.

EYE PROTECTION: WEAR FACE SHIELD OR CHEMICAL GOGGLES.

OTHER PROTECTIVE EQUIPMENT: WEAR PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT. EYE WASH STATION AND SAFETY SHOWER SHOULD BE AVAILABLE.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR SMOKING.

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: AVOID PROLONGED OR REPEATED INHALATION OF HEATED VAPORS OR SPRAY MIST. KEEP AWAY FROM HEAT OR OPEN FLAME. THIS MATERIAL MAY CAUSE SENSITIZATION. DO NOT GET IN EYES, ON SKIN OR CLOTHING. DO NOT ALLOW CONTAMINATED CLOTHING TO CONTACT SKIN. DO NOT WELD ON FULL OR EMPTY CONTAINERS. KEEP CONTAINERS CLOSED WHEN NOT IN USE, AND PROPERLY LABELED.

SECTION X: SUPPLEMENTAL INFORMATION

THIS MATERIAL HAS BEEN CATEGORIZED AS HAVING THE FOLLOWING HAZARD(S) AS DEFINED BY SARA TITLE III REGULATIONS (40 CFR 370):
ACUTE, FIRE

THE INFORMATION IN THIS DATA SHEET IS BELIEVED TO BE ACCURATE AND TRUE AT THE TIME OF PREPARATION OF THIS DOCUMENT. THIS IS NOT A WARRANTY OF PRODUCT OR PRODUCT SPECIFICATION. THE END-USER OF THIS PRODUCT IS ADVISED TO VERIFY IN ADVANCE THAT THE INFORMATION IN THIS SHEET IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

(solvent)

Farwest Paint Manufacturing Co.

4522 South 133rd Street
 Tukwila, Washington, 98168
<http://www.farwestpaint.com>

Material Safety Data Sheet
For Coatings and Related Materials
Prep: Feb. 1989 Update: Feb. 1992

Sections I-IV (This Page) / [Sections V-X \(Click Here\)](#)

Section I - Product Identification**Product Number:** 223**Product Name:** Dark Gray Floor Grip**Product Class:** Pigmented, Acrylic Resin Solution**24 Hour Emergency Assistance**

Emergency (Chemtrec) (800) 424-9300
 Information (Farwest) (206) 244-8844

<i>Hazard Rating</i>		<i>This Product</i>
0	Lowest	Health: 2
1		Flammability: 2
2		Reactivity: 1
3		Personal Protection: G
4	Extreme	

Section II - Hazardous Ingredients

<i>Ingredient</i>	<i>CAS Number</i>	<i>Percent (By Weight)</i>	<i>Occupational Exposure</i>	
			<i>TLV (ACGIH)</i>	<i>PEL (OSHA)</i>
Xylene	1330-20-7	22.0%	100ppm	100ppm
Natural Mineral Quartz (Sand)	14808-60-7	35.0%	8Hr-50Ug/m3	8Hr-.10mg/m3

"Pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372, this product contains or may contain a toxic chemical in a quantity subject to the reporting requirements under Section 313"

Section III - Physical Data**Boiling Range:** 281-284 F.**Weight/Gallon:** 14.02 lbs.**Vapor Pressure:** 9.5mmHg@20C**Vapor Density:****Heavier than Air:** XX**Lighter than Air:****Evaporation Rate:****Faster than Ether:****Slower than Ether:** XX**Percent Organic Volatile by Volume:**
40%**Solubility in Water:** NIL**VOC:** 354 Grams/Liter (Less Water)**Reactivity in Water:** NIL**Appearance & Odor:** Gray thixotropic material with mild, sweet aromatic odor.Section IV - Fire and Explosion Hazard Data**Flammability Classification:**

OSHA: Flammable
Class: 3
DOT: Flammable

Flash Point: 80 F. TCC
LEL: 1.5% **UEL:** 7.0%
UN Number: 1263

Extinguishing Media: Foam, CO2, Dry Chemical, or Water Fog.

Use the above or any Class B extinguishing agent. Water may be unsuitable as an extinguishing medium, but helpful in keeping adjacent containers cool.

Special Firefighting Procedures: Firefighters and others exposed to vapors or products of combustion should wear self-contained breathing apparatus. Evacuate area of unprotected personnel. Wear protective clothing.

Unusual Fire and Explosion Hazards: Vapors may form an explosive mixture in air and may be ignited by sparks, pilot lights, etc. Closed containers may rupture when exposed to extreme heat.

223 (solvent)

SECTION V: HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

SKIN: THIS MATERIAL MAY CAUSE IRRITATION, SENSITIZATION, OR DEFATTING OF SKIN UPON PROLONGED OR REPEATED CONTACT.

INHALATION: EXCESSIVE EXPOSURE TO VAPORS OR SPRAY MIST CAN RESULT IN HEADACHE, DIZZINESS, NAUSEA AND LOSS OF CONSCIOUSNESS.

SOME REPORTS HAVE ASSOCIATED REPEATED & PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN & NERVOUS SYSTEM DAMAGE.

EYES: THIS MATERIAL MAY BE AN EYE IRRITANT.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: NONE, WHEN USED IN ACCORDANCE WITH SAFE HANDLING INSTRUCTIONS. (SEE SECTION VIII)

EMERGENCY AND FIRST AID PROCEDURES:

SKIN: PROMPTLY WASH WITH SOAP AND WATER. REMOVE AND WASH ANY CONTAMINATED CLOTHING BEFORE REUSE.

EYES: FLUSH WITH LARGE QUANTITIES OF WATER FOR 15 MINUTES AND SEEK MEDICAL ATTENTION.

SWALLOWING: IF INGESTED DO NOT INDUCE VOMITING; KEEP PERSON WARM AND QUIET AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL INTO

LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.

INHALATION: REMOVE VICTIM TO FRESH AIR IMMEDIATELY. IF RESPIRATORY SYMPTOMS DEVELOP, SEEK MEDICAL ATTENTION AT ONCE.

PRIMARY ROUTE(S) OF ENTRY: INHALATION, DERMAL, INGESTION.

CARCINOGENICITY: THIS PRODUCT CONTAINS NO KNOWN CARCINOGENS IN REPORTABLE QUANTITIES AS DEFINED BY ACGIH, OSHA, NTP, IARC.

SECTION VI: REACTIVITY DATA

STABILITY: UNSTABLE: STABLE: XX

HAZARDOUS POLYMERIZATION: MAY OCCUR: WILL NOT OCCUR: XX

HAZARDOUS DECOMPOSITION PRODUCTS: INCOMPLETE COMBUSTION CAN YIELD CARBON MONOXIDE AND TOXIC VAPORS.

CONDITIONS TO AVOID: HEAT, SPARKS & OPEN FLAME. IF PRODUCT CONTAINS ALUMINUM, MOISTURE IN CLOSED CONTAINERS WILL GENERATE HYDROGEN GAS.

INCOMPATIBILITY: AVOID CONTACT WITH STRONG OXIDANTS, ACIDS, BASES AND EPOXY HARDENERS UNDER UNCONTROLLED CONDITIONS.

SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA. ABSORB SPILL WITH AN ABSORBENT MATERIAL SUCH AS SAWDUST, VERMICULITE OR SAND AND PLACE MATERIAL INTO A CLOSED CONTAINER. IF LARGE SPILL, DIKE AREA TO PREVENT THIS MATERIAL FROM ENTERING WATER SYSTEMS OR SEWERS. WEAR PROTECTIVE EQUIPMENT DURING CLEANUP.

WASTE DISPOSAL METHOD: IF DISCARDED, THIS MATERIAL AND CONTAINERS SHOULD BE TREATED AS HAZARDOUS WASTE BASED ON THE CHARACTERISTICS OF IGNITABILITY AS DEFINED UNDER FEDERAL RCRA REGULATIONS (40 CFR 261). DISPOSAL OF THIS MATERIAL OR ITS CONTAINERS REQUIRES COMPLIANCE WITH APPLICABLE LABELING, PACKAGING AND RECORDKEEPING STANDARDS.

WASTE DISPOSAL: DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL AGENCIES. GROUND HANDLING EQUIPMENT TO PREVENT SPARKS.

FOR FURTHER INFORMATION: CONTACT YOUR STATE OR LOCAL WASTE AGENCY OR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S RCRA HOTLINE

(1-800-424-9346 OR 1-202-382-3000).

SECTION VIII: SAFE HANDLING AND USE INFORMATION KEEP OUT OF THE REACH OF CHILDREN

RESPIRATORY PROTECTION: A CANISTER-TYPE RESPIRATOR MUST BE WORN TO PREVENT THE INHALATION OF VAPORS OR SPRAY MIST WHEN THE TLV OR PEL IS EXCEEDED.

VENTILATION: GENERAL VENTILATION IS REQUIRED DURING NORMAL USE. LOCAL VENTILATION MAY BE REQUIRED DURING CERTAIN OPERATIONS TO KEEP EXPOSURE LEVEL BELOW THE LIMITS LISTED IN SECTION II OF THIS DATA SHEET.

PROTECTIVE GLOVES: CHEMICAL RESISTANT NITRILE, NEOPRENE OR RUBBER GLOVES REQUIRED.

EYE PROTECTION: WEAR FACE SHIELD OR CHEMICAL GOGGLES.

OTHER PROTECTIVE EQUIPMENT: WEAR PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT. EYE WASH STATION AND SAFETY SHOWER SHOULD BE AVAILABLE.

HYGIENIC PRACTICES: WASH HANDS BEFORE EATING OR SMOKING.

SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: AVOID PROLONGED OR REPEATED INHALATION OF HEATED VAPORS OR SPRAY MIST. KEEP AWAY FROM HEAT OR OPEN FLAME. THIS MATERIAL MAY CAUSE SENSITIZATION. DO NOT GET IN EYES, ON SKIN OR CLOTHING. DO NOT ALLOW CONTAMINATED CLOTHING TO CONTACT SKIN. DO NOT WELD ON FULL OR EMPTY CONTAINERS. KEEP CONTAINERS CLOSED WHEN NOT IN USE, AND PROPERLY LABELED.

SECTION X: SUPPLEMENTAL INFORMATION

THIS MATERIAL HAS BEEN CATEGORIZED AS HAVING THE FOLLOWING HAZARD(S) AS DEFINED BY SARA TITLE III REGULATIONS (40 CFR 370):
ACUTE, FIRE

THE INFORMATION IN THIS DATA SHEET IS BELIEVED TO BE ACCURATE AND TRUE AT THE TIME OF PREPARATION OF THIS DOCUMENT. THIS IS NOT A WARRANTY OF PRODUCT OR PRODUCT SPECIFICATION. THE END-USER OF THIS PRODUCT IS ADVISED TO VERIFY IN ADVANCE THAT THE INFORMATION IN THIS SHEET IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

(solvent)

DPL

NOV-05-'98 THU 14:09 ID:OMC BELDIT-MURPHY

TEL NO:608-364-3327

#529 P01

JUL -24'96 (WED) 16:49 GUARDSMAN PRODUCTS

TEL:1-800-531-3950

D.P.L.

P. 055

7/11/71



GUARDSMAN PRODUCTS, INC. MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION

Product: Moisture Displacing Lube
Manufacturer: Guardsman Products, Inc.
Address: 411 North Darling, Fremont MI 49412

Code No.: NA
Telephone: (616)924-3950
SP Code: 1060

SECTION 2 - PRODUCT COMPONENTS

Table with 5 columns: Component Name, OSHA PEL, ACGIH TLV, Wt. %, CAS Number. Rows include Petroleum naphtha, Lubricants/corrosion inhibitors, and Petroleum products, liquefied gas, sweetened.

SECTION 3 - PHYSICAL AND CHEMICAL CHARACTERISTICS

Boiling Point: 300°F IBP
Vapor Pressure: 3 at 75°F
Vapor Density (Air = 1): > 1
Volume % Volatile: > 70
Appearance and Odor: Clear liquid, solvent odor.
Specific Gravity: 0.8 typical
Water Soluble: Nil
Water Reactive: No
pH: NA

SECTION 4 - FIRE AND EXPLOSION INFORMATION

Flash Point (Method): 108°F
Flammable Limits, LEL: ND
Flame Extension: 50 - 60 "
Extinguishing Media: Foam, dry chemical, CO2
Special Firefighting Procedures: Use SCBA. Water is not suitable as an extinguishing media, but may be useful for cooling nearby containers.
Unusual Fire and Explosion Hazards: Aerosol containers may burst when exposed to temperatures in excess of 120°F.

SECTION 5 - REACTIVITY DATA

Stable: Yes
Incompatibility: Strong oxidizers like chlorine or concentrated O2
Hazardous Decomposition Products: Fumes, smoke, oxides of carbon.
Polymerization: No
Conditions to Avoid: Heat, sparks, open flame.
Conditions to Avoid: None Known

Post-It brand fax transmittal memo 7671 # of pages 1
To: W. Daley
From: J. Ryberg
Co.
Dept.
Phone #
Fax # 6138

INSP1060
7/24/96

MOISTURE DISPLACING LUBE AEROSOL MATERIAL SAFETY DATA SHEET, CONTINUED

SECTION 6 - HEALTH HAZARDS

Primary Routes of Entry: Oral: No Carcinogenic Listing: NTP: No
 Inhalation: Yes IARC: No
 Skin Absorb.: No ACGIH: No

HMIS Rating¹: Health: 2 Flammability: 2 Reactivity: 0

Signs/Symptoms of Exposure: Headache, dizziness, nausea from inhalation of vapors or mist. May cause skin or eye irritation.

Emergency First Aid Procedures

Eye Contact: Flush with running water for 15 minutes, holding lid open to expose surface. Contact physician.

Skin Contact: Remove contaminated clothing and shoes. Wash with mild soap and water, apply skin cream for irritation.

Inhalation: Remove to fresh air at once. Apply artificial respiration if necessary, contact physician immediately.

Ingestion: Do not induce vomiting, contact physician immediately.

Chronic Hazards: Health studies have shown that many chemicals pose human health risks which may vary from person to person. Prolonged or repeated occupational overexposure to solvents has been linked to permanent brain and nervous system damage. Intentional misuse by deliberate concentration and inhalation may be harmful or fatal. As a precaution, exposure to liquids or vapors should be minimized.

SECTION 7 - SPECIAL PRECAUTIONS/SPILL & LEAK PROCEDURES

Precautions for Storage and Handling: Keep containers closed when not in use. Do not use or store near open flame or strong oxidizers.

Other Precautions: Avoid breathing vapors or mists; prolonged or repeated skin contact.

Spill or Leak Precautions: **** DANGER!! LEAKING AEROSOLS ARE AN EXTREME FIRE AND EXPLOSION HAZARD!!** Remove ignition sources, check area with gas detector. Move leaking cans outdoors and empty into suitable container by depressing valve button. Small liquid spills may be taken up with absorbent material.

Waste Disposal Method: Comply with all applicable regulations.

SECTION 8 - SPECIAL PROTECTION & PRECAUTIONS

Respiratory Protection: None required in normal use, but an effective, NIOSH/MSHA approved respirator should be used at any time when vapor concentrations exceed established standards.

Ventilation Type Required: Adequate to maintain level below established standards.

Local Exhaust: Yes Rate: >60 fpm Mech. (General) No

Gloves: Chemical resistant

Eye Protection: Face shield or safety glasses recommended.

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MOISTURE DISPLACING LUBE AEROSOL MATERIAL SAFETY DATA SHEET, CONTINUED

Other Clothing/Equipment: *None required in normal use.*
Work/Hygiene Practices: *Basic good housekeeping.*

SECTION 9 - SHIPPING/LABELING INFORMATION

DOT ID Number: *None*
DOT Hazard Class: *ORM-D*
DOT Shipping Name: *Consumer Commodity*
DOT Precautionary Label: *None required*
Packing Group: *None assigned*
IMO/IATA ID Number: *UN1950 / UN1950*
IMO/IATA Hazard Class: *9 / 2.1*
IMO Shipping Name: *AEROSOLS*
IATA Shipping Name: *Aerosols, flammable, n.o.s. (Propane/Isobutane)*
IMO/IATA Precautionary Label: *AEROSOLS statement / Flammable Gas diamond*
IMO/IATA Packing Group: *II / None assigned*
IMO Page Number: *9022* **Marine Pollutant:** *No*

In Case of Transportation Emergency, Call Chemtrec 1-800-424-9300

¹ Standard for oil mist in air
² New Jersey Trade Secret Number 800887-5343P
³ Values given in this section are for non-aerosolized product

Abbreviations

NA	Not Applicable	ppcf	Million Parts per Cubic Foot
NAV	Not Available	ppm	Parts per Million
ND	Not Determined	mg/m ³	Milligrams per Cubic Meter
NTP	National Toxicology Program	CAS	Chemical Abstract Service
IBP	Inflated Boiling Point	SCBA	Self contained Breathing Apparatus
TCC	Tag Closed Cup	fpm	Feet per Minute, Face Velocity
COC	Cleveland Open Cup		
IARC	International Agency for Research on Cancer		
OSHA	Occupational Safety and Health Administration		
ACGIH	American Conference of Governmental Hygienists		

The information presented here has been assembled by Guardsman Products, Inc. based on our own study and on the work of others. It is believed to be correct. However, no warranty, expressed or implied, is given as to the accuracy, completeness, or adequacy of the information is made by Guardsman Products, Inc.

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Guardsman Products, Inc.
 Specialty Products Division
 Fremont, MI USA

Prepared By:
 Date:
 Revision:

Andrew Whitlock
 07-24-88
 C-1

INSP1060
 7/24/96



LENSCLEAN MSDS

1. Chemical Product And Company Identification

MATERIAL NAME:	Visionaid Rainbow II
COMPANY PRODUCT CODE:	LCL211B, LCL211BR, LCL211E, LCL2112, 1LC211C, 1LC1760D, LC5000D, LC382D, LCT100
PREPARED BY	ASR CONSULTANTS LTD, approved by H.L. Bouton Co., Inc.
PHONE NUMBER:	(416) 925-3407
DATE PREPARED:	January 15, 2002
LAST REVISION DATE:	Not applicable - first release
MANUFACTURER:	H.L. Bouton Co., Inc. 11 Kendrick Road, Warcham Massachusetts, U.S.A., 02571
INFORMATION PHONE NUMBERS:	U.S.A.: (800) 426-1881 (business hours)
EMERGENCY PHONE NUMBERS:	U.S.A.: CHEMTREC (800)424-9300 (24 hours) Canada: CANUTEC (613)996-6666 (24 hours)
SIZE:	3.8 L (128 fl. Oz.), 473 ml (16 fl. oz.), 103 ml (3.5 fl. oz.), 59 ml (2 fl. oz.)
PRODUCT USE:	Lens cleaner
CHEMICAL NAME:	Mixture
CHEMICAL FAMILY:	Not applicable
SYNONYMS:	Not applicable
FORMULA:	Not applicable
CLASSIFICATION:	WHMIS Class: B3 - Combustible liquid WHMIS Class: D2B - Toxic: Eye/Skin Irritant.
SYMBOLS:	 
RISK PHRASES:	Caution: Combustible liquid. Causes eye and skin irritation.

2. Composition/Information On Ingredients

HAZARDOUS INGREDIENTS

CHEMICAL NAME:	Isopropanol
COMMON NAME:	Rubbing Alcohol

EXPOSURE LIMITS OF INGREDIENT:	Unknown for mixture, however Direct Blue 86 has an exposure limit of 1 mg/m ³ (AS, CU, dust and mists) OSHA-PEL TWA/ACGIH
LD ₅₀ :	Greater than 5000 mg/kg oral
LC ₅₀ :	Not available
LISTS WHICH INCLUDE CHEMICAL:	Not applicable - mixture
OTHER:	This is a mixture which contains: 2% Copper Cas no. 7440-50-8 0.39% Direct Blue 86 (Copper Phthalocyanine compound) cas no. 1330-38-7 Acid Green 25 cas no. 4403-90-1 Sodium Sulphate cas no. 7757-82-6 Sodium Chloride cas no. 7647-14-5 Sodium Carbonate cas no. 497-19-8 This is a controlled product as defined by the Canadian WHMIS, Category D-2-B. This contains Copper Compound and Sodium Carbonate which are listed on the IDL, but exist at concentrations well below reported concentrations.

3. Hazards Identification

EMERGENCY OVERVIEW

Combustible liquid, may cause eye or skin irritation.

POTENTIAL HEALTH EFFECTS

See SECTION 11 TOXICOLOGICAL INFORMATION for background data on the health hazards presented in this subsection.

INHALATION

ROUTE OF ENTRY:	<input checked="" type="checkbox"/> Y=YES, N=NO, U=UNKNOWN
SINGLE EXPOSURE SEVERITY, TARGET ORGANS AND TYPE OF EFFECT:	High levels may cause headaches, nausea, dizziness
REPEATED EXPOSURE SEVERITY, TARGET ORGANS AND TYPE OF EFFECT:	No longterm effects expected.
LIFETIME EXPOSURE SEVERITY, TARGET ORGANS AND EFFECT OF TYPE:	No longterm effects expected
SIGNS AND SYMPTOMS OF EXPOSURE:	Headache, nausea, dizziness
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:	None expected.

INGESTION

ROUTE OF ENTRY:	<input checked="" type="checkbox"/> Y=YES, N=NO, U=UNKNOWN
SINGLE EXPOSURE SEVERITY, TARGET ORGANS AND TYPE OF EFFECT:	Mildly toxicating by ingestion. May cause nausea, headache, and vomiting.

SIGNS AND SYMPTOMS OF EXPOSURE:	Irritation, redness.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:	None expected.

HAZARDS TO THE ENVIRONMENT

ENVIRONMENTAL HAZARDS OVERVIEW	Solutions of alcohols are toxic to aquatic at moderate to low concentrations. Detergents such as SDS (Sodium Dodecyl Sulphate) are aesthetics nuisances and may enhance toxicity of other components.
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4. FIRST AID MEASURES

FIRST AID FOR INHALATION:	Move to fresh air. If dizziness persists, consult physician.
FIRST AID FOR INGESTION:	If conscious, induce vomiting and drink two glasses of water. Seek medical advice.
FIRST AID FOR SKIN CONTACT:	Wash thoroughly with soap and water.
FIRST AID FOR EYE CONTACT:	Flush with plenty of water for at least fifteen minutes. If irritation persists consult physician.
FIRST AID EQUIPMENT AND SKILLS REQUIRED ON-SITE:	No special equipment required.
ANTIDOTE:	None.

NOTE TO PHYSICIAN

DELAYED EFFECTS AND SYMPTOMS DETECTABLE ONLY BY CLINICAL TESTING:	Ingestion of large quantities may cause intoxication followed by severe gastrointestinal pain and upset.
TREATMENT AND DIAGNOSTIC PROCEDURES:	Treat symptomatically.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:	Allergies
See SECTION 3 HAZARDS IDENTIFICATION, SUBSECTION POTENTIAL HEALTH EFFECTS for more information.	

5. FIRE FIGHTING MEASURES**FLAMMABLE PROPERTIES**

FLAMMABILITY CLASSIFICATION (29 CFR 1910.1200)	Combustible liquid
FLASH POINT AND METHOD:	82°C (180°F)

CONTAINMENT TECHNIQUE:	Prevent from entering waterways and storm sewers.
CLEAN-UP TECHNIQUE:	Contain spill. Cover spill with inert absorbent (absorbent, vermiculate). Using non-sparking tools, shovel or sweep up into a clean container. Remove from area. Flush spill area with water.
EVACUATION PROCEDURES:	Follow normal Emergency Response Plan (ERP).
SPECIAL INSTRUCTIONS, EQUIPMENT AND OTHER EMERGENCY ADVICE:	Risk of spreading an already existing fire. See SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION, SUBSECTION PERSONAL PROTECTIVE (PPE) for more information.
REPORTING REQUIREMENTS ASSOCIATED WITH SPILLS, LEAKS, AND RELEASES:	Not available See SECTION 15 REGULATORY INFORMATION for additional information.

7. HANDLING AND STORAGE

HANDLING

HANDLING PRACTICES:	Use grounding wires if transferring large quantities. Keep away from oxidizers, heat and other ignition sources. Do not allow to freeze.
HYGIENE RECOMMENDATIONS TO PREVENT CONTINUED EXPOSURE:	Use normal good industrial hygiene practices.
REGULATORY REQUIREMENTS ASSOCIATED WITH SAFE HANDLING:	Not available. See SECTION 15 REGULATORY INFORMATION for additional information
VENTILATION REQUIREMENTS FOR HANDLING:	None required.
MEASURES TO PREVENT AEROSOL AND DUST GENERATION AND FIRE:	Not required.

STORAGE

CONDITIONS FOR SAFE STORAGE:	Keep away from oxidizers, heat and other ignition sources. Do not store in direct sunlight. Store in cool, dry well-ventilated area. Do not allow to freeze.
VENTILATION REQUIREMENTS FOR	None required

Eye Wash
Eyewear
By Style
Eyewear
By Hazard
Lensclean
MSDS Sheets
Distributors
News Room
Company Info.

professional judgement to determine if the results are appropriate to the specific combination of ingredients. Occasionally certain chemical mixtures contain components that may act upon the same organ system. The combined health effects may be additive. See SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS for exposure limits of each ingredient if product is a mixture.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear blue solution.
ODOR:	Slight alcoholic odor.
ODOR THRESHOLD:	Not available.
PHYSICAL STATE:	Liquid
PH FACTOR:	Not applicable
VAPOR PRESSURE:	20mmHg at 20°C (68°F)
VAPOR DENSITY:	1
BOILING POINT:	93°C (200°F)
MELTING POINT:	-6°C (21°F)
FREEZING POINT:	-6°C (21°F)
SOLUBILITY IN WATER:	100%
SOLUBILITY IN OTHER SOLVENTS (SPECIFY SOLVENT):	Not available
SPECIFY GRAVITY (RELATIVE DENSITY):	0.98
HEAT VALUE:	Not available
PARTICLE SIZE:	Not applicable
VOLATILE ORGANIC COMPOUNDS (VOC) CONTENT:	10%
SOFTENING POINT:	Not applicable
EVAPORATE RATE:	0.99
MISCIBILITY:	100%
VISCOSITY:	As for water.
CONDUCTIVITY:	Slightly higher than water.
BULK DENSITY:	Not applicable
PERCENT VOLATILE BY VOLUME:	10%
PARTITION CO-EFFICIENT (N OCTANOL/WATER):	Not available
MOLECULAR WEIGHT:	Not available- mixture
MOLECULAR FORMULA:	Not available- mixture
ADDITIONAL CHARACTERISTICS NOT LISTED:	Surface active foaming.

10. STABILITY AND REACTIVITY

EXPOSURE:	
SUBCHRONIC EFFECTS:	CNS (CENTRAL NERVOUS SYSTEM), depression.
IS PRODUCT AN IRRITANT?:	<input checked="" type="checkbox"/> Y=YES, N=NO, U=UNKNOWN Eye and skin irritant.
IS PRODUCT A SENSITIZER?:	<input type="checkbox"/> N Y=YES, N=NO, U=UNKNOWN
EVIDENCE OF EPIDEMIOLOGY	<input type="checkbox"/> N Y=YES, N=NO, U=UNKNOWN
EVIDENCE OF CARCINOGENICITY:	<input type="checkbox"/> N Y=YES, N=NO, U=UNKNOWN IARC Group 3, Insufficient evidence.
EVIDENCE OF REPRODUCTIVE TOXICITY:	<input type="checkbox"/> N Y=YES, N=NO, U=UNKNOWN Insufficient evidence.
EVIDENCE OF TERATOGENICITY:	<input type="checkbox"/> N Y=YES, N=NO, U=UNKNOWN
EVIDENCE OF MUTAGENICITY:	<input type="checkbox"/> N Y=YES, N=NO, U=UNKNOWN
EVIDENCE OF NEUROTOXICITY:	<input checked="" type="checkbox"/> Y=YES, N=NO, U=UNKNOWN May occur from ingestion of isopropanol.
EVIDENCE OF NARCOSIS:	<input checked="" type="checkbox"/> Y=YES, N=NO, U=UNKNOWN May cause severe narcosis if large amounts are ingested.
OTHER STUDIES RELEVANT TO MATERIAL:	None known.
SYNERGISTIC PRODUCTS:	None known.

12. ECOLOGICAL INFORMATION

ECOTOXICITY

ACUTE AND LONG-TERM TOXICITY TO FISH AND INVERTEBRATES:	Solutions of alcohols are toxic to aquatic life at moderate to low concentrations. No longterm ecological effects are likely.
TOXICITY TO AQUATIC AND TERRESTRAL PLANTS:	Concentrated solutions of alcohols and surfactants may cause damage to aquatic and terrestrial plants.
ACUTE AND DIETARY TOXICITY TO BIRDS:	Not expected to be toxic
TOXICITY TO BENEFICIAL MICROORGANISMS:	Concentrated solutions of alcohols and surfactants have antimicrobial activity.

ENVIRONMENTAL FATE

PERSISTANCE AND DEGRADATION:	Moderately persistent but is biodegradable over time.
BIOACCUMULATION/ BIOCONCENTRATION:	Will not bioaccumulate.
SOIL MOBILITY:	Similar to water.

PHYSICAL/CHEMICAL

For additional PHYSICAL/CHEMICAL characteristics see SECTION 9. PHYSICAL/AND CHEMICAL PROPERTIES.	
HYDROLYTIC AND	Stable

ITEM: 4ZB79 - PK5 Thread Insert 1/2-13x21/32 L

Msn: B1041

ORDER: 0065798473

LP NUMBER: U187227432-A

MATERIAL SAFETY DATA SHEET (MSDS)

This MSDS should be attached or kept with the respective product with which it is associated.

GLOBAL SAFETY DATA SHEET - B1041

Associated Grainger Items
4ZB64, 4ZB65, 4ZB66, 4ZB67, 4ZB68, 4ZB69, 4ZB70, 4ZB71, 4ZB72, 4ZB73, 4ZB74
4ZB75, 4ZB76, 4ZB77, 4ZB78, 4ZB79, 4ZB80, 4ZB81, 4ZB82, 4ZB83, 4ZB84, 4ZB85
4ZB86, 4ZB87, 4ZB88, 4ZB89, 4ZB90, 4ZB91, 4ZB92, 4ZB93, 4ZB94, 4ZB95, 4ZB96
4ZB97, 4ZB98, 4ZB99, 4ZE10, 4ZE11, 4ZE12, 4ZE13, 4ZE14, 4ZE15, 4ZE16, 4ZE17
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LOCTITE(R*)

MATERIAL SAFETY DATA SHEET

HENKEL TECHNOLOGIES

REVISION DATE: 05/08/2007

ISSUE DATE: 05/08/2007

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: LOCTITE(R) 204 THREADLOCKER DRI-LOC(R) STOCK SOLUTION 156

ITEM NO.: 18723

PRODUCT TYPE: SEALANT

REGION: UNITED STATES

COMPANY ADDRESS:
HENKEL CORPORATION
1001 TROUT BROOK CROSSING
ROCKY HILL, CONNECTICUT 06067

CONTACT INFORMATION:
PHONE: 860.571.5100
FACILITY TELEPHONE: 860.571.5100
WWW: WWW.LOCTITE.COM

2. COMPOSITION/INFORMATION ON INGREDIENTS

Table with 5 columns: HAZARDOUS COMPONENTS, %, ACGIH TLV, OSHA PEL, OTHER. Rows include AROMATIC DIMETHACRYLATE ESTER, SILICA, QUARTZ, ACRYLIC POLYMER, and AMMONIUM BENZOATE.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

PHYSICAL STATE: LIQUID

COLOR: PINK

ODOR: MILD

HMS:
HEALTH 2*
FLAMMABILITY 1
PHYSICAL HAZARD 1
PERSONAL PROTECTION SEE SECTION 8

WARNING:
MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.
MAY CAUSE ALLERGIC SKIN REACTION.

RELEVANT ROUTES OF EXPOSURE: SKIN, INHALATION, EYES

POTENTIAL HEALTH EFFECTS:

INHALATION: MAY CAUSE RESPIRATORY TRACT IRRITATION.

SKIN CONTACT: MAY CAUSE SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION.

EYE CONTACT: MAY CAUSE IRRITATION.

INGESTION: MAY BE HARMFUL IF SWALLOWED.

EXISTING CONDITIONS AGGRAVATED BY EXPOSURE:
EYE, SKIN, AND RESPIRATORY DISORDERS.

SEE SECTION 11 FOR ADDITIONAL TOXICOLOGICAL INFORMATION.

4. FIRST AID MEASURES

INHALATION:
REMOVE TO FRESH AIR. IF SYMPTOMS DEVELOP AND PERSIST, GET MEDICAL ATTENTION.

SKIN CONTACT:
WASH WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE REUSE. GET MEDICAL ATTENTION IF SYMPTOMS OCCUR.

EYE CONTACT:
FLUSH WITH COPIOUS AMOUNTS OF WATER, PREFERABLY, LUKEWARM WATER FOR AT LEAST 15 MINUTES, HOLDING EYELIDS OPEN ALL THE TIME. GET MEDICAL ATTENTION.

INGESTION:
DO NOT INDUCE VOMITING. KEEP INDIVIDUAL CALM. OBTAIN MEDICAL ATTENTION.

5. FIRE-FIGHTING MEASURES

FLASH POINT: GREATER THAN 93 DEG. C (200 DEG. F)

AUTOIGNITION TEMPERATURE: NOT APPLICABLE

FLAMMABLE/EXPLOSIVE LIMITS-LOWER %: NOT APPLICABLE
FLAMMABLE/EXPLOSIVE LIMITS-UPPER %: NOT APPLICABLE

EXTINGUISHING MEDIA: FOAM, DRY CHEMICAL OR CARBON DIOXIDE.

SPECIAL FIRE FIGHTING PROCEDURES:
WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING, SUCH AS TURN-OUT GEAR.

UNUSUAL FIRE OR EXPLOSION HAZARDS: NONE

HAZARDOUS COMBUSTION PRODUCTS:
OXIDES OF CARBON, OXIDES OF NITROGEN, OXIDES OF SULFUR, ACRYLIC MONOMERS, IRRITATING ORGANIC VAPORS.

6. ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS:
PREVENT PRODUCT FROM ENTERING DRAINS OR OPEN WATERS.

CLEAN-UP METHODS:
SOAK UP WITH INERT ABSORBENT. STORE IN A PARTLY FILLED, CLOSED CONTAINER UNTIL DISPOSAL.

7. HANDLING AND STORAGE

HANDLING:
AVOID CONTACT WITH EYES, SKIN AND CLOTHING. AVOID BREATHING VAPOR AND MIST. WASH THOROUGHLY AFTER HANDLING. USE ONLY WITH ADEQUATE VENTILATION.

STORAGE:
FOR SAFE STORAGE, STORE BETWEEN 5 DEG. C (41 DEG. F) AND 30 DEG. C (86 DEG. F). KEEP IN A COOL, WELL VENTILATED AREA AWAY FROM HEAT, SPARKS AND OPEN FLAME. KEEP CONTAINER TIGHTLY CLOSED UNTIL READY FOR USE.

INCOMPATIBLE PRODUCTS: REFER TO SECTION 10.

FOR INFORMATION ON PRODUCT SHELF LIFE CONTACT HENKEL CUSTOMER SERVICE AT (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:
NO SPECIFIC VENTILATION REQUIREMENTS NOTED, BUT FORCED VENTILATION MAY STILL BE REQUIRED IF CONCENTRATIONS EXCEED OCCUPATIONAL EXPOSURE LIMITS.

RESPIRATORY PROTECTION:
USE NIOSH APPROVED RESPIRATOR IF THERE IS POTENTIAL TO EXCEED EXPOSURE LIMIT(S).

SKIN PROTECTION:
USE IMPERMEABLE GLOVES AND PROTECTIVE CLOTHING AS NECESSARY TO PREVENT SKIN CONTACT. POLYVINYL CHLORIDE GLOVES, NITRILE GLOVES.

EYE/FACE PROTECTION: SAFETY GOGGLES OR SAFETY GLASSES WITH SIDE SHIELDS.

SEE SECTION 2 FOR EXPOSURE LIMITS.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: LIQUID

COLOR: PINK

ODOR: MILD

VAPOR PRESSURE: 20 mmHg AT 22 DEG. C (72 DEG. F)

pH: 7 - 10

BOILING POINT/RANGE: 100 DEG. C (212 DEG. F)

MELTING POINT/RANGE: NOT AVAILABLE

SPECIFIC GRAVITY: 1.1034

VAPOR DENSITY: NOT AVAILABLE

EVAPORATION RATE: NOT AVAILABLE

SOLUBILITY IN WATER: MISCIBLE



Revision Date: 10/20/2003

Issue date: 10/20/2003

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: 242® Threadlocker
Product type: Anaerobic Sealant
Company address:
Henkel Loctite Corporation
1001 Trout Brook Crossing
Rocky Hill, Connecticut 06067

Item number: 24231
Region: United States
Contact Information:
Telephone: 860.571.5100
Emergency telephone: 860.571.5100
Internet: www.loctite.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Polyglycol dimethacrylate	60-100	None	None	
Polyglycol oleate 9004-96-0	10-30	None	None	None
Alkylene glycol	1-5	None	None	None
Cumene hydroperoxide 80-15-9	1-5	None	None	1 ppm (6 mg/m ³) Skin (WEEL)

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Liquid
Color: Blue
Odor: Mild

HMIS:

HEALTH: 1*
FLAMMABILITY: 1
PHYSICAL HAZARD: 1
Personal Protection: See Section 8

WARNING: CAUSES EYE IRRITATION.
MAY CAUSE SKIN IRRITATION.
MAY CAUSE ALLERGIC SKIN REACTION.
MAY CAUSE RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: May cause respiratory tract irritation.
Skin contact: May cause allergic skin reaction. May cause skin irritation.
Eye contact: Contact with eyes will cause irritation.
Ingestion: Not expected to be harmful by ingestion.

Existing conditions aggravated by exposure: Skin disorders.

See Section 11 for additional toxicological information.

Item number: 24231

Product name: 242® Threadlocker

Eye/face protection:

Safety goggles or safety glasses with side shields.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
 Color: Blue
 Odor: Mild
 Vapor pressure: Less than 5 mm Hg at 27°C (80°F)
 pH: Not applicable
 Boiling point/range: Greater than 149°C (300°F)
 Melting point/range: Not available
 Specific gravity: 1.1
 Vapor density: Not available
 Evaporation rate: Not available
 Solubility in water: Slight
 Partition coefficient (n-octanol/water): Not available
 VOC content: 4.48%; 49.3 grams/liter (EPA Method 24)

10. STABILITY AND REACTIVITY

Stability: Stable.
 Hazardous polymerization: Will not occur.
 Hazardous decomposition products: Oxides of carbon. Oxides of sulfur. Oxides of nitrogen. Irritating organic vapors.
 Incompatibility: Strong oxidizers.
 Conditions to avoid: See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10).

11. TOXICOLOGICAL INFORMATION

Product toxicity data: Acute oral LD50 greater than 10,000 mg/kg (rat). Acute dermal LD50 greater than 5000 mg/kg (rabbit).

Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Polyglycol dimethacrylate	No	No	No
Polyglycol oleate	No	No	No
Alkylene glycol	No	No	No
Cumene hydroperoxide	No	No	No

Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Polyglycol dimethacrylate	Allergen, Irritant
Polyglycol oleate	Irritant
Alkylene glycol	Irritant
Cumene hydroperoxide	Allergen, Central nervous system, Corrosive, Irritant, Mutagen

12. ECOLOGICAL INFORMATION

Ecological Information: Not available

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections:
New Material Safety Data Sheet format.

Prepared by: Stephen Repetto, Senior Health & Regulatory Affairs Specialist

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Loctite Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Loctite Corporation has no control. It is the user's responsibility to determine the suitability of Henkel Loctite's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Loctite Corporation's products. In light of the foregoing, Henkel Loctite Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Loctite Corporation's products. Henkel Loctite Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.



Revision Date: 11/05/2003

Issue date: 11/05/2003

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Loctite(R) 262 Threadlocker High Strength
Product type: Anaerobic Sealant
Company address:
Henkel Loctite Corporation
1001 Trout Brook Crossing
Rocky Hill, Connecticut 06067

Item number: 26231
Region: United States
Contact Information:
Telephone: 860.571.5100
Emergency telephone: 860.571.5100
Internet: www.loctite.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Polyglycol dimethacrylate	60-100	None	None	
Fumarate ester resin	10-30	None	None	None
Cumene hydroperoxide 80-15-9	1-5	None	None	1 ppm (6 mg/m ³) Skin (WEEL)

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:

Physical state: Liquid
Color: Red
Odor: Mild

HEALTH: 1*
FLAMMABILITY: 1
PHYSICAL HAZARD: 1
Personal Protection: See Section 8

WARNING: CAUSES EYE IRRITATION.
MAY CAUSE ALLERGIC SKIN REACTION.
MAY CAUSE RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: May cause respiratory tract irritation.
Skin contact: May cause allergic skin reaction.
Eye contact: Contact with eyes will cause irritation.
Ingestion: Not expected to be harmful by ingestion.

Existing conditions aggravated by exposure: None known

See Section 11 for additional toxicological information.

Item number: 26231

Product name: Loctite(R) 262 Threadlocker High Strength

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid
Color: Red
Odor: Mild
Vapor pressure: Less than 5 mm Hg at 27°C (80°F)
pH: Not applicable
Boiling point/range: Greater than 149°C (300°F)
Melting point/range: Not available
Specific gravity: 1.05
Vapor density: Not available
Evaporation rate: Not available
Solubility in water: Slight
Partition coefficient (n-octanol/water): Not available
VOC content: 13.5%; 142 grams/liter (EPA Method 24)

10. STABILITY AND REACTIVITY

Stability: Stable.
Hazardous polymerization: Will not occur.
Hazardous decomposition products: Oxides of carbon. Oxides of sulfur. Oxides of nitrogen. Irritating organic vapors.
Incompatibility: Strong oxidizers.
Conditions to avoid: See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10).

11. TOXICOLOGICAL INFORMATION

Product toxicity data: Acute oral LD50 greater than 10,000 mg/kg (rat). Acute dermal LD50 greater than 5000 mg/kg (rabbit).

Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Polyglycol dimethacrylate	No	No	No
Fumarate ester resin	No	No	No
Cumene hydroperoxide	No	No	No

Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Polyglycol dimethacrylate	Allergen, Irritant
Fumarate ester resin	Allergen, Irritant
Cumene hydroperoxide	Allergen, Central nervous system, Corrosive, Irritant, Mutagen

12. ECOLOGICAL INFORMATION

Ecological information: Not available

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections:
New Material Safety Data Sheet format.

Prepared by: Stephen Repetto, Senior Health & Regulatory Affairs Specialist

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Material Safety Data Sheet

Revision Date: 03/06/2008

Issue date: 03/06/2008

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: TYCEL 7000	Item No. : / IDH No. 515419
Product type: Laminating Adhesive	Region: United States
Company address: Henkel Corporation 1001 Trout Brook Crossing Rocky Hill, Connecticut 06067	Contact Information: Telephone: 860.571.5100 Emergency telephone: 860.571.5100 Internet: www.loctite.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Methyl ethyl ketone 78-93-3	60-100	200 ppm TWA 300 ppm STEL	200 ppm TWA 590 mg/m ³ TWA	None
Polymer	10-30	None	None	None

3. HAZARDS IDENTIFICATION

<u>EMERGENCY OVERVIEW</u>	
Physical state: Liquid	HMIS:
Color: Clear	HEALTH: 2*
Odor: Solvent	FLAMMABILITY: 3
	PHYSICAL HAZARD: 0
	Personal Protection: See Section 8
DANGER: FLAMMABLE!	
MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION.	
MAY AFFECT THE CENTRAL NERVOUS SYSTEM.	

Relevant routes of exposure: Skin, Eyes, Inhalation, Ingestion

Potential Health Effects

Inhalation:	May cause respiratory tract irritation. Central nervous system depression, including dizziness, drowsiness, fatigue, nausea, headache, unconsciousness. May cause sensitization by inhalation.
Skin contact:	May cause skin irritation. Itching. Redness. Pain and discomfort. May cause sensitization by skin contact.
Eye contact:	May cause irritation.
Ingestion:	Harmful if swallowed.

Existing conditions aggravated by exposure:

Determining whether product ingredients will aggravate a pre-existing medical condition requires case-by-case consideration of the exposed workers' medical condition and the nature of the exposures expected to occur in the specific workplace where the worker will be employed.

See Section 11 for additional toxicological information.

Eye/face protection:

Safely goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Clear
Odor:	Solvent
Vapor pressure:	Not determined
pH:	Not applicable
Boiling point/range:	79°C (174°F)
Melting point/range:	Not determined
Specific gravity:	7.25-7.55 lbs/gal
Vapor density:	Heavier than air
Evaporation rate:	7.12
Solubility in water:	Not soluble
Partition coefficient (n-octanol/water):	Not available
VOC content:	627.5 g/L

10. STABILITY AND REACTIVITY

Stability:	Stable.
Hazardous polymerization:	Will not occur.
Hazardous decomposition products:	May produce fumes when heated to decomposition. Fumes may contain carbon monoxide and other toxic fumes.
Incompatibility:	Acids. Bases. Oxidizing agents.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition.

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Methyl ethyl ketone 78-93-3	No	No	No
Polymer	No	No	No

Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Methyl ethyl ketone 78-93-3	Central nervous system, Irritant
Polymer	No data

12. ECOLOGICAL INFORMATION

Ecological information: Not available

PRECAUTIONS -
 WITHIN PREMISES:
 SPECIAL SHIPPING Not regulated.
 INSTRUCTIONS AND
 PRECAUTIONS - OFF
 PREMISES:
 DOT CLASSIFICATION/ Not regulated.
 DESCRIPTION:
 TDG CLASSIFICATION/ Not regulated.
 DESCRIPTION:
 CLASSIFICATION/DESCRIPTION Not regulated.
 UNDER OTHER
 INTERNATIONAL
 TRANSPORTATION
 REGULATIONS:

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

OSHA: This product is classified as an Eye and Skin Irritant under the OSHA Standard classification system.

TSCA (Toxic Substances Control Act): Ingredients of this product are on the U.S. TSCA. Export Notification: Isopropanol Export notification required - Section 4

FIFRA (Federal Insecticide, Fungicide, And Rodenticide Act): Not Applicable.

CERCLA (Comprehensive Environmental Response, Compensation, And Liability Act): Not Listed.

EPCRA (SARA Title III [Superfund Amendments And Reauthorization Act]): Not Listed.

CAA (Clean Air Act): Not Listed.

CWA (Clean Water Act): Not Listed.

FDA/USDA (Food and Drug Act): Not applicable.

NFPA (National Fire Protection Association): NFPA Classification Fire=1 (slightly flammable), Health=1 (slightly hazardous), Reactivity=0 (Stable)

0=Least, 1=Slight, 2=Moderate,
 3=High 4=Extreme

This information is intended solely for the use of individuals trained in the particular system.

U.S. STATE REGULATIONS

Florida Hazardous Substances List:
 Isopropanol Massachusetts Right-To-Know List: Isopropanol Minnesota Hazardous Substances List: Isopropanol New Jersey Right-To-Know List: Isopropanol sn 1076 New Jersey Right-

RIGHT TO KNOW

	not yet possible.
ISRAEL:	This information applies to Isopropanol only: Occupational Exposure Limits for Chemical Substances - 1990 Time Weighted Average: 400 ppm TWA; 983 mg/m ³ TWA Short Term Exposure Limit: 500 ppm STEL; 1230 mg/m ³ STEL Action Level: 200 ppm AL; 491.5 mg/m ³ AL
MEXICO:	This information applies to Isopropanol only: Secretariat of Labor and Social Welfare Instruction No. 10 Permissible Concentrations - 1992 Time Weighted Average: 400 ppm TWA; 980 mg/m ³ TWA {new} Short Term Exposure Limit: 500 ppm STEL; 1225 mg/m ³ {new} Skin Designation: skin - potential for cutaneous absorption {new}
OTHER INTERNATIONAL REGULATIONS:	Not Available.

16. OTHER INFORMATION

REVISIONS (GIVE DATE AND SPECIFIC CHANGES):	Not applicable - first release
HAZARD RATINGS:	HMIS Classification: Fire=1(slightly flammable), Health=1(slightly hazardous), Reactivity=0(stable), Personal Protection=b 0=Least, 1=Slight, 2=Moderate, 3=High, 4=Extreme This information is intended solely for the use of individuals trained in the particular system.
TRAINING REQUIREMENTS:	Workplace Hazardous Materials Information System training is required for handling and using this product in Canadian Workplaces. U.S. OSHA requirements for handling and using this product in the United States.
RECOMMENDED USES AND RESTRICTIONS:	Cleaning of clear surfaces. Check compatibility with material to be cleaned prior to use.
ADDITIONAL INFORMATION:	Keep out of reach of children.
DISCLAIMER:	This information is furnished without warranty, representation, or license of any kind, except that it is accurate to

2.5% Sodium Dodecyl Sulfate CAS #151-21-3
TRACE Copper CAS #7440-50-8
TRACE Direct Blue 86 (Copper phthalocyanine compound) CAS #1330-38-7
TRACE Acid Green 25 CAS #4403-90-1
TRACE Sodium Sulphate CAS #7757-82-6
TRACE Sodium Chloride CAS #7647-14-5
TRACE Sodium Carbonate CAS # 497-19-8

Caution - combustible liquid.
Caution - Causes eye and skin irritation.
Harmful if swallowed.
Contains Isopropanol.
Keep away from open flame and heat.
Avoid contact with eyes.
No not drink.
Use with adequate ventilation.

[Eye Wash](#) | [Eyewear By Style](#) | [Eyewear By Hazard](#) | [Lensclean](#)
[MSDS Sheets](#) | [Home Page](#) | [Distributors](#) | [News Room](#) | [Company Info.](#)

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Revision Number: 003.1

Issue date: 06/25/2009

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	DB EPOXY ADH E-60HP 50 ML RESIN	IDH number:	701985
Product type:	Epoxy resin	Item number:	29319_209534
Company address:	Henkel Corporation 1001 Trout Brook Crossing Rocky Hill, Connecticut 06067	Region:	United States
		Contact information:	Telephone: 860.571.5100 Emergency telephone: 860.571.5100 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state:	Liquid	HEALTH:	*2
Color:	Pale yellow	FLAMMABILITY:	1
Odor:	Faint, Epoxy	PHYSICAL HAZARD:	1
WARNING:	MAY CAUSE ALLERGIC SKIN REACTION. MAY CAUSE EYE AND SKIN IRRITATION.		See MSDS Section 8

Relevant routes of exposure: Eyes, Skin

Potential Health Effects

Inhalation:	This material does not normally present an inhalation hazard, however, in applications where vapors (caused by high temperatures) or mists (caused by mixing) are created, breathing may cause respiratory tract irritation.
Skin contact:	May cause skin irritation with discomfort or rash. May cause allergic skin reaction.
Eye contact:	May cause irritation.
Ingestion:	Not a relevant route of exposure.

Existing conditions aggravated by exposure: Skin disorders. Skin allergies.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Epichlorohydrin-4,4'-isopropylidene diphenol resin	25068-38-6	60 - 100
2-Propenoic acid, 2-methyl-, methyl ester, polymer	25053-09-2	10 - 30

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If symptoms persist, seek medical advice.
Skin contact:	Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). Wash clothing before reuse. If symptoms develop and persist, get medical attention.
Eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Pale yellow
Odor:	Faint, Epoxy
Odor threshold:	Not available
pH:	Not available
Vapor pressure:	Not available
Boiling point/range:	> 260 °C (> 500°F)
Melting point/ range:	Not available
Specific gravity:	1.17
Vapor density:	Not available
Flash point:	> 93 °C (> 199.4 °F) Setaflash Closed Cup
Flammable/Explosive limits - lower:	Not available
Flammable/Explosive limits - upper:	Not available
Autoignition temperature:	Not available
Evaporation rate:	Not available
Solubility in water:	Negligible
Partition coefficient (n-octanol/water):	Not available
VOC content:	< 1.0 %; < 10 g/l Estimated

10. STABILITY AND REACTIVITY

Stability	Stable
Hazardous reactions:	Reaction with some curing agents may produce an exothermic reaction which in large masses could cause runaway polymerization.
Hazardous decomposition products:	None reasonably foreseeable.
Incompatible materials:	Strong oxidizing agents. Strong acids and strong bases. Amines. Water. Do not allow molten material to contact water or liquids as this can cause violent eruptions, splatter hot material, or ignite flammable material.
Conditions to avoid:	Excessive heat. Store away from incompatible materials. Avoid mixing resin (Part A) and curing agent (Part B) unless you plan to use immediately. Failure to observe these precautions may result in excessive heat build-up causing an exotherm.

11. TOXICOLOGICAL INFORMATION

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Epichlorohydrin-4,4'-isopropylidene diphenol resin	No	No	No
2-Propenoic acid, 2-methyl-, methyl ester, polymer	No	No	No

Hazardous components	Health Effects/Target Organs
Epichlorohydrin-4,4'-isopropylidene diphenol resin	Allergen, Irritant
2-Propenoic acid, 2-methyl-, methyl ester, polymer	No Target Organs

12. ECOLOGICAL INFORMATION

Ecological information: Not available

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Revision Date: 04/07/2004

Issue date: 04/07/2004

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: 561 PIPE THREAD SLNT 19GR STK
Product type: Anaerobic Sealant
Company address:
Henkel Corporation
1001 Trout Brook Crossing
Rocky Hill, Connecticut 06067

Item number: 37127
Region: United States
Contact Information:
Telephone: 860.571.5100
Emergency telephone: 860.571.5100
Internet: www.loctite.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Polyglycol dioctanoate 18268-70-7	30-60	None	None	None
Polyglycol dimethacrylate 25852-47-5	10-30	None	None	None
Thixotropic agent UNKNOWN	5-10	None	None	None
Dimethacrylate ester Proprietary	5-10	None	None	None
Bisphenol A fumarate resin 39382-25-7	5-10	None	None	None
Poly(tetrafluoroethylene) 9002-84-0	1-5	None	None	AEL (DuPont): 10 mg/m ³ , 8 Hr TWA, total dust; 5mg/m ³ , 8 hr. TWA respirable dust
Silica, amorphous, fumed, crystalline-free 112945-52-5	1-5	6 mg/m ³ TWA	10 mg/m ³ TWA	3 mg/m ³ TWA respirable dust
Ethylene glycol 107-21-1	1-5	100 mg/m ³ Ceiling	None	None
Titanium dioxide 13463-67-7	1-5	10 mg/m ³ TWA	15 mg/m ³ TWA	None
Saccharin 81-07-2	1-5	None	None	None
Methacrylate ester UNKNOWN	1-5	None	None	None
Cumene hydroperoxide 80-15-9	1-5	None	None	1 ppm (6 mg/m ³) Skin (WEEL)

3. HAZARDS IDENTIFICATION

<u>EMERGENCY OVERVIEW</u>	
<u>HMS:</u>	
Physical state: Wax	HEALTH: 1*
Color: White	FLAMMABILITY: 1
Odor: Mild	PHYSICAL HAZARD: 1

Item number: 37127

Product name: 561 PIPE THREAD SLNT 19GR STK

7. HANDLING AND STORAGE

Handling:	Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mist. Wash thoroughly after handling. Use only with adequate ventilation.
Storage:	For safe storage, store at or below 38°C (100°F). Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.
Incompatible products:	Refer to Section 10.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:	No specific ventilation requirements noted, but forced ventilation may still be required if concentrations exceed occupational exposure limits.
Respiratory protection:	Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
Skin protection:	Use impermeable gloves and protective clothing as necessary to prevent skin contact.
Eyeface protection:	Safety goggles or safety glasses with side shields.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Wax
Color:	White
Odor:	Mild
Vapor pressure:	Less than 10 mm Hg at 27°C (80°F)
pH:	Not applicable
Boiling point/range:	Greater than 149°C (300°F)
Melting point/range:	Not available
Specific gravity:	1.1394
Vapor density:	Not available
Evaporation rate:	Not available
Solubility in water:	Slight
Partition coefficient (n-octanol/water):	Not available
VOC content:	6.95%; 79.2 grams/liter (EPA Method 24)

10. STABILITY AND REACTIVITY

Stability:	Stable.
Hazardous polymerization:	Will not occur.
Hazardous decomposition products:	Oxides of carbon. Toxic fluorine compounds. Irritating organic vapors.
Incompatibility:	Strong oxidizers.
Conditions to avoid:	See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10).

11. TOXICOLOGICAL INFORMATION

Product toxicity data:	Acute LD50 (oral) :Greater than 10000 (rat). (estimated). Acute dermal LD50 greater than 5000 mg/kg (rabbit)(estimated).
------------------------	--

Carcinogen Status

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification:	None.
CERCLA/SARA Section 302 EHS:	None above reporting de minimus.
CERCLA/SARA Section 311/312:	Immediate Health Hazard, Delayed Health Hazard
CERCLA/SARA 313:	This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Cumene hydroperoxide (CAS# 80-15-9) .
California Proposition 65:	This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. Ethylene oxide (CAS# 75-21-8). Acetaldehyde (CAS# 75-07-0). 1,4-Dioxane (CAS# 123-91-1). Toluene (CAS# 108-88-3).

Canada Regulatory Information

CEPA DSL/NDSL Status:	All components are listed on or are exempt from listing on the Domestic Substances List.
WHMIS hazard class:	D.2.A, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: Expanded chemical information in Section 2 and related sections.

Prepared by: Kyra Kozak Woods, Health and Regulatory Affairs Specialist

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ROCKY HILL, CONNECTICUT 06067
EMERGENCY PHONE: (860) 571-5100

MATERIAL SAFETY DATA SHEET

Page 01 of 05

Loctite(R) Hydraulic Jack Oil
30522

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Loctite(R) Hydraulic Jack Oil
Item No.: 30522
Product Type: Hydraulic Fluid

2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredients	CAS No.	%
Mineral oil	64742-52-5	95-100
Polymethacrylate dispersion	Proprietary	1-3
Rust inhibitor	Proprietary	0.1-1
Surfactant	Proprietary	0.01-0.1

The polymethacrylate dispersion is registered with the state of New Jersey as a trade secret: NJ TSRN 06-070-1067-5034P

The rust inhibitor is registered with the state of New Jersey as a trade secret: NJ TSRN 06-070-1067-5035P

The surfactant is registered with the state of New Jersey as a trade secret: NJ TSRN 06-070-1067-5036P.

Ingredients which have exposure limits

Exposure Limits (TWA) Ingredients	ACGIH (TLV)	OSHA (PEL)	OTHER
Mineral oil	5 mg/m3 mist	5 mg/m3 mist	None

Exposure Limits (STEL) Ingredients	ACGIH (TLV)	OSHA (PEL)
Mineral oil	10 mg/m3 mist	None

3. HAZARDS IDENTIFICATION

Toxicity: Skin and eye irritant.
Primary Routes of Entry: Skin, ingestion, inhalation
Signs and Symptoms of Exposure: Prolonged exposure may cause dermatitis. Breathing of mist or vapor may cause irritation of the pulmonary tract or aspiration pneumonia.
Existing Conditions Aggravated by Exposure: None known

ROCKY HILL, CONNECTICUT 06067
EMERGENCY PHONE: (860) 571-5100

MATERIAL SAFETY DATA SHEET

Page 03 of 05

Product Name: Loctite(R) Hydraulic Jack Oil
Item No.: 30522

7. HANDLING AND STORAGE

Safe Storage: Keep away from flames, sparks, or hot surfaces.
(Contact Loctite Customer Service 1-800-243-4874 for shelf life information)
Handling: Avoid skin contact. Keep away from eyes. Avoid prolonged breathing of vapors.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses or goggles.
Skin: Neoprene or plastic gloves.
Ventilation: Sufficient to maintain vapor concentration below TLV.
Respiratory: NIOSH/MSHA approved respirator when ventilation is inadequate.

See Section 2 for Exposure Limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Amber liquid
Odor: Mild petroleum
Boiling Point: More than 500°F
: Does not apply
Solubility in Water: Negligible
Specific Gravity: 0.905 at 60°F
Volatile Organic Compound (EPA Method 24): 21.6%; 195 grams per liter
Vapor Pressure: Less than 5 mm
Vapor Density: Not available
Evaporation Rate (Ether = 1): Not available

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: Will not occur
Incompatibility: Strong oxidizers.
Conditions to Avoid: Not available
Hazardous Decomposition Products (non-thermal): None

11. TOXICOLOGICAL INFORMATION

See Section 3.

ROCKY HILL, CONNECTICUT 06067
EMERGENCY PHONE: (860) 571-5100

MATERIAL SAFETY DATA SHEET

Page 05 of 05

Product Name: Loctite(R) Hydraulic Jack Oil
Item No.: 30522

16. OTHER INFORMATION

(continued)

Prepared By: Stephen Repetto
Title: Research Chemist - Health & Regulatory Affairs
Company: Henkel Loctite Corporation, Rocky Hill CT 06067
(24hr.) Phone: (860) 571-5100
Revision Date: September 26, 1997

Revision: 0020

**PERMATEX FORM-A-GASKET NO. 2
SEALANT, 2B**

Product and Company Identification
Composition/Information on Ingredients
Hazards Identification
First Aid Measures
Fire Fighting Measures
Accidental Release Measures
Handling and Storage
Exposure Controls/Personal Protection

Physical and Chemical Properties
Stability and Reactivity
Toxicological Information
Ecological Information
Disposal Considerations
Transport Information
Regulatory Information
Other Information / Hazmat Info / Hazcom Label

MSDS Safety Information

TOP

FSC: 8030

MSDS Date: 05/25/1988

MSDS Num: BLGGV

Submitter: NEN

LIIN: 00N018970

Tech Review: 07/06/1995

Status CD: C

Product PERMATEX FORM-A-GASKET NO. 2 SEALANT, 2B
 ID:

MFN: 01

Article: N

Kit N
 Part:

Responsible Party

Cage: 05972

Name: LOCTITE CORPORATION

Address: 4450 CRANWOOD COURT

City: CLEVELAND

State: OH

Zip: 44128

Country: US

Info Phone Number: 216-475-3600, 800-321-9188

Emergency Phone Number: 216-475-3600, 800-321-9188

Preparer's Name: N/P

Proprietary Ind: N

Review Ind: N

Published: Y

Special Project CD: N

Contractor Summary

TOP

Cage:08028

Name:LOCTITE CORP AUTOMOTIVE AND CONSUMER
 GROUP

Address:4450 CRANWOOD COURT

City:CLEVELAND

State:OH

Zip:44128-
 4004

% Text: 30-35

Environmental Wt:
Other REC Limits: N/K

OSHA PEL: NOT APPLICABLE

Code: M

OSHA

Code:

ACGIH TLV: NOT APPLICABLE

Code: M

STEL:

Code:

ACGIH N/P

STEL:

EPA Rpt Qty:

DOT Rpt

Qty:

Ozone Depleting Chemical: N

Health Hazards Data

TOP

LD50 LC50 Mixture NONE SPECIFIED BY MANUFACTURER.

Route Of Entry Inds - Inhalation: YES

Skin: NO

Ingestion: YES

Carcinogenicity Inds - NTP: NO

IARC: NO

OSHA: NO

Health Hazards Acute And Chronic

OVEREXPOSURE TO ISOPROPYL ALCOHOL VAPOR MAY IRRITATE EYES, NOSE AND THROAT. LIQUID ISOPROPYL ALCOHOL IS AN EYE IRRITANT AND MODERATELY TOXIC BY INGESTION. CLAY HAS BEEN SHOWN TO CAUSE REPRODUCTIVE EFFECTS IN EXPERIMENTAL ANIMALS WHEN INGESTED. IT IS OUR BEST TECHNICAL JUDGEMENT THAT WITH PROPER (SEE EFFECTS OF OVEREXPOSURE)

Explanation Of Carcinogenicity

NOT RELEVANT.

Signs And Symptoms Of Overexposure

HLTH HAZ: PRECAUTIONS, NORMAL USE OF THIS PRODUCT POSES NO SUCH HAZARDS. VAPOR ABOVE TLV IS IRRITATING TO EYES, NOSE, THROAT AND CAN CAUSE HEADACHE, DIZZINESS AND NAUSEA. LIQUID IS EYE IRRITANT.

Medical Cond Aggravated By Exposure

NONE SPECIFIED BY MANUFACTURER.

First Aid InformationTOP

INGEST: INDUCE VOMITING AND GET MD. INHAL: REMOVE TO FRESH AIR. SKIN: WASH WITH SOAP AND WATER. EYE: FLUSH WITH WATER FOR AT LEAST 15 MINUTES AND CONSULT MD.

Spill Release ProceduresTOP

SCRAPE/WIPE UP AS MUCH AS POSSIBLE & STORE IN CLOSED CONTAINERS. RESIDUES MAY BE CLEANED WITH ISOPROPYL ALC. OR 1,1,1- TRICHLOROETHANE. FOR LARGE QUANTITY SPILLS VENTILATE AREA WELL & ELIMINATE SOURCE OF IGNITION.

Neutralizing Agent

NONE SPECIFIED BY MANUFACTURER.

NONE SPECIFIED BY MANUFACTURER.

Supplemental Safety and Health

NONE SPECIFIED BY MANUFACTURER.

Physical/Chemical Properties

TOP

HCC: F3

NRC/State LIC No:

Net Prop WT For Ammo:

Boiling Point:

B.P. Text: 180F,82C

Melt/Freeze Pt:

M.P/F.P Text: N/K

Decomp Temp:

Decomp Text: N/K

Vapor Pres: 33 @ 68F

Vapor Density: 2.07

Volatile Org Content %:

Spec Gravity: 1.5 @ 77F

VOC Pounds/Gallon:

PH: N/A

VOC Grams/Liter:

Viscosity: N/P

Evaporation Rate & N/K

Reference:

Solubility in Water: PARTIAL

Appearance and Odor: BLACK PASTE, ALCOHOLIC ODOR.

Percent Volatiles by Volume: N/K

Corrosion Rate: N/K

Reactivity Data

TOP

Stability Indicator: YES

Stability Condition To Avoid: NONE SPECIFIED BY MANUFACTURER.

Materials To Avoid: STRONG OXIDIZERS

Hazardous Decomposition NONE KNOWN.

Products:

Hazardous Polymerization NO

Indicator:

Conditions To Avoid NOT RELEVANT.

Polymerization:

Toxicological Information

TOP

Toxicological Information: N/P

Ecological Information

TOP

Ecological: N/P

MSDS Transport Information

TOP

DOT Packaging Group:

Label: NONE

Special Provision:

Packaging Exception:

Non Bulk Pack: 156,306

Bulk Pack: NONE

Max Qty Pass: 30KGGROSS

Max Qty 30KGGROSS

Cargo:

Vessel Stow Req: A

Water/Ship/Other Req:

Detail IMO Information

TOP

IMO PSN Code: NBF

IMO Proper Shipping Name: RESIN,SOLUTION

IMO PSN Modifier: FLAMMABLE o

IMDG Page Number: 3278

UN Number: 1866

UN Hazard Class: I/II ++

IMO Packaging Group: II ~

Subsidiary Risk Label: -

EMS Number: 3-05

MED First Aid Guide NUM: 310

Detail IATA Information

TOP

IATA PSN Code: VRV

IATA UN ID NUM: 1866

IATA Proper Shipping Name: RESIN SOLUTION

IATA PSN Modifier: ,FLAMMABLE

IATA UN Class: 3

Subsidiary Risk Class:

IATA Label: FLAMMABLE LIQUID

UN Packing Group: II

Packing Note Passenger: 305

Max Quant Pass: 5L

Max Quant Cargo: 60L

Packaging Note Cargo: 307

Exceptions: A7

Detail AFI Information

TOP

AFI PSN Code: VRV

AFI Symbols:

AFI Proper Shipping Name: RESIN SOLUTION

AFI PSN Modifier: ,FLAMMABLE

AFI Hazard Class: 3

AFI UN ID NUM: UN1866

AFI Packing Group: II

Tight Anaerobic Gel
51642

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Tight Anaerobic Gel
Item No.: 51642
Product Type: Anaerobic

2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredients	CAS No.	%
Polyglycol dimethacrylate	25852-47-5	65-70
DI-n-BUTYL PHTHALATE*	84-74-2	10-15
SILICA, AMORPHOUS, FUMED, CRYSTALLINE-FREE	112945-52-5	5-10
Cellulose ester	9004-36-8	3-5
Saccharin	81-07-2	3-5
CUMENE HYDROPEROXIDE*	80-15-9	1-3
Poly(ethylene)	9002-88-4	1-3
Propylene glycol	57-55-6	1-3
1-Acetyl-2-phenylhydrazine	114-83-0	0.1-1
N,N-Dialkyltoluidines	613-48-9	0.1-1
TITANIUM DIOXIDE	13463-67-7	0.01-0.1

* This component is listed as a SARA Section 313 Toxic Chemical.

Ingredients which have exposure limits

Exposure Limits (TWA) Ingredients	ACGIH (TLV)	OSHA (PEL)	OTHER
DI-n-BUTYL PHTHALATE	5 mg/m3 TWA	5 mg/m3 TWA	None
SILICA, AMORPHOUS, FUMED, CRYSTALLINE-FREE	10 mg/m3 TWA	6 mg/m3 TWA	3 mg/m3 TWA resp. dust 1ppm (6mg/m3)
CUMENE HYDROPEROXIDE	None	None	Skin (WEEL)
TITANIUM DIOXIDE	10 mg/m3	15 mg/m3 Total dust	None
Exposure Limits (STEL) Ingredients	ACGIH (TLV)	OSHA (PEL)	

3. HAZARDS IDENTIFICATION

Toxicity: Mild eye irritant. Propylene glycol is a mild skin irritant. Dibutyl phthalate irritates skin, eyes, respiratory tract, and gastrointestinal

ROCKY HILL, CONNECTICUT 06067
EMERGENCY PHONE: (860) 571-5100

MATERIAL SAFETY DATA SHEET

Page 03 of 06

Product Name: Tight Anaerobic Gel
Item No.: 51642

5. FIRE FIGHTING MEASURES

Flash Point: 172°F Method: Pensky Martins Closed Cup
Recommended
Extinguishing Agents: Carbon dioxide, foam, dry chemical
Special Firefighting
Procedures: Not available
Hazardous Products formed
by Fire or Thermal Decomp Irritating organic vapors; oxides of carbon.
Unusual Fire or
Explosion Hazards: None

Explosive Limits:

(% by volume in air) Lower Propylene glycol: 2.6%
(% by volume in air) Upper Propylene glycol: 12.5%

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case
of spill or leak: Remove sources of ignition. Maintain adequate
ventilation.
Soak up in an inert absorbant. Store in a partly
filled, closed container until disposal.

7. HANDLING AND STORAGE

Safe Storage: Store below 100°F away from sources of ignition.
(Contact Loctite Customer Service 1-800-243-4874 for shelf life information)
Handling: Do not use near sources of ignition.
Avoid prolonged skin contact. Keep away from eyes.
Do not breathe vapors.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses or goggles.
Skin: Neoprene, rubber, or butyl rubber gloves.
Ventilation: Sufficient to maintain vapor concentration below
TLV.
Respiratory: NIOSH approved respirator if ventilation is
inadequate.

See Section 2 for Exposure Limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Blue liquid
Odor: Mild
Boiling Point: More than 300°F
pH: Does not apply
Solubility in Water: Slight

ROCKY HILL, CONNECTICUT 06067
EMERGENCY PHONE: (860) 571-5100

MATERIAL SAFETY DATA SHEET

Page 05 of 06

Product Name: Tight Anaerobic Gel
Item No.: 51642

14. TRANSPORTATION INFORMATION

(continued)

Combustible liquid, Packing Group III (More than 450 liters)
Identification Number: None (Not more than 75 pounds);
UN 3082 (More than 75 pounds but not more than 450 liters)
NA 1993 (More than 450 liters)
Marine Pollutant: None
IATA
Proper Shipping Name: Unrestricted (Not more than 75 pounds)
Environmentally hazardous substances, liquid,
n.o.s. (Contains di-n-butyl phthalate) (More than 75 pounds)
Class or Division: Unrestricted (Not more than 75 pounds);
Class 9, Packing Group III (More than 75 pounds)
UN or ID Number: None (Not more than 75 pounds);
UN 3082 (More than 75 pounds)

15. REGULATORY INFORMATION

CA Proposition 65: WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
(ppb levels of Arsenic, Cd, Pb, Ni),

This product contains Saccharin. No Prop65 hazard warning is necessary if this product is used as reasonably anticipated.

16. OTHER INFORMATION

Estimated NFPA(R) Code:
Health Hazard: 1
Fire Hazard: 1
Reactivity Hazard: 1
Specific Hazard: Does not apply

Estimated HMIS(R) Code:
Health Hazard: 1*
Flammability Hazard: 1
Reactivity Hazards: 1
Personal Protection: See Section 8.

NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared By: Stephen Repetto
Title: Research Chemist - Health & Regulatory Affairs

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 08/06/2002

Reviewed on 05/23/2000

1 Identification of substance

HMG**Product details****Trade name:** Acrythane XSC Reducer (CB122) Very Fast**Article number:**

2307

Stock Codes: 1042, 1044**Application of the substance / the preparation:** Coating compound / Surface coating / paint**Manufacturer/Supplier:**

HMG AMERICA LLC,

PO BOX 313

ROEBUCK

SC 29376

TEL 864 585 0266

FAX 864 585 3808

Information department: CHEMTREC 1-800 424 9300 or 1(703)527 3887 outside the USA

2 Composition/Data on components

Chemical characterization**Description:** Mixture of the substances listed below with nonhazardous additions.**Dangerous components:**

1330-20-7	Xylene (mix)	25-50%
78-93-3	butanone	10-25%
108-65-6	2-methoxy-1-methylethyl acetate	10-25%
108-88-3	toluene	10-25%
108-10-1	4-methylpentan-2-one	2.5-10%

Additional information: For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

Hazard description:Harmful
Highly flammable**Information pertaining to particular dangers for man and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Highly flammable.

Harmful by inhalation and in contact with skin.

Irritating to eyes and skin.

Classification system:

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

(Contd. on page 2)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 08/06/2002

Reviewed on 05/23/2000

Trade name: Acrythane XSC Reducer (CB122) Very Fast

(Contd. of page 2)

- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Class according to regulation on flammable liquids: A I**

8 Exposure controls and personal protection

- **Additional information about design of technical systems: No further data; see item 7.**

- **Components with limit values that require monitoring at the workplace:**

1330-20-7 Xylene (mix)

PEL	435 mg/m ³ , 100 ppm
REL	Short-term value: 655 mg/m ³ , 150 ppm Long-term value: 435 mg/m ³ , 100 ppm (o-, m-, & p-isomers)
TLV	Short-term value: 651 mg/m ³ , 150 ppm Long-term value: 434 mg/m ³ , 100 ppm
BEI	

78-93-3 butanone

PEL	590 mg/m ³ , 200 ppm
REL	Short-term value: 885 mg/m ³ , 300 ppm Long-term value: 590 mg/m ³ , 200 ppm
TLV	Short-term value: 885 mg/m ³ , 300 ppm Long-term value: 590 mg/m ³ , 200 ppm
BEI	

108-88-3 toluene

PEL	Short-term value: C 300; 500* ppm Long-term value: 200 ppm *10-min peak per 8-hr shift
REL	Short-term value: 560 mg/m ³ , 150 ppm Long-term value: 375 mg/m ³ , 100 ppm
TLV	188 mg/m ³ , 50 ppm Skin; BEI

108-10-1 4-methylpentan-2-one

PEL	410 mg/m ³ , 100 ppm
REL	Short-term value: 300 mg/m ³ , 75 ppm Long-term value: 205 mg/m ³ , 50 ppm
TLV	Short-term value: 307 mg/m ³ , 75 ppm Long-term value: 205 mg/m ³ , 50 ppm
BEI	

- **Additional information: The lists that were valid during the creation were used as basis.**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

- **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

(Contd. on page 4)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 08/06/2002

Reviewed on 05/23/2000

Trade name: Acrythane XSC Reducer (CB122) Very Fast

(Contd. of page 4)

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
- Dangerous reactions No dangerous reactions known.
- Dangerous products of decomposition: No dangerous decomposition products known.

11 Toxicological information

· Acute toxicity:

· LD/LC50 values that are relevant for classification:

1330-20-7 Xylene (mix)

Oral	LD50	8700 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rbt)
Inhalative	LC50/4 h	6350 mg/l (rat)

108-88-3 toluene

Oral	LD50	5000 mg/kg (rat)
Dermal	LD50	12124 mg/kg (rab)
Inhalative	LC50/4 h	5320 mg/l (mus)

· Primary irritant effect:

- on the skin: Irritant to skin and mucous membranes.
- on the eye: Irritating effect.

· Sensitization: No sensitizing effects known.

· Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

- Harmful.
- Irritant.

12 Ecological information

- General notes: Not known to be hazardous to water.

13 Disposal considerations

· Product:

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packagings:

- Recommendation: Disposal must be made according to official regulations.

14 Transport information

· DOT regulations:



· Hazard class:

3

(Contd. on page 6)

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 08/06/2002

Reviewed on 05/23/2000

Trade name: Acrythane XSC Reducer (CB122) Very Fast

(Contd. of page 6)

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity:**

108-88-3 toluene

· **Carcinogeny categories**

· **EPA (Environmental Protection Agency)**

1330-20-7 Xylene (mix) D

78-93-3 butanone D

108-88-3 toluene D

· **IARC (International Agency for Research on Cancer)**

1330-20-7 Xylene (mix) 3

108-88-3 toluene 3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

1330-20-7 Xylene (mix) A4

108-88-3 toluene A4

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**

Harmful

Highly flammable

· **Hazard-determining components of labelling:**

toluene

Xylene (mix)

· **Risk phrases:**

Highly flammable.

Harmful by inhalation and in contact with skin.

Irritating to eyes and skin.

· **Safety phrases:**

Keep container in a well-ventilated place.

Keep away from sources of ignition - No smoking.

Avoid contact with eyes.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing and gloves.

This material and its container must be disposed of as hazardous waste.

· **National regulations:**

· **Classification according to VbF: A I**

(Contd. on page 8)

USA

Material Safety Data Sheet acc. to ISO/DIS 11014

Printing date 08/06/2002

Reviewed on 05/31/2000

1 Identification of substance

HMG

· **Product details**

· **Trade name:** Epi-Prime Epoxy Primer

· **Article number:**

6704

Stock Code:4022,4024

· **Application of the substance / the preparation** Coating compound/ Surface coating/ paint

· **Manufacturer/Supplier:**

HMG AMERICA LLC,

PO BOX313

ROEBUCK

SC29376

TEL 864 585 0266

FAX 864 585 3808

· **Information department:** CHEMTREC 1-800 424 9300 or 1(703)527 3887 outside the USA

2 Composition/Data on components

· **Chemical characterization**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

1330-20-7	Xylene (mix)	10-25%
25068-38-6	reaction product	10-25%
78-83-1	butanol	2.5-10%
108-10-1	4-methylpentan-2-one	≤ 2.5%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

· **Hazard description:**



Harmful

· **Information pertaining to particular dangers for man and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Flammable.

Harmful by inhalation and in contact with skin.

Irritating to eyes and skin.

May cause sensitization by skin contact.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Contains epoxy constituents. See information supplied by the manufacturer.

· **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

(Contd. on page 2)

Trade name: Epi-Prime Epoxy Primer

(Contd. of page 2)

- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Class according to regulation on flammable liquids:** A II

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

1330-20-7 Xylene (mix)

PEL	435 mg/m ³ , 100 ppm
REL	Short-term value: 655 mg/m ³ , 150 ppm Long-term value: 435 mg/m ³ , 100 ppm (o-, m-, & p-isomers)
TLV	Short-term value: 651 mg/m ³ , 150 ppm Long-term value: 434 mg/m ³ , 100 ppm BEI

78-83-1 butanol

PEL	300 mg/m ³ , 100 ppm
REL	150 mg/m ³ , 50 ppm
TLV	152 mg/m ³ , 50 ppm

108-10-1 4-methylpentan-2-one

PEL	410 mg/m ³ , 100 ppm
REL	Short-term value: 300 mg/m ³ , 75 ppm Long-term value: 205 mg/m ³ , 50 ppm
TLV	Short-term value: 307 mg/m ³ , 75 ppm Long-term value: 205 mg/m ³ , 50 ppm BEI

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

- **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

(Contd. on page 4)

Trade name: *Epi-Prime Epoxy Primer*

(Contd. of page 4)

- **Primary irritant effect:**
- *on the skin: Irritant to skin and mucous membranes.*
- *on the eye: Irritating effect.*
- **Sensitization:** *Sensitization possible through skin contact.*
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful.
Irritant.

12 Ecological information

- **Ecotoxicological effects:**
- **Remark:** *Harmful to fish*
- **General notes:** *Harmful to aquatic organisms*

13 Disposal considerations

- **Product:**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** *Disposal must be made according to official regulations.*

14 Transport information

- **DOT regulations:**



- **Hazard class:** 3
- **Identification number:** UN1263
- **Packing group:** III
- **Proper shipping name (technical name):** *Paint*

- **Land transport ADR/RID (cross-border):**



- **ADR/RID class:** 3 *Flammable liquids*
- **Item:** 31c
- **Danger code (Kemler):** 30
- **UN-Number:** 1263
- **Description of goods:** 1263 *Paint*

(Contd. on page 6)

Trade name: Epi-Prime Epoxy Primer

(Contd. of page 6)

· IARC (International Agency for Research on Cancer)		
1330-20-7	Xylene (mix)	3
13463-67-7	titanium dioxide	3
14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	3
60676-86-0	Silica, vitreous	3
· NTP (National Toxicology Program)		
None of the ingredients is listed.		
· TLV (Threshold Limit Value established by ACGIH)		
1330-20-7	Xylene (mix)	A4
13463-67-7	titanium dioxide	A4
14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	A4
· MAK (German Maximum Workplace Concentration)		
None of the ingredients is listed.		
· NIOSH-Ca (National Institute for Occupational Safety and Health)		
13463-67-7	titanium dioxide	
60676-86-0	Silica, vitreous	
· OSHA-Ca (Occupational Safety & Health Administration)		
None of the ingredients is listed.		

· Product related hazard informations:

The product has been classified and marked in accordance with directives on hazardous materials.

· Hazard symbols:

Harmful

· Hazard-determining components of labelling:

reaction product

Xylene (mix)

· Risk phrases:

Flammable.

Harmful by inhalation and in contact with skin.

Irritating to eyes and skin.

May cause sensitization by skin contact.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

· Safety phrases:

Keep container in a well-ventilated place.

Avoid contact with eyes.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After contact with skin, wash immediately with plenty of water

Wear suitable protective clothing, gloves and eye/face protection.

Avoid release to the environment. Refer to special instructions/Safety data sheets

· Special labeling of certain preparations:

Contains epoxy constituents. See information supplied by the manufacturer.

· National regulations:

· Classification according to VbF: A II

(Contd. on page 8)

USA



Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 08/07/2002

Reviewed on 05/31/2000

1 Identification of substance

HMG

- **Product details**
- **Trade name: Epi-prime Hardener**
- **Article number:**
9058
Stock codes: 7080, 7082
- **Application of the substance / the preparation** Coating compound/ Surface coating/ paint
- **Manufacturer/Supplier:**
HMG AMERICA LLC,
PO BOX 313
ROEBUCK
SC 29376
TEL 864 585 0266
FAX 864 585 3808
- **Information department:** CHEMTREC 1-800 424 9300 or 1(703)527 3887 outside the USA

2 Composition/Data on components

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

Dangerous components:	
1330-20-7 Xylene (mix)	50-100%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

- **Hazard description:**



Harmful

- **Information pertaining to particular dangers for man and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
Flammable.
Harmful by inhalation and in contact with skin.
Irritating to skin.
- **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **NFPA ratings (scale 0 - 4)**



Health = 2
Fire = 3
Reactivity = 0

(Contd. on page 2)

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 08/07/2002

Reviewed on 05/31/2000

Trade name: Epi-prime Hardener

(Contd. of page 2)

8 Exposure controls and personal protection

· Additional information about design of technical systems: No further data; see item 7.

· Components with limit values that require monitoring at the workplace:

1330-20-7 Xylene (mix)

ACGIH TLV Short-term value: 651 mg/m³, 150 ppm
Long-term value: 434 mg/m³, 100 ppm
BEI

NIOSH REL Short-term value: 655 mg/m³, 150 ppm
Long-term value: 435 mg/m³, 100 ppm
(o-, m-, & p-isomers)

OSHA PEL 435 mg/m³, 100 ppm

· Additional information: The lists that were valid during the creation were used as basis.

· Personal protective equipment:

· General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

· Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· General Information

Form:	Fluid
Color:	According to product specification
Odor:	Characteristic

(Contd. on page 4)

USA

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 08/07/2002

Reviewed on 05/31/2000

Trade name: Epi-prime Hardener

(Contd. of page 4)

12 Ecological information

- **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

13 Disposal considerations

- **Product:**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information· **DOT regulations:**

- **Hazard class:** 3
- **Identification number:** UN1263
- **Packing group:** III
- **Proper shipping name (technical name):** Paint

· **Land transport ADR/RID (cross-border):**

- **ADR/RID class:** 3 Flammable liquids
- **Item:** 31c
- **Danger code (Kemler):** 30
- **UN-Number:** 1263
- **Description of goods:** 1263 Paint

· **Maritime transport IMDG:**

- **IMDG Class:** 3.3
- **Page:** 3372
- **UN Number:** 1263
- **Packaging group:** III
- **EMS Number:** 3-05
- **MFA G:** 310,313
- **Marine pollutant:** No

(Contd. on page 6)

USA

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 08/07/2002

Reviewed on 05/31/2000

Trade name: *Epi-prime Hardener*

(Contd. of page 6)

· *Technical instructions (air):*

Class	Share in %
II	62.5

· *Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.*

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- *Department issuing MSDS: Product safety department: LABORATORY*
- *Contact: DAVE MCROBBIE*

USA

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 08/06/2002

Reviewed on 08/22/2000

1 Identification of substance

HMG**· Product details****· Trade name:** Superspeed SP 52 (Various colors)**· Article number:**

7840 Series

Stock codes: 3013/3014/3023/3024/3033/3034/3043/3044/3053/3054/3062/3063/3064/3074

· Application of the substance / the preparation Coating compound/ Surface coating/ paint**· Manufacturer/Supplier:**

HMG AMERICA LLC,

PO BOX313

ROEBUCK

SC29376

TEL 864 585 0266

FAX 864 585 3808

· Information department: CHEMTREC 1-800 424 9300 or 1(703)527 3887 outside the USA

2 Composition/Data on components

· Chemical characterization**· Description:** Mixture of the substances listed below with nonhazardous additions.**· Dangerous components:**

1317-39-1	dicopper oxide	10-25%
108-10-1	4-methylpentan-2-one	10-25%
8050-09-7	Rosin	10-25%
1330-20-7	Xylene (mix)	10-25%
68937-41-7	Triaryl phosphates isopropylated	≤ 2.5%

· Additional information: For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

· Hazard description:

Harmful
Highly flammable

· Information pertaining to particular dangers for man and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Highly flammable.

Harmful by inhalation and in contact with skin.

May cause sensitization by skin contact.

· Classification system:

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

(Contd. on page 2)

USA

Trade name: Superspeed SP 52 (Various colors)

(Contd. of page 2)

- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Class according to regulation on flammable liquids: A I**

8 Exposure controls and personal protection

- **Additional information about design of technical systems: No further data; see item 7.**

- **Components with limit values that require monitoring at the workplace:**

108-10-1 4-methylpentan-2-one	
PEL	410 mg/m ³ , 100 ppm
REL	Short-term value: 300 mg/m ³ , 75 ppm Long-term value: 205 mg/m ³ , 50 ppm
TLV	Short-term value: 307 mg/m ³ , 75 ppm Long-term value: 205 mg/m ³ , 50 ppm BEI
8050-09-7 Rosin	
PEL	(Colophony)
TLV	SEN; (L)
1330-20-7 Xylene (mix)	
PEL	435 mg/m ³ , 100 ppm
REL	Short-term value: 655 mg/m ³ , 150 ppm Long-term value: 435 mg/m ³ , 100 ppm (o-, m-, & p-isomers)
TLV	Short-term value: 651 mg/m ³ , 150 ppm Long-term value: 434 mg/m ³ , 100 ppm BEI

- **Additional information: The lists that were valid during the creation were used as basis.**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

(Contd. on page 4)

Trade name: *Superspeed SP 52 (Various colors)*

(Contd. of page 4)

- **Primary irritant effect:**
- *on the skin: No irritant effect.*
- *on the eye: No irritating effect.*
- **Sensitization:** *Sensitization possible through skin contact.*
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful.
Irritant.

12 Ecological information

- **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

13 Disposal considerations

- **Product:**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** *Disposal must be made according to official regulations.*

14 Transport information

- **DOT regulations:**



- **Hazard class:** 3
- **Identification number:** UN1263
- **Packing group:** II
- **Proper shipping name (technical name):** *Paint*

- **Land transport ADR/RID (cross-border):**



- **ADR/RID class:** 3 *Flammable liquids*
- **Item:** 5b
- **Danger code (Kemler):** 33
- **UN-Number:** 1263

(Contd. on page 6)

Trade name: Superspeed SP 52 (Various colors)

(Contd. of page 6)

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

1330-20-7	Xylene (mix)	D
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· **IARC (International Agency for Research on Cancer)**

13463-67-7	titanium dioxide	3
1330-20-7	Xylene (mix)	3
14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	3
60676-86-0	Silica, vitreous	3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

13463-67-7	titanium dioxide	A4
1330-20-7	Xylene (mix)	A4
14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	A4

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

13463-67-7	titanium dioxide
60676-86-0	Silica, vitreous

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**

Harmful
Highly flammable

· **Hazard-determining components of labelling:**

Rosin
Xylene (mix)

· **Risk phrases:**

Highly flammable.
Harmful by inhalation and in contact with skin.
May cause sensitization by skin contact.

· **Safety phrases:**

Keep container in a well-ventilated place.
Keep away from sources of ignition - No smoking.
Avoid contact with eyes.
Take precautionary measures against static discharges.
Wear suitable protective clothing and gloves.
This material and its container must be disposed of as hazardous waste.

· **National regulations:**

· **Classification according to VbF: A I**

· **Technical instructions (air):**

Class	Share in %
II	16.0
III	18.7

(Contd. on page 8)



MATERIAL SAFETY DATA SHEET

Marine Diesel Fuel

MSDS No. 4323

1. CHEMICAL PRODUCT and COMPANY INFORMATION (rev. Jan-99)

HOVENSA L.L.C.

1 Estate Hope

Christiansted, VI 00820-5652

EMERGENCY TELEPHONE NUMBER (24 hrs): CHEMTREC (800) 424-9300

COMPANY CONTACT (business hours): Safety Department (340) 692-3000

SYNONYMS: Marine Diesel Bunkers

See Section 16 for abbreviations and acronyms.

2. COMPOSITION and INFORMATION ON INGREDIENTS (rev. Jan-99)

INGREDIENT NAME	EXPOSURE LIMITS	CONCENTRATION PERCENT BY WEIGHT
Diesel Fuel CAS NUMBER: 68476-34-6	OSHA PEL-TWA: 5 mg/m, as mineral oil mist ACGIH TLV-TWA: 1997 NOIC- 100 mg/m ³ , skin, A3	100
Naphthalene CAS NUMBER: 91-20-3	OSHA PEL: 10 ppm ACGIH TLV-TWA/STEL: 10 / 15 ppm, A4	Typically < 0.01

A complex mixture of hydrocarbons with carbon numbers in the range C9 and higher.

3. HAZARDS IDENTIFICATION (rev. Mar-98; Tox-99)

EMERGENCY OVERVIEW

CAUTION!

OSHA/NFPA COMBUSTIBLE LIQUID - SLIGHT TO MODERATE IRRITANT - EFFECTS CENTRAL NERVOUS SYSTEM - HARMFUL OR FATAL IF SWALLOWED

Moderate fire hazard. Avoid breathing vapors or mists. May cause dizziness and drowsiness. May cause moderate eye irritation and skin irritation (rash). Long-term, repeated exposure may cause skin cancer.

If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs).

EYES

Contact with liquid or vapor may cause mild irritation.

SKIN

May cause skin irritation with prolonged or repeated contact. Practically non-toxic if absorbed following acute (single) exposure. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

INGESTION

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

INHALATION

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

HOVENSA

MATERIAL SAFETY DATA SHEET

Marine Diesel Fuel

MSDS No. 4323

FIRE FIGHTING INSTRUCTIONS

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

See Section 16 for the NFPA 704 Hazard Rating.

6. ACCIDENTAL RELEASE MEASURES (rev. Mar-98)

ACTIVATE FACILITY'S SPILL CONTINGENCY OR EMERGENCY RESPONSE PLAN.

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal - caution, flammable vapors may accumulate in closed containers. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

7. HANDLING and STORAGE (rev. Mar-98)

HANDLING PRECAUTIONS

Handle as a combustible liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents.

STORAGE PRECAUTIONS

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

HOVENSA

MATERIAL SAFETY DATA SHEET

Marine Diesel Fuel

MSDS No. 4323

CONDITIONS TO AVOID and INCOMPATIBLE MATERIALS

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Keep away from strong oxidizers; Viton ® ; Fluorel ®

HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

11. TOXICOLOGICAL PROPERTIES (rev. Mar-00; Tox-00)

ACUTE TOXICITY

Acute dermal LD50 (rabbits): > 5 ml/kg
Acute oral LD50 (rats): 9 ml/kg
Primary dermal irritation: extremely irritating (rabbits)
Draize eye irritation: non-irritating (rabbits)
Guinea pig sensitization: negative

CHRONIC EFFECTS AND CARCINOGENICITY

Carcinogenic: OSHA: NO IARC: YES (2B) NTP: NO ACGIH: 1997 NOIC: A3

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

MUTAGENICITY (genetic effects)

This material has been positive in a mutagenicity study.

12. ECOLOGICAL INFORMATION (rev. Mar-98)

Keep out of sewers, drainage areas, and waterways. Report spills and releases, as applicable, under Federal and State regulations.

13. DISPOSAL CONSIDERATIONS (rev. Mar-98)

Consult federal, state and local waste regulations to determine appropriate disposal options.

14. TRANSPORTATION INFORMATION (rev. Mar-98)

PROPER SHIPPING NAME: Diesel Fuel
HAZARD CLASS and PACKING GROUP: 3, PG III
DOT IDENTIFICATION NUMBER: NA 1993
DOT SHIPPING LABEL: None

15. REGULATORY INFORMATION (rev. Feb-01)

U.S. FEDERAL, STATE, and LOCAL REGULATORY INFORMATION

This product and its constituents listed herein are on the EPA TSCA Inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other regulations at the state and/or local level. Consult those regulations applicable to your facility/operation.

CLEAN WATER ACT (OIL SPILLS)

Any spill or release of this product to "navigable waters" (essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) or, if not practical, the U.S. Coast Guard with follow-up to the National Response Center, as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However,

HOVENSA

MATERIAL SAFETY DATA SHEET

Marine Diesel Fuel

MSDS No. 4323

TLV Threshold Limit Value (ACGIH)
TSCA Toxic Substances Control Act
TWA Time Weighted Average (8 hr.)

WEEL Workplace Environmental Exposure
 Level (AIHA)
WHMIS Canadian Workplace Hazardous
 Materials Information System

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

Hazardous Polymerization: Will not occur

SECTION 6 HEALTH HAZARDS

Effects of over exposure:

Acute: May cause skin and eye irritation.

Chronic: Prolonged or repeated contact can cause defatting of skin, skin disorders, dermatitis, folliculitis, or oil acne.

Emergency and First Aid procedures:

Eyes: Flush with water for at least 15 minutes. Contains abrasive particles, consult a physician.

Skin: Wash thoroughly with soap and water. If irritation occurs, consult a physician.

Ingestion: Consult a physician.

SECTION 7 SPECIAL PRECAUTIONS AND SPILL/LEAD PROCEDURES

Storage and Handling: Store in closed containers. Protect from contamination with other materials. Do not transfer into unmarked containers.

Leak/Spill Procedure: Scoop up material. Use sand, earth, sawdust, or other absorbent if necessary.

Waste Disposal: Dispose of in accordance with state, local and federal regulations.

SECTION 8 SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

Respiratory protection: None required under normal conditions

Ventilation: Use in open, well-ventilated area.

Protective Gloves: Chemical resistant gloves

Eyes Protection: Goggles or safety glasses

Other protection: As required to prevent dermal contact. Launder contaminated clothing before reuse. Wash before eating, drinking, and smoking. Safety shower and eye wash should be provided.

OTHER COMMENTS

The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and to develop work practice procedures for a safe environment.

DISCLAIMER: The information contained herein is, to the best of our knowledge and belief, accurate. However, because the condition of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all federal, state, and local laws and regulations.

ILSCO is a Registered Service Mark of the IlSCO Corporation

TETRAHYDROFURAN
MATERIAL SAFETY DATA SHEET

INTEGRA Chemical Company
710 Thomas Ave SW
Renton, WA 98055
Phone: 425-277-9244
24 Hour Emergency Response: CHEMTREC 800-424-9300 (Outside USA 703-527-3887)

MSDS Number: T227
Revision Date: 19-Sep-03
Revision No.: 003

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Product Identification

Product Name: TETRAHYDROFURAN
Synonyms: THF, Diethylene Oxide, Tetramethylene Oxide
Chemical Formula: C₄H₈O
Formula Weight: 72.11
Chemical Family: Cyclic Ether
Integra Product Numbers: T227.10; T227.50

Hazard Overview

HMIS Rating: 2-3-2-H **NFPA Rating:** 2-3-1
Warning Label:

DANGER!

Extremely flammable liquid and vapor. Keep away from heat, sparks and open flame. May form explosive peroxides. Minimize exposure to air and store out of direct sunlight. Harmful if swallowed or inhaled. Use only with adequate ventilation. Avoid contact with skin, eyes and clothing.

Components

Component	CAS #	%
Tetrahydrofuran	00109-99-9	100

Physical Data

Boiling Point:	66 °C	Specific Gravity:	0.888 Water=1
Melting Point:	-108.5 °C	Evaporation Rate:	8.0 Butyl Acetate=1
Vapor Pressure:	129 mm Hg@20°C	Vapor Density:	2.5 Air = 1

Solubility:

Miscible with water.

Appearance and Odor:

Clear, colorless liquid. Ether-like odor.

Fire and Explosion Data

Flash Point: -14 °C Test Method: CC
Auto-ignition Temperature: 320 °C
Flammable Limits (% by volume in air): Upper: 11.8 Lower: 2.0

Fire Extinguishing Media:

CO₂, Dry chemical or alcohol foam. Water may be ineffective.

Special Firefighting Procedures:

Use water to cool nearby containers and structures. Wear full protective equipment, including suitable respiratory protection.

Unusual Fire and Explosion Hazards:

Vapors may flow along surfaces to distant ignition sources and flash back. May form explosive peroxides, especially when heated..

Health Hazard Information

Effects of Overexposure

Skin Contact:

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Health Hazard Information

Effects of Overexposure

Skin Contact:

Contact may cause severe irritation or burns.

Eye Contact:

May irritate or burn the eyes.

Ingestion:

Harmful if swallowed. Ingestion may cause headache, dizziness, nausea, vomiting, gastrointestinal irritation .

Inhalation:

Harmful if inhaled. Symptoms include respiratory tract irritation, coughing, dizziness, dullness and headache. High concentrations can produce central nervous system depression, narcosis and unconsciousness.

Chronic Effects of Overexposure:

Kidney damage, liver damage.

Exposure Limits:

	<u>TWA</u>	<u>OSHA PEL</u> <u>STEL</u>	<u>Ceiling</u>
Tetrahydrofuran	200 ppm	NE	NE
	<u>TWA</u>	<u>ACGIH TLV</u> <u>STEL</u>	<u>Ceiling</u>
Tetrahydrofuran	200 ppm	250 ppm	NE

Toxicity Data:

Tetrahydrofuran	LD50 (oral, rat)	2816 mg/kg
	LC50 (inhalation, rat)	78000 mg/m ³ /2H
	LD50 (intraperitoneal, rat)	2900 mg/kg

Medical Conditions Generally Aggravated by Exposure:

Respiratory, skin, liver and kidney conditions.

Target Organs:

Eyes, skin, respiratory system, CNS, liver, kidneys.

Reproductive Effects:

None Identified

Carcinogenicity:

None Identified

<u>Component</u>	<u>NTP Listing</u>	<u>IARC Listing</u>	<u>OSHA Regulated</u>
Tetrahydrofuran	No listing	No Listing	<input type="checkbox"/>

Emergency First Aid Procedures

Skin Contact:

Flush skin with plenty of water. Seek medical attention.

Eye Contact:

Flush with water for at least 15 minutes. Seek immediate medical attention.

Inhalation:

Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult administer oxygen. Seek medical attention.

Ingestion:

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Emergency First Aid Procedures

Ingestion:

Do not induce vomiting. If victim is conscious, give water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Additional First aid and Treatment Notes:

No information available

Reactivity Data

Stability: Stable

Hazardous Polymerization: Will Not Occur

Incompatibles:

Incompatible with strong bases and strong oxidizers Strong reducing agents.

Decomposition Products:

Oxides of carbon (CO, CO₂) Peroxides.

Conditions to Avoid:

Heat, sparks and open flame. Exposure to air and sunlight.

Spill and Disposal Procedures

Spill and Leak Procedures:

Prevent spread of spill. Eliminate all potential sources of ignition. Wear protective equipment. Take up with non-combustible inert material and place into container for disposal. Flush spill area with water.

Disposal Procedures:

Dispose in accordance with all Local, State and Federal regulations. EPA Hazardous Waste Code: U213 (Toxic waste)

Protective Equipment

Ventilation:

Use general or local exhaust ventilation to meet TLV and PEL requirements.

Respiratory Protection:

If ventilation controls do not limit airborne concentrations below PEL or TLV values, an approved respirator must be worn. Use a chemical cartridge respirator with an organic vapor cartridge. At concentrations above 1000 ppm a self-contained breathing apparatus is recommended.

Skin and Eye Protective Equipment:

Safety goggles, protective clothing and gloves. Maintain an eyewash station and safety shower nearby. Polyvinyl alcohol gloves are recommended.

Storage and Handling Precautions

Storage Area: FLAMMABLE LIQUID

Store in a cool, dry, well-ventilated flammable liquids storage area or cabinet. Bond and ground containers when transferring liquid. Minimize exposure to air and light sources. Check peroxide content of material before heating. Protect containers from physical damage.

Transportation Information

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Transportation Information

Regulated Material domestic ground transportation

(reference: CFR Title 49, Transportation)

Proper Shipping Name: Tetrahydrofuran
UN or NA Identification number: UN2056 Hazard Class and Label: 3 Flammable Liquid
Packing Group: II Subsidiary Risk and Label:

Regulated Material via Air Transportation

(reference: ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air)

Proper Shipping Name: Tetrahydrofuran
UN Identification Number: UN2056 Hazard Class and Label: 3 Flammable Liquid
Packing Group: II Subsidiary Risk and Label:

	Packing Instruction	Max net qty per package
Passenger Aircraft:	305/Y305	5/1 L
Cargo Aircraft:	307	60 L

Regulatory Information

<u>Component</u>	<u>TSCA</u> <u>Inventory</u>	<u>CERCLA</u> <u>RQ</u>	<u>SARA EHS</u> <u>TPQ</u>	<u>SARA 313 Toxic Release</u> <u>de minimus</u>
Tetrahydrofuran	<input checked="" type="checkbox"/>	1000 lbs	<input type="checkbox"/> lbs	<input type="checkbox"/> lbs
<u>SARA Hazard Categories:</u>	<u>Acute</u>	<u>Chronic</u>	<u>Flammability</u>	<u>Pressure</u> <u>Reactivity</u>
Tetrahydrofuran	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
<u>Clean Air Act Categories:</u>	<u>SOCMI</u>	<u>HAP</u>	<u>Volatile HAP</u>	<u>Organic HAP</u> <u>Ozone Depleting</u>
Tetrahydrofuran	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

MSDS Revision History:

002 - Changed header phone number
003 - Format revisions; updated header phone number

NE = Not established, NA = Not applicable or Not available

The information presented above is offered for informational purposes only. This MSDS, and the associated product, is intended for use only by technically qualified persons, and at their own discretion and risk. Since conditions and manner of use are outside the control of Integra Chemical Company, we make no warranties, either expressed or implied, and assume no liability in connection with any use of this information.

***** END OF MSDS *****

MATERIAL SAFETY DATA SHEET

Sales Order: {SalesOrd}

INTERLAC 665 INTL ORANGE 420 VOC

MSDS Revision No: U9 -1
MSDS Revision Date: 03/02/2001



International Paint Inc.

6001 Antoine Drive

Houston, Texas 77091

EMERGENCY NUMBERS:

(800) 424-9300 CHEMTREC (USA)
(703) 527-3887 CHEMTREC (Intl)
(800) 854-6813 Poison Control Center

CUSTOMER SERVICE:

(Non-Emergency)
(800) 589-1267 International Paint
(800) 631-7481 Interlux

1. GENERAL INFORMATION

Product Identity: INTERLAC 665 INTL ORANGE 420 VOC

Bulk Sales Reference No: CLD260

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000095-47-6	o-Xylene 0.10 - 1.0% by Weight	OSHA:	No Data Available
		ACGIH:	100 ppm TWA/150 ppm STEL
		NIOSH:	100 ppm TWA; 435 mg/m ³ TWA/150 ppm STEL; 655 mg/m ³ STEL/900 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	CNS depression, respiratory and eye irritation
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
		OSHA:	100 ppm TWA; 435 mg/m ³ TWA/125 ppm STEL; 545 mg/m ³ STEL

000100-41-4

Ethyl benzene
0.10 - 1.0% by Weight

ACGIH: 100 ppm TWA 125 ppm STEL
 NIOSH: 100 ppm TWA; 435 mg/m³ TWA 125 ppm STEL; 545 mg/m³ STEL 800 ppm IDLH (10 percent lower explosive limit)
 Supplier: No Data Available
 OSHA, CAN: 100 ppm TWAEV; 435 mg/m³ TWAEV 125 ppm STEV; 540 mg/m³ STEV
 Mexico: 100 ppm TWA; 435 mg/m³ TWA 125 ppm STEL; 545 mg/m³ STEL
 Brazil: 78 ppm; 340 mg/m³; medium degree of harm
Source Health Data
 NIOSH: Eye, skin, and upper respiratory irritation
Source Carcinogen Data
 OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No; Group 2b: Yes; Group 3: No; Group 4: No

CAS No.

Ingredient Name & %

Source

Exposure Data

000106-42-3

p-Xylene
0.10 - 1.0% by Weight

OSHA: No Data Available
 ACGIH: 100 ppm TWA 150 ppm STEL
 NIOSH: 100 ppm TWA; 435 mg/m³ TWA 150 ppm STEL; 655 mg/m³ STEL 900 ppm IDLH
 Supplier: No Data Available
 OSHA, CAN: No Data Available
 Mexico: No Data Available
 Brazil: No Data Available
Source Health Data
 NIOSH: CNS depression, respiratory and eye irritation
Source Carcinogen Data
 OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.

Ingredient Name & %

Source

Exposure Data

000108-38-3

m-Xylene
0.10 - 1.0% by Weight

OSHA: No Data Available
 ACGIH: 100 ppm TWA 150 ppm STEL
 NIOSH: 100 ppm TWA; 435 mg/m³ TWA 150 ppm STEL; 655 mg/m³ STEL 900 ppm IDLH
 Supplier: No Data Available
 OSHA, CAN: No Data Available
 Mexico: No Data Available
 Brazil: No Data Available
Source Health Data
 NIOSH: CNS depression, respiratory and eye irritation
Source Carcinogen Data
 OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
008052-41-3	Stoddard solvent 25 - 50% by Weight	OSHA:	500 ppm TWA; 2900 mg/m3 TWA
		ACGIH:	100 ppm TWA
		NIOSH:	350 mg/m3 TWAC 1800 mg/m3 (15 min)20,000 mg/m3 IDLH
		Supplier:	No Data Available
		OHSA, CAN:	525 mg/m3 TWAEV (listed as an agent of variable composition) As sum of
		Mexico:	100 ppm TWA; 523 mg/m3 TWA200 ppm STEL; 1050 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Eye, nose, and throat irritation; dermatitis; nervous system effects (Listed under 'Refined petroleum solvents')
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
013463-67-7	Titanium dioxide 0.10 - 1.0% by Weight	OSHA:	15 mg/m3 TWA (total dust)
		ACGIH:	10 mg/m3 TWA
		NIOSH:	NIOSH Potential Occupational Carcinogen - see Appendix APotential NIOSH carcinogen.
		Supplier:	No Data Available
		OHSA, CAN:	total dust: 10 mg/m3 TWAEV (listed as nuisance particulates)
		Mexico:	10 mg/m3 TWA; (nuisance particulate)20 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Lung tumors in animals
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
068911-87-5	Quaternary ammonium compounds, bis(hydrogenated tallow alkyl 1.0 - 10% by Weight	OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	No Data Available
		Supplier:	No Data Available
		OHSA, CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	No Data Available
		Source	Carcinogen Data

OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No;
 Group 2b: No; Group 3: No; Group 4: No

3. HAZARD IDENTIFICATION

Overview:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.		
Inhalation:	Harmful if inhaled. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.		
Eyes:	Causes severe eye irritation. Avoid contact with eyes.		
Skin:	Causes skin irritation. May be harmful if absorbed through the skin.		
Ingestion:	Harmful or fatal if swallowed.		
Chronic Effects:	Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient). Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.		
HMIS Rating:	Health: 1*	Flammability: 2	Reactivity: 0

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes:	Avoid contact with eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin/Hand:	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls:	Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
Other Work Practices:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:	F: 106 C: 41
Lower Explosive Limit (LEL):	1 (%vol in air) at Normal Atmospheric Temp and Pressure
Fire and Explosion Hazards:	Combustible liquid and vapor. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.
Fire Fighting Procedures:	CAUTION: This product has a very low flashpoint. Use of water spray when fighting fire may be inefficient. SMALL FIRES: Use dry chemical, CO ₂ , water spray or alcohol-resistant foam. LARGE FIRES: Use water spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material. Also Reference Emergency Response Guide Number: 127

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
pH:	Not Determined
Specific Gravity:	0.937277
Boiling Point (F):	235
Vapor Density:	Heavier than air
VOC Content (lbs):	Refer to the Technical Data Sheet for this product
Evaporation Rate:	Slower than ether

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:	Store between 32 and 120 F
Handling and Storage Precautions:	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Avoid contact with eyes, skin and clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:	OTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.
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11. ECOLOGICAL DATA

General: o additional information provided for this product. See Section 2 for chemical specific data.

12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures: ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.

Public Safety: CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).

Also, Reference Emergency Response Guide Number: 127

13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:		IMDG Proper Shipping Name:	
PAINT		PAINT	
DOT Hazard Class:	3	IMDG Hazard Class:	3.3 - High flashpoint flammable liquids
UN / NA Number:	UN 1263	UN Number:	UN 1263
DOT Packing Group:	III	IMDG Packing Group:	III
CERCLA/DOT RQ:	5759 gal. / 44961 lbs.	System Reference Code:	1

15. REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

WHMIS Classification: Not Determined

Regulatory List **Product Ingredients on List**

DOT Marine Pollutants (10%):

(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):

(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs:

000100-41-4

000108-38-3

000095-47-6

000106-42-3

Ethyl benzene : final RQ = 1000 pounds (454 kg)

m-Xylene : final RQ = 1000 pounds (454 kg) (Listed under 'Xylene (mixed)')

o-Xylene : final RQ = 1000 pounds (454 kg) (Listed under 'Xylene (mixed)')

p-Xylene : final RQ = 100 pounds (45.4 kg) (Listed under 'Xylene (mixed)')

EPCRA 302 Extremely Hazardous:

(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals:

000100-41-4

000108-38-3

000095-47-6

000106-42-3

Ethyl benzene

m-Xylene

o-Xylene

p-Xylene

Mass RTK Substances:

008052-41-3

Stoddard solvent

Mass Extraordinarily Haz Substances:

y

014808-60-7	Quartz
014464-46-1	Silica, cristobalite
Penn RTK Substances:	
008052-41-3	Stoddard solvent
Penn Special Hazardous Substances: (No Product Ingredients Listed)	
Rhode Island Hazardous Substance:	
000100-41-4	Ethyl benzene
008052-41-3	Stoddard solvent
013463-67-7	Titanium dioxide
RCRA Status: (No Product Ingredients Listed)	
N.J. RTK Substances:	
008052-41-3	Stoddard solvent
N.J. Special Hazardous Substances:	
000100-41-4	Ethyl benzene
000108-38-3	m-Xylene
000123-86-4	n-Butyl acetate
000095-47-6	o-Xylene
000106-42-3	p-Xylene
000107-98-2	Propylene glycol monomethyl ether
001330-20-7	Xylenes (o-, m-, p- isomers)
N.J. Env. Hazardous Substance	
000100-41-4	Ethyl benzene
000108-38-3	m-Xylene
000095-47-6	o-Xylene
000106-42-3	p-Xylene
Proposition 65 - Carcinogens:	
007439-92-1	Lead
007440-02-0	Nickel
007440-43-9	Cadmium
Proposition 65 - Female Reproductive Toxins:	
007439-92-1	Lead
Proposition 65 - Male Reproductive Toxins:	
007439-92-1	Lead
007440-43-9	Cadmium
Proposition 65 - Developmental Toxins:	
007439-92-1	Lead
007440-43-9	Cadmium

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

MATERIAL SAFETY DATA SHEET

Sales Order: {SalesOrd}

INTERPROTECT 2000E GRAY

MSDS Revision No: E6 -5
MSDS Revision Date: 01/19/2002



International Paint Inc.
6001 Antoine Drive
Houston, Texas 77091

EMERGENCY NUMBERS:
(800) 424-9300 CHEMTREC (USA)
(703) 527-3887 CHEMTREC (Intl)
(800) 854-6813 Poison Control Center
CUSTOMER SERVICE: (Non-Emergency)
(800) 589-1267 International Paint
(800) 631-7481 Interlux

1. GENERAL INFORMATION

Product Identity: INTERPROTECT 2000E GRAY

Bulk Sales Reference No: Y2000E

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000064-17-5	Ethyl alcohol 0.10 - 1.0% by Weight	OSHA:	1000 ppm TWA; 1900 mg/m3 TWA
		ACGIH:	1000 ppm TWA
		NIOSH:	1000 ppm TWA; 1900 mg/m3 TWA 3300 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	1000 ppm TWAEV; 1900 mg/m3 TWAEV
		Mexico:	1000 ppm TWA; 1900 mg/m3 TWA
		Brazil:	780 ppm; 1480 mg/m3; minimal degree of harm
		Source	Health Data
		NIOSH:	Eye respiratory
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
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000071-36-3

n-Butyl alcohol
1.0 - 10% by Weight

OSHA: 100 ppm TWA; 300 mg/m3 TWA50 ppm Ceiling; 150 mg/m3 Ceiling
ACGIH: 50 ppm Ceiling
NIOSH: 50 ppm Ceiling; 150 mg/m3 Ceiling1400 ppm IDLH
Supplier: No Data Available
OHSA, CAN: 50 ppm CEV; 150 mg/m3 CEV
Mexico: 50 ppm TWA; 150 mg/m3 TWA
Brazil: 40 ppm (ceiling); 115 mg/m3 (ceiling); skin absorber; maximum degree of harm

Source **Health Data**
NIOSH: Eye and mucous membrane irritation CNS depression
Source **Carcinogen Data**
OSHA: Select Carcinogen: No
NTP: Known Carcinogen: No; Suspected Carcinogen: No
Group 1: No; Group 2A: No;
IARC: Group 2b: No; Group 3: No; Group 4: No

CAS No.

Ingredient Name & %

Source

Exposure Data

000095-63-6

Pseudocumene
1.0 - 10% by Weight

OSHA: No Data Available
ACGIH: No Data Available
NIOSH: 25 ppm TWA; 125 mg/m3 TWA
Supplier: No Data Available
OHSA, CAN: No Data Available
Mexico: No Data Available
Brazil: No Data Available
Source **Health Data**
NIOSH: No Data Available
Source **Carcinogen Data**
OSHA: Select Carcinogen: No
NTP: Known Carcinogen: No; Suspected Carcinogen: No
Group 1: No; Group 2A: No;
IARC: Group 2b: No; Group 3: No; Group 4: No

CAS No.

Ingredient Name & %

Source

Exposure Data

000098-82-8

Cumene
0.10 - 1.0% by Weight

OSHA: 50 ppm TWA; 245 mg/m3 TWA
ACGIH: 50 ppm TWA
NIOSH: 50 ppm TWA; 245 mg/m3 TWA900 ppm IDLH
Supplier: No Data Available
OHSA, CAN: 50 ppm TWAEV; 245 mg/m3 TWAEV
Mexico: 50 ppm TWA; 245 mg/m3 TWA75 ppm STEL; 365 mg/m3 STEL
Brazil: 39 ppm; 190 mg/m3; skin absorber; maximum degree of harm
Source **Health Data**
NIOSH: Eye skin
Source **Carcinogen Data**
OSHA: Select Carcinogen: No
NTP: Known Carcinogen: No; Suspected Carcinogen: No
Group 1: No; Group 2A: No;
IARC: Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
000100-41-4	Ethyl benzene 1.0 - 10% by Weight	OSHA:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
		ACGIH:	100 ppm TWA125 ppm STEL
		NIOSH:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL800 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV125 ppm STEV; 540 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
		Brazil:	78 ppm; 340 mg/m3; medium degree of harm
		Source	Health Data
		NIOSH:	Eye skin
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: Yes; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
001330-20-7	Xylenes (o-, m-, p- isomers) 1.0 - 10% by Weight	OSHA:	100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
		ACGIH:	100 ppm TWA150 ppm STEL
		NIOSH:	100 ppm TWA; 435 mg/m3 TWA900 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV150 ppm STEV; 650 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
		Brazil:	78 ppm; 340 mg/m3; skin absorber; medium degree of harm
		Source	Health Data
		NIOSH:	Central nervous system depressant; respiratory and eye irritation
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
001333-86-4	Carbon black 0.10 - 1.0% by Weight	OSHA:	3.5 mg/m3 TWA
		ACGIH:	3.5 mg/m3 TWA
		NIOSH:	0.1 mg/m3 (carbon black in presence of polycyclic aromatic hydrocarbons (PAHs))1750 mg/m3 IDLH
		Supplier:	No Data Available
		OHSA, CAN:	3.5 mg/m3 TWAEV
		Mexico:	3.5 mg/m3 TWA7 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Lung cardiovascular
		Source	Carcinogen Data

OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 Group 1: No; Group 2A: No;
 IARC: Group 2b: Yes; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
007727-43-7	Barium sulfate 10 - 25% by Weight	OSHA:	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
		ACGIH:	10 mg/m3 TWA (The value is for the total dust containing no asbestos and <1% crystalline silica)
		NIOSH:	10 mg/m3 (total); 5 mg/m3 (respirable dust)
		Supplier:	No Data Available
		OHSA, CAN:	10 mg/m3 TWAEV (total dust)
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Eye nose
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
012001-26-2	Mica (containing less than 1% quartz) 10 - 25% by Weight	OSHA:	see Table Z-3
		ACGIH:	3 mg/m3 TWA (respirable fraction of dust for Mica, for particulate matter containing no asbestos and <1% crystalline silica)
		NIOSH:	3 mg/m3 TWA (respirable dust) 1500 mg/m3 IDLH
		Supplier:	No Data Available
		OHSA, CAN:	6 mg/m3 TWAEV (total dust); 3 mg/m3 TWAEV (respirable dust. listed as mineral dust. no asbestos and less than 1% crystalline silica)
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	respirable dust; Fibrotic pneumoconiosis
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
		OSHA:	15 mg/m3 TWA (total dust)

013463-67-7

Titanium dioxide
10 - 25% by Weight

ACGIH: 10 mg/m3 TWA
 NIOSH: NIOSH Potential Occupational Carcinogen - see Appendix A Potential NIOSH carcinogen.
 Supplier: No Data Available
 OSHA, CAN: 10 mg/m3 TWAEV (total dust)
 Mexico: 10 mg/m3 TWA (nuisance particulate) 20 mg/m3 STEL
 Brazil: No Data Available
Source **Health Data**
 NIOSH: Lung tumors in animals
Source **Carcinogen Data**
 OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 Group 1: No; Group 2A: No;
 IARC: Group 2b: No; Group 3: Yes; Group 4: No

CAS No.

Ingredient Name & %

Source

Exposure Data

064742-95-6

Petroleum naphtha, light aromatic
1.0 - 10% by Weight

OSHA: No Data Available
 ACGIH: No Data Available
 NIOSH: No Data Available
 Supplier: No Data Available
 OSHA, CAN: No Data Available
 Mexico: No Data Available
 Brazil: No Data Available
Source **Health Data**
 NIOSH: No Data Available
Source **Carcinogen Data**
 OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 Group 1: No; Group 2A: No;
 IARC: Group 2b: No; Group 3: No; Group 4: No

CAS No.

Ingredient Name & %

Source

Exposure Data

071011-24-0

Quaternary ammonium compounds,
benzyl(hydrogenated tallow alkyl)
dimethyl, salts with bentonite
1.0 - 10% by Weight

OSHA: No Data Available
 ACGIH: No Data Available
 NIOSH: No Data Available
 Supplier: No Data Available
 OSHA, CAN: No Data Available
 Mexico: No Data Available
 Brazil: No Data Available
Source **Health Data**
 NIOSH: No Data Available
Source **Carcinogen Data**
 OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 Group 1: No; Group 2A: No;
 IARC: Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
14807-96-6*	Talc (*non-asbestiform) 10 - 25% by Weight	OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	No Data Available
		Supplier:	No Data Available
		OHSA, CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	
		NIOSH:	No Data Available
		Source	
		Health Data	
		Carcinogen Data	
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No Group 1: No; Group 2A: No;
		IARC:	Group 2b: No; Group 3: No; Group 4: No

3. HAZARD IDENTIFICATION

Overview:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing. Contains 1,2,4-Trimethylbenzene which can cause central nervous system depression, anemia and bronchitis.		
Inhalation:	May be harmful or fatal if inhaled. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.		
Eyes:	Causes severe eye irritation. Do not get in eyes.		
Skin:	Causes skin irritation. May cause allergic skin reaction. May be harmful if absorbed through the skin.		
Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.		
Chronic Effects:	Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient). Cancer hazard. Contains an ingredient which can cause cancer (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.		
HMIS Rating:	Health: Unknown	Flammability: Unknown	Reactivity: Unknown

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
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Eyes: Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.

Skin/Hand: Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.

Engineering Controls: Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Other Work Practices: Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point: F: 80
C: 27

Lower Explosive Limit (LEL): 1 (%vol in air) at Normal Atmospheric Temp and Pressure

Fire and Explosion Hazards: Flammable liquid and vapor. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.

Fire Fighting Procedures: Also Reference Emergency Response Guide Number: Not Determined

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

pH: Not Determined

Specific Gravity: 1.605388

Boiling Point (F): 279

Vapor Density: Heavier than air

VOC Content (lbs): Refer to the Technical Data Sheet for this product

Evaporation Rate: Slower than ether

8. STABILITY AND REACTIVITY DATA

General: This product is stable and hazardous polymerization will not occur.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition: May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature: Store between 32 and 120 F

Handling and Storage Precautions: Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.

11. ECOLOGICAL DATA

General: No additional information provided for this product. See Section 2 for chemical specific data.

12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures: ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.

Public Safety: CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).

Also, Reference Emergency Response Guide Number: Not Determined

13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	CONSUMER COMMODITY, ORM-D	IMDG Proper Shipping Name:	CONSUMER COMMODITY, ORM-D
DOT Hazard Class:	NR	IMDG Hazard Class:	Not Regulated
UN / NA Number:	Not Regulated	UN Number:	Not Regulated
DOT Packing Group:	Not Regulated	IMDG Packing Group:	Not Regulated
CERCLA/DOT RQ:	113 gal. / 1514 lbs.	System Reference Code:	5

15. REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

WHMIS Classification: Not Determined

Regulatory List **Product Ingredients on List**

DOT Marine Pollutants (10%):

(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):

(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs:

000098-82-8

000100-41-4

000071-36-3

001330-20-7

EPCRA 302 Extremely Hazardous:

(No Product Ingredients Listed)

Cumene : final RQ = 5000 pounds (2270 kg)

Ethyl benzene : final RQ = 1000 pounds (454 kg)

n-Butyl alcohol : final RQ = 5000 pounds (2270 kg)

Xylenes (o-, m-, p- isomers) : final RQ = 100 pounds (45.4 kg)

EPCRA 313 Toxic Chemicals:

007727-43-7	Barium sulfate
000098-82-8	Cumene
000100-41-4	Ethyl benzene
000071-36-3	n-Butyl alcohol
000095-63-6	Pseudocumene
001330-20-7	Xylenes (o-, m-, p- isomers)

Mass RTK Substances:

007727-43-7	Barium sulfate
000100-41-4	Ethyl benzene
012001-26-2	Mica (containing less than 1% quartz)
000071-36-3	n-Butyl alcohol
000095-63-6	Pseudocumene
013463-67-7	Titanium dioxide
001330-20-7	Xylenes (o-, m-, p- isomers)

Mass Extraordinarily Haz Substances:**(No Product Ingredients Listed)****Penn RTK Substances:**

007727-43-7	Barium sulfate
000100-41-4	Ethyl benzene
012001-26-2	Mica (containing less than 1% quartz)
000071-36-3	n-Butyl alcohol
000095-63-6	Pseudocumene
013463-67-7	Titanium dioxide
001330-20-7	Xylenes (o-, m-, p- isomers)

Penn Special Hazardous Substances:

001333-86-4	Carbon black
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Rhode Island Hazardous Substance:

001333-86-4	Carbon black
000098-82-8	Cumene
000064-17-5	Ethyl alcohol
000100-41-4	Ethyl benzene
012001-26-2	Mica (containing less than 1% quartz)
000071-36-3	n-Butyl alcohol
013463-67-7	Titanium dioxide
001330-20-7	Xylenes (o-, m-, p- isomers)

CRA Status:**(No Product Ingredients Listed)****N.J. RTK Substances:**

000100-41-4	Ethyl benzene
012001-26-2	Mica (containing less than 1% quartz)
000071-36-3	n-Butyl alcohol
000095-63-6	Pseudocumene
013463-67-7	Titanium dioxide
001330-20-7	Xylenes (o-, m-, p- isomers)

N.J. Special Hazardous Substances:

000098-82-8	Cumene
000064-17-5	Ethyl alcohol
000100-41-4	Ethyl benzene
000071-36-3	n-Butyl alcohol
001330-20-7	Xylenes (o-, m-, p- isomers)

N.J. Env. Hazardous Substance

007727-43-7	Barium sulfate
000098-82-8	Cumene
000100-41-4	Ethyl benzene
000071-36-3	n-Butyl alcohol
000095-63-6	Pseudocumene
001330-20-7	Xylenes (o-, m-, p- isomers)

Proposition 65 - Carcinogens:

001333-86-4	Carbon black
014464-46-1	Silica, cristobalite
014808-60-7	Quartz

Proposition 65 - Female Reproductive Toxins:**(No Product Ingredients Listed)****Proposition 65 - Male Reproductive Toxins:****(No Product Ingredients Listed)****Proposition 65 - Developmental Toxins:**

000064-17-5	Ethyl alcohol
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SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : 4580 LEAK FINDER TRACE POWDER
 IDENTIFICATION NUMBER: DATE PRINTED: 04/23/01
 PRODUCT USE/CLASS : LEAK FINDER - POWDER

SUPPLIER: INTERNATIONAL EPOXIES AND SEALERS
 30241 COMMERCE DRIVE
 SAN ANTONIO, FL 33576

MANUFACTURER: INTERNATIONAL EPOXIES AND SEALERS
 30241 COMMERCE DRIVE
 SAN ANTONIO, FL 33576

24 HOUR EMERGENCY PHONE (INFOTRAC): 800 535-5053
 INFORMATION TELEPHONE: 800 451-7206

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % LESS THAN
01	N-HEXANE	110-54-3	65.0 %
02	PROPANE/ISOBUTANE/N-BUTANE	68476-86-8	30.0 %
03	TALC	14807-96-6	15.0 %

ITEM	EXPOSURE LIMITS					COMPANY TLV-TWA	SKIN
	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING	OSHA PEL-TWA		
01	50 PPM	N.E.	50 PPM	500 PPM	N.E.	N.E.	YES
02	800 PPM	N.E.	800 PPM	N.E.	N.E.	N.E.	YES
03	2 MG/M3	N.E.	2 MG/M3	N.E.	N.E.	N.E.	NO

(See Section 16 for abbreviation legend)

SECTION 3 - HAZARDS IDENTIFICATION

*** EMERGENCY OVERVIEW ***: Vapors irritating to eyes and respiratory tract. Vapors may cause flash fire or explosion.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin

(Continued on Page 2)

SECTION 3 - HAZARDS IDENTIFICATION

irritation and dermatitis (rash).

EFFECTS OF OVEREXPOSURE - INHALATION: Headaches, dizziness, nausea, decreased blood pressure, changes in heart rate and cyanosis may result from over-exposure to vapor or skin exposure. Prolonged inhalation may be harmful.

EFFECTS OF OVEREXPOSURE - INGESTION: This material may be harmful or fatal if swallowed. Corrosive and may cause severe and permanent damage to mouth, throat and stomach.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure may cause nervous system damage. Overexposure may cause lung damage. Overexposure may cause kidney damage.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT SKIN ABSORPTION INHALATION
INGESTION EYE CONTACT

SECTION 4 - FIRST AID MEASURES

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

FIRST AID - SKIN CONTACT: Immediately flush skin with plenty of water. Remove clothing. Get medical attention immediately. Wash clothing separately before reuse.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

FIRST AID - INGESTION: Get medical attention immediately. If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: -156 F
(SETAFLASH CLOSED CUP)

LOWER EXPLOSIVE LIMIT: 1.0 %
UPPER EXPLOSIVE LIMIT: 9.5 %

AUTOIGNITION TEMPERATURE: ND

EXTINGUISHING MEDIA: CO2 DRY CHEMICAL FOAM WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors can travel to a source of ignition and flash back. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND

(Continued on Page 3)

SECTION 5 - FIRE FIGHTING MEASURES

CAUSE INJURY OR DEATH. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.

SPECIAL FIREFIGHTING PROCEDURES: Containers can build up pressure if exposed to heat (fire). As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Wash thoroughly after handling.

STORAGE: Keep away from heat, sparks and flame. Keep from freezing.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product.

RESPIRATORY PROTECTION: A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

SKIN PROTECTION: Where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.

EYE PROTECTION: Wear safety glasses with side shields (or goggles) and a face shield.

OTHER PROTECTIVE EQUIPMENT: STANDARD INDUSTRIAL CLOTHING STANDARDS SHOULD BE FOLLOWED.

HYGIENIC PRACTICES: Wash hands before eating. Remove contaminated clothing and wash before reuse. Use only in a well ventilated area.

(Continued on Page 4)

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Follow all MSDS/label precautions even after container is emptied because they may retain product residues. Avoid prolonged or repeated contact with skin. Avoid breathing vapors from heated material. Avoid contact with eyes, skin, and clothing.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE	: -43 - 159 F	VAPOR DENSITY	: Is heavier than air
ODOR	: PROPANE	ODOR THRESHOLD	: ND
APPEARANCE	: WHITE	EVAPORATION RATE	: Is faster than Butyl Acetate
SOLUBILITY IN H2O	: NEGLIGIBLE	SPECIFIC GRAVITY	: 0.6825
FREEZE POINT	: 32	pH @ 0.0 %	: NA
VAPOR PRESSURE	: 80-90	VISCOSITY	: NA
PHYSICAL STATE	: LIQUID		
COEFFICIENT OF WATER/OIL DISTRIBUTION: NEGLIGIBLE			

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: ALL SOURCES OF IGNITION, WELDING ARCS, AND OPEN FLAMES.

INCOMPATIBILITY: STRONG ACIDS, ALKALIS, OXIDIZERS, AND AMINES.

HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF CARBON, OXIDES OF NITROGEN, AND MAY PRODUCE FORMS OF CHLORIDE, CHLORINE, AND PHOSGENE.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

PRODUCT LD50: 48 mg/kg

PRODUCT LC50: 28 ppm

COMPONENT TOXICOLOGICAL INFORMATION:

----- CHEMICAL NAME -----	----- LD50 -----	----- LC50 -----
N-HEXANE	48,000 PPM/4H/RAT	28,710 MG/KG RAT
PROPANE/ ISOBUTANE/N-BUTANE	NE	57 PPH/15M/RAT
TALC	NE	TCLO

(Continued on Page 5)

SECTION 12 - ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No Information.

SECTION 13 - DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: DISPOSE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: AEROSOL - CONSUMER COMMODITY

DOT TECHNICAL NAME: ORM-D

DOT HAZARD CLASS: 2.1

HAZARD SUBCLASS: NA

DOT UN/NA NUMBER: UN1950

PACKING GROUP: NA

RESP. GUIDE PAGE: 126

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

CERCLA - SARA HAZARD CATEGORY:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD CHRONIC HEALTH HAZARD FIRE HAZARD PRESSURIZED
GAS HAZARD

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

----- CHEMICAL NAME -----	CAS NUMBER	WT/WT % IS LESS THAN
N-HEXANE	110-54-3	65.0 %

TOXIC SUBSTANCES CONTROL ACT:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

----- CHEMICAL NAME ----- CAS NUMBER

No information is available.

(Continued on Page 6)

SECTION 15 - REGULATORY INFORMATION

U.S. STATE REGULATIONS: AS FOLLOWS -

NEW JERSEY RIGHT-TO-KNOW:

The following materials are non-hazardous, but are among the top five components in this product:

----- CHEMICAL NAME ----- CAS NUMBER

No non-hazardous materials are among the top five ingredients.

PENNSYLVANIA RIGHT-TO-KNOW:

The following non-hazardous ingredients are present in the product at greater than 3%:

----- CHEMICAL NAME ----- CAS NUMBER

No non-hazardous ingredients are present at greater than 3%.

CALIFORNIA PROPOSITION 65:

WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause cancer, birth defects or other reproductive harm:

----- CHEMICAL NAME ----- CAS NUMBER

No Proposition 65 chemicals exist in this product.

INTERNATIONAL REGULATIONS: AS FOLLOWS -

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: No information available.

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 1 FLAMMABILITY: 4 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 04/23/01

REASON FOR REVISION: NEW FORMAT

VOLATILE ORGANIC COMPOUNDS (VOCs): 5.05 lbs/gal, 605 grams/ltr

LEGEND: N.A. - Not Applicable, N.E. - Not Established,
N.D. - Not Determined

The information contained on this MSDS is been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

MATERIAL SAFETY DATA SHEET

Sales Order: {SalesOrd}

INTERPROTECT CURE

MSDS Revision No: E2 -2
MSDS Revision Date: 10/18/2001



International Paint Inc.

6001 Antoine Drive

Houston, Texas 77091

EMERGENCY NUMBERS:

(800) 424-9300 CHEMTREC (USA)
(703) 527-3887 CHEMTREC (Intl)
(800) 854-6813 Polson Control Center
CUSTOMER SERVICE: (Non-Emergency)
(800) 589-1267 International Paint
(800) 631-7481 Interlux

1. GENERAL INFORMATION

Product Identity: INTERPROTECT CURE

Bulk Sales Reference No: Y2001E

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000071-36-3	n-Butyl alcohol 25 - 50% by Weight	OSHA:	100 ppm TWA; 300 mg/m ³ TWAC 50 ppm; C 150 mg/m ³
		ACGIH:	(C 50 ppm) C 50 ppm; C 150 mg/m ³ 1400 ppm IDLH (10 percent lower explosive limit)
		NIOSH:	limit)
		Supplier:	No Data Available
		OHSA, CAN:	50 ppm CEV; 150 mg/m ³ CEV
		Mexico:	50 ppm TWA; 150 mg/m ³ TWA
		Brazil:	40 ppm (ceiling); 115 mg/m ³ (ceiling); skin absorber; maximum degree of harm
		Source	Health Data
		NIOSH:	Eye and mucous membrane irritation, CNS depression
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
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000100-41-4

Ethyl benzene
1.0 - 10% by Weight

OSHA: 100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
 ACGIH: 100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
 NIOSH: 100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
 ppm IDLH (10 percent lower explosive limit)
 Supplier: No Data Available
 100 ppm TWABV; 435 mg/m3 TWABV125 ppm STEV; 540 mg/m3 STEV
 OSHA, CAN: STEV
 Mexico: 100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
 Brazil: 78 ppm; 340 mg/m3; medium degree of harm
Source Health Data
 NIOSH: Eye, skin, and upper respiratory irritation
Source Carcinogen Data
 OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 Group 1: No; Group 2A: No;
 IARC: Group 2b: Yes; Group 3: No; Group 4: No

CAS No.

Ingredient Name & %

Source

Exposure Data

000112-24-3

Triethylene tetramine
1.0 - 10% by Weight

OSHA: No Data Available
 ACGIH: No Data Available
 NIOSH: No Data Available
 Supplier: No Data Available
 OSHA, CAN: No Data Available
 Mexico: No Data Available
 Brazil: No Data Available
Source Health Data
 NIOSH: No Data Available
Source Carcinogen Data
 OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 Group 1: No; Group 2A: No;
 IARC: Group 2b: No; Group 3: No; Group 4: No

CAS No.

Ingredient Name & %

Source

Exposure Data

001330-20-7

Xylenes (o-, m-, p- isomers)
25 - 50% by Weight

OSHA: 100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
 ACGIH: 100 ppm TWA150 ppm STEL
 NIOSH: 100 ppm TWA; 435 mg/m3 TWA900 ppm IDLH
 Supplier: No Data Available
 100 ppm TWABV; 435 mg/m3 TWABV150 ppm STEV; 650 mg/m3 STEV
 OSHA, CAN: STEV
 Mexico: 100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
 Brazil: 78 ppm; 340 mg/m3; skin absorber; medium degree of harm
Source Health Data
 NIOSH: Central nervous system depressant; respiratory and eye irritation
Source Carcinogen Data

OSHA: Select Carcinogen: No
NTP: Known Carcinogen: No; Suspected Carcinogen: No
Group 1: No; Group 2A: No;
IARC: Group 2b: No; Group 3: Yes; Group 4: No

3. HAZARD IDENTIFICATION

Overview: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.

Inhalation: Harmful if inhaled. Causes lung irritation. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.

Eyes: Causes eye burns. Do not get in eyes.

Skin: Causes skin burns. May be harmful if absorbed through the skin.

Ingestion: Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.

Chronic Effects: Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient). Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.

HMIS Rating: Health: Unknown Flammability: Unknown Reactivity: Unknown

4. FIRST AID MEASURES

General: Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin: In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.

Ingestion: If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory: Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.

Eyes: Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.

Skin/Hand: Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.

Engineering Controls: Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.

Other Work Practices: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:	F: 80 C: 27
Lower Explosive Limit (LEL):	1 (%vol in air) at Normal Atmospheric Temp and Pressure
Fire and Explosion Hazards:	Flammable liquid and vapor. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.
Fire Fighting Procedures:	Also Reference Emergency Response Guide Number: Not Determined

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
pH:	Not Determined
Specific Gravity:	0.875804
Boiling Point (F):	243
Vapor Density:	Heavier than air
VOC Content (lbs):	Refer to the Technical Data Sheet for this product
Evaporation Rate:	Slower than ether

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:	Store between 32 and 120 F
Handling and Storage Precautions:	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.
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11. ECOLOGICAL DATA

General:	No additional information provided for this product. See Section 2 for chemical specific data.
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12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures: ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.

Public Safety: CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).

Also, Reference Emergency Response Guide Number: Not Determined

13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:		IMDG Proper Shipping Name:	
CONSUMER COMMODITY, ORM-D		CONSUMER COMMODITY, ORM-D	
DOT Hazard Class:	NR	IMDG Hazard Class:	Not Regulated
UN / NA Number:	Not Regulated	UN Number:	Not Regulated
DOT Packing Group:	Not Regulated	IMDG Packing Group:	Not Regulated
CERCLA/DOT RQ:	46 gal. / 338 lbs.	System Reference Code:	5

15. REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

WHMIS Classification: Not Determined

Regulatory List

DOT Marine Pollutants (10%):
(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):
(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs:

000100-41-4	Ethyl benzene : final RQ = 1000 pounds (454 kg)
000071-36-3	n-Butyl alcohol : final RQ = 5000 pounds (2270 kg)
001330-20-7	Xylenes (o-, m-, p- isomers) : final RQ = 100 pounds (45.4 kg)

EPCRA 302 Extremely Hazardous:
(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals:

000100-41-4	Ethyl benzene
000071-36-3	n-Butyl alcohol
001330-20-7	Xylenes (o-, m-, p- isomers)

Mass RTK Substances:

000100-41-4	Ethyl benzene
000071-36-3	n-Butyl alcohol
000112-24-3	Triethylene tetramine
001330-20-7	Xylenes (o-, m-, p- isomers)

Mass Extraordinarily Haz Substances:
(No Product Ingredients Listed)

Penn RTK Substances:

000100-41-4	Ethyl benzene
000071-36-3	n-Butyl alcohol
000112-24-3	Trichlycnc tetramine

001330-20-7

Xylenes (o-, m-, p- isomers)

Penn Special Hazardous Substances:

(No Product Ingredients Listed)

Rhode Island Hazardous Substance:

000100-41-4

Ethyl benzene

000071-36-3

n-Butyl alcohol

001330-20-7

Xylenes (o-, m-, p- isomers)

RCRA Status:

(No Product Ingredients Listed)

N.J. RTK Substances:

000100-41-4

Ethyl benzene

000071-36-3

n-Butyl alcohol

000112-24-3

Triethylene tetramine

001330-20-7

Xylenes (o-, m-, p- isomers)

N.J. Special Hazardous Substances:

000100-41-4

Ethyl benzene

000071-36-3

n-Butyl alcohol

000112-24-3

Triethylene tetramine

001330-20-7

Xylenes (o-, m-, p- isomers)

N.J. Env. Hazardous Substance

000100-41-4

Ethyl benzene

000071-36-3

n-Butyl alcohol

001330-20-7

Xylenes (o-, m-, p- isomers)

Proposition 65 - Carcinogens:

(No Product Ingredients Listed)

Proposition 65 - Female Reproductive

Toxins:

(No Product Ingredients Listed)

Proposition 65 - Male Reproductive Toxins:

(No Product Ingredients Listed)

Proposition 65 - Developmental Toxins:

(No Product Ingredients Listed)

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

MATERIAL SAFETY DATA SHEET

INTERLUX SPECIAL THINNER

Sales Order: {SalesOrd}

MSDS Revision No: A2-4

MSDS Revision Date: 08/11/2003



International Paint Inc.

6001 Antoine Drive

Houston, Texas 77091

EMERGENCY NUMBERS:

(800) 424-9300	CHEMTREC (USA)
(703) 527-3887	CHEMTREC (Intl)
(800) 854-6813	Poison Control Center
CUSTOMER SERVICE:	(Non-Emergency)
(800) 589-1267	International Paint
(800) 631-7481	Interlux

1. GENERAL INFORMATION

Product Identity: INTERLUX SPECIAL THINNER

Bulk Sales Reference No: Y216

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
		OSHA:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
		ACGIH:	100 ppm TWA125 ppm STEL
		NIOSH:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL800 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV125 ppm STEV; 540 mg/m3 STEV
000100-41-4	Ethyl benzene 10 - 25% by Weight	Mexico:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
		Brazil:	78 ppm; 340 mg/m3; medium degree of harm
		Source	Health Data
		NIOSH:	Eye skin
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: Yes; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
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001330-20-7

Xylenes (o-, m-, p- isomers)
75 - 100% by Weight

OSHA: 100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
 ACGIH: 100 ppm TWA150 ppm STEL
 NIOSH: 100 ppm TWA; 435 mg/m3 TWA900 ppm IDLH
 Supplier: No Data Available
 OSHA, CAN: 100 ppm TWAEV; 435 mg/m3 TWAEV150 ppm STEV; 650 mg/m3 STEV
 Mexico: 100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
 Brazil: 78 ppm; 340 mg/m3; skin absorber; medium degree of harm

Source Health Data
 NIOSH: Central nervous system depressant; respiratory and eye irritation

Source Carcinogen Data
 OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No

3. HAZARD IDENTIFICATION

Overview: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.

Inhalation: Harmful if inhaled. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.

Eyes: Causes severe eye irritation. Do not get in eyes.

Skin: Causes skin irritation. May be harmful if absorbed through the skin.

Ingestion: Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.

Chronic Effects: Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient).

HMIS Rating: Health: Unknown Flammability: Unknown Reactivity: Unknown

4. FIRST AID MEASURES

General: Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin: In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.

Ingestion: If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory: Select equipment to provide protection from the Ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-2F 4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.

Eyes: Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly

cleaned, or discarded after each use.

Skin/Hand:

Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.

Engineering Controls: Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.

Other Work Practices:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:

F: 80

C: 27

Lower Explosive Limit (LEL):

1 (%vol in air) at Normal Atmospheric Temp and Pressure

Fire and Explosion Hazards:

Flammable liquid and vapor. **FLAMMABLE/COMBUSTIBLE MATERIALS:** Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.

Fire Fighting Procedures:

Also Reference Emergency Response Guide Number: Not Determined

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:

Liquid

pH:

Not Determined

Specific Gravity:

0.8622

Boiling Point (F):

279

Vapor Density:

Heavier than air

VOC Content (lbs):

Refer to the Technical Data Sheet for this product

Evaporation Rate:

Slower than ether

8. STABILITY AND REACTIVITY DATA

General:

This product is stable and hazardous polymerization will not occur.

Incompatible Materials:

Strong oxidizing agents.

Hazardous

May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon

Decomposition:

Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:

Store between 32 and 120 F

Handling and Storage

Precautions:

Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.

11. ECOLOGICAL DATA

General:

No additional information provided for this product. See Section 2 for chemical specific data.

12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures:

ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.

Public Safety:

CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).

Also, Reference Emergency Response Guide Number: Not Determined

13. DISPOSAL CONSIDERATION

Waste Disposal:

Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	CONSUMER COMMODITY, ORM-D	IMDG Proper Shipping Name:	CONSUMER COMMODITY, ORM-D
DOT Hazard Class:	NR	IMDG Hazard Class:	Not Regulated
UN / NA Number:	Not Regulated	UN Number:	Not Regulated
DOT Packing Group:	Not Regulated	IMDG Packing Group:	Not Regulated
CERCLA/DOT RQ:	16 gal. / 118 lbs.	System Reference Code:	5

15. REGULATORY INFORMATION

Regulatory Overview:

The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

WHMIS Classification:

Not Determined

Regulatory List

Product Ingredients on List

DOT Marine Pollutants (10%):

(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):

(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs:

000100-41-4

001330-20-7

Ethyl benzene : final RQ = 1000 pounds (454 kg)

Xylenes (o-, m-, p- isomers) : final RQ = 100 pounds (45.4 kg)

EPCRA 302 Extremely Hazardous:
(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals:

000100-41-4

Ethyl benzene

001330-20-7

Xylenes (o-, m-, p- isomers)

Mass RTK Substances:

000100-41-4

Ethyl benzene

001330-20-7

Xylenes (o-, m-, p- isomers)

Mass Extraordinarily Haz Substances:
(No Product Ingredients Listed)

Penn RTK Substances:

000100-41-4

Ethyl benzene

001330-20-7

Xylenes (o-, m-, p- isomers)

Penn Special Hazardous Substances:
(No Product Ingredients Listed)

Rhode Island Hazardous Substances:

000100-41-4

Ethyl benzene

001330-20-7

Xylenes (o-, m-, p- isomers)

RCRA Status:

(No Product Ingredients Listed)

N.J. RTK Substances:

000100-41-4

Ethyl benzene

001330-20-7

Xylenes (o-, m-, p- isomers)

N.J. Special Hazardous Substances:

000100-41-4

Ethyl benzene

001330-20-7

Xylenes (o-, m-, p- isomers)

N.J. Env. Hazardous Substances:

000100-41-4

Ethyl benzene

001330-20-7

Xylenes (o-, m-, p- isomers)

Proposition 65 - Carcinogens:

(No Product Ingredients Listed)

Proposition 65 - Female Reproductive

Toxins:

(No Product Ingredients Listed)

Proposition 65 - Male Reproductive

Toxins:

(No Product Ingredients Listed)

Proposition 65 - Developmental Toxins:

(No Product Ingredients Listed)

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

CAS No.	Ingredient Name & %	Source	Exposure Data
000108-67-8	1,3,5-Trimethylbenzene 1.0 - 10% by Weight	OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	25 ppm TWA; 125 mg/m3 TWA
		Supplier:	No Data Available
		OHSA,	No Data Available
		CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	No Data Available
Source	Carcinogen Data		
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No;		
	Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
001111-67-7	Thiocyanic acid, copper(1+) salt 10 - 25% by Weight	OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	No Data Available
		Supplier:	No Data Available
		OHSA,	No Data Available
		CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	No Data Available
Source	Carcinogen Data		
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No;		
	Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
	Zinc oxide	OSHA:	5 mg/m3 TWA (fume); 15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)10 mg/m3 STEL (fume)
		ACGIH:	5 mg/m3 TWA (fume); 10 mg/m3 TWA (dust, The value for Zinc oxide 'dust' is for total dust containing no asbestos and < 1% crystalline silica)10 mg/m3 STEL (fume)
		NIOSH:	5 mg/m3 TWA (fume/dust)10 mg/m3 STEL15 mg/m3 Ceiling (fume and dust)500 mg/m3 IDLH
		Supplier:	No Data Available
		OHSA,	5 mg/m3 TWAEV (fume); 10 mg/m3 TWAEV (dust)10 mg/m3
		CAN:	STEV (fume)
		Mexico:	5 mg/m3 TWA (fume); 15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)10 mg/m3 STEL (fume)
		Brazil:	5 mg/m3 TWA (fume); 10 mg/m3 TWA (dust, The value for Zinc oxide 'dust' is for total dust containing no asbestos and < 1% crystalline silica)10 mg/m3 STEL (fume)
		Source	Health Data
		NIOSH:	No Data Available
Source	Carcinogen Data		
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No;		
	Group 2b: No; Group 3: No; Group 4: No		

001314-13-2 10 - 25% by Weight

Mexico: 5 mg/m³ TWA (fume); 10 mg/m³ TWA (dust) 10 mg/m³ STEL
 Brazil: No Data Available
Source Health Data
 NIOSH: Metal fume fever
Source Carcinogen Data
 OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
001330-20-7	Xylenes (o-, m-, p- isomers) 1.0 - 10% by Weight	OSHA: ACGIH: NIOSH: Supplier: OHSA, CAN: Mexico: Brazil:	100 ppm TWA; 435 mg/m ³ TWA 150 ppm STEL; 655 mg/m ³ STEL 100 ppm TWA; 150 ppm STEL 100 ppm TWA; 435 mg/m ³ TWA 900 ppm IDLH No Data Available 100 ppm TWAEV; 435 mg/m ³ TWAEV 150 ppm STEV; 650 mg/m ³ STEV 100 ppm TWA; 435 mg/m ³ TWA 150 ppm STEL; 655 mg/m ³ STEL 78 ppm; 340 mg/m ³ ; skin absorber; medium degree of harm
		Source	Health Data
		NIOSH:	Central nervous system depressant; respiratory and eye irritation
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
001333-86-4	Carbon black 1.0 - 10% by Weight	OSHA: ACGIH: NIOSH: Supplier: OHSA, CAN: Mexico: Brazil:	3.5 mg/m ³ TWA 3.5 mg/m ³ TWA 0.1 mg/m ³ (carbon black in presence of polycyclic aromatic hydrocarbons (PAHs)) 1750 mg/m ³ IDLH No Data Available 3.5 mg/m ³ TWAEV 3.5 mg/m ³ TWA 7 mg/m ³ STEL No Data Available
		Source	Health Data
		NIOSH:	Lung cardiovascular
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: Yes; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
008050-09-7	Rosin 10 - 25% by Weight	OSHA:	No Data Available
		ACGIH:	sensitizer; reduce exposure as low as possible
		NIOSH:	No Data Available
		Supplier:	No Data Available
		OHSA,	No Data Available
		CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	No Data Available
Source	Carcinogen Data		
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
013463-41-7	Zinc pyrithione 1.0 - 10% by Weight	OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	No Data Available
		Supplier:	No Data Available
		OHSA,	No Data Available
		CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	No Data Available
Source	Carcinogen Data		
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
064742-95-6	Petroleum naphtha, light aromatic	OSHA:	No Data Available
		ACGIH:	No Data Available
		NIOSH:	No Data Available
		Supplier:	No Data Available
		OHSA,	No Data Available
		CAN:	No Data Available
		Mexico:	No Data Available
		Brazil:	No Data Available

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
pH:	Not Determined
Specific Gravity:	1.329981
Boiling Point (F):	279
Vapor Density:	Heavier than air
VOC Content (lbs):	Refer to the Technical Data Sheet for this product
Evaporation Rate:	Slower than ether

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:	Store between 32 and 120 F
Handling and Storage Precautions:	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.
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11. ECOLOGICAL DATA

General:	No additional information provided for this product. See Section 2 for chemical specific data.
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12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures:	ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.
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Public Safety:

CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet). Also, Reference Emergency Response Guide Number: Not Determined

13. DISPOSAL CONSIDERATION

Waste Disposal:

Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	CONSUMER COMMODITY, ORM-D	IMDG Proper Shipping Name:	CONSUMER COMMODITY, ORM-D
DOT Hazard Class:	NR	IMDG Hazard Class:	Not Regulated
UN / NA Number:	Not Regulated	UN Number:	Not Regulated
DOT Packing Group:	Not Regulated	IMDG Packing Group:	Not Regulated
CERCLA/DOT RQ:	106 gal. / 1169 lbs.	System Reference Code:	5

15. REGULATORY INFORMATION

Regulatory Overview:

The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

WHMIS Classification:

Not Determined

Regulatory List

Product Ingredients on List

DOT Marine Pollutants (10%):
(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):
(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs:

- 000098-82-8
- 000100-41-4
- 001330-20-7
- 001314-13-2
- 013463-41-7

Cumene : final RQ = 5000 pounds (2270 kg)
 Ethyl benzene : final RQ = 1000 pounds (454 kg)
 Xylenes (o-, m-, p- isomers) : final RQ = 100 pounds (45.4 kg)
 Zinc oxide : statutory RQ = 1 pound (0.454 kg)
 Zinc pyriithione : statutory RQ = 1 pound (0.454 kg)

EPCRA 302 Extremely Hazardous:
(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals:

- 000098-82-8
- 000100-41-4
- 000095-63-6
- 001330-20-7
- 001314-13-2
- 013463-41-7

Cumene
 Ethyl benzene
 Pseudocumene
 Xylenes (o-, m-, p- isomers)
 Zinc oxide
 Zinc pyriithione

Mass RTK Substances:

- 000108-67-8
- 001333-86-4

1,3,5-Trimethylbenzene
 Carbon black

End Of Document

MATERIAL SAFETY DATA SHEET**VINYLUX PRIMEWASH REDUCER**

Sales Order: (SalesOrd)

MSDS Revision No: A4 -3

MSDS Revision Date: 01/07/2004



International Paint Inc.

6001 Antoine Drive

Houston, Texas 77091

EMERGENCY NUMBERS:

(800) 424-9300	CHEMTREC (USA)
(703) 527-3887	CHEMTREC (Intl)
(800) 854-6813	Poison Control Center
CUSTOMER SERVICE:	(Non-Emergency)
(800) 589-1267	International Paint
(800) 631-7481	Interlux

1. GENERAL INFORMATION

Product Identity: VINYLUX PRIMEWASH REDUCER

Bulk Sales Reference No: Y354

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000067-63-0	Isopropyl alcohol 1.0 - 10% by Weight	OSHA:	400 ppm TWA; 980 mg/m3 TWA500 ppm STEL; 1225 mg/m3 STEL
		ACGIH:	200 ppm TWA400 ppm STEL
		NIOSH:	400 ppm TWA; 980 mg/m3 TWA500 ppm STEL; 1225 mg/m3 STEL2000 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	400 ppm TWAEV; 980 mg/m3 TWAEV500 ppm STEV; 1225 mg/m3 STEV
		Mexico:	400 ppm TWA; 980 mg/m3 TWA500 ppm STEL; 1225 mg/m3 STEL
		Brazil:	310 ppm TWA; 765 mg/m3 TWA
		Source	Health Data
		NIOSH:	Mucous membrane irritation; possible carcinogenic effects
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
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000078-93-3	Methyl ethyl ketone 25 - 50% by Weight	OSHA:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL
		ACGIH:	200 ppm TWA300 ppm STEL
		NIOSH:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL3000 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	200 ppm TWAEV; 590 mg/m3 TWAEV300 ppm STEV; 885 mg/m3 STEV
		Mexico:	200 ppm TWA; 590 mg/m3 TWA300 ppm STEL; 885 mg/m3 STEL
		Brazil:	155 ppm TWA; 460 mg/m3 TWA
		Source	Health Data
		NIOSH:	Irritation; liver kidney
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000107-98-2	Propylene glycol monomethyl ether 25 - 50% by Weight	OSHA:	150 ppm STEL; 540 mg/m3 STEL
		ACGIH:	100 ppm TWA150 ppm STEL
		NIOSH:	100 ppm TWA; 360 mg/m3 TWA150 ppm STEL; 540 mg/m3 STEL
		Supplier:	No Data Available
		OHSA, CAN:	100 ppm TWAEV; 365 mg/m3 TWAEV150 ppm STEV; 550 mg/m3 STEV
		Mexico:	No Data Available
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Eye nose
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
007664-38-2	Phosphoric acid 10 - 25% by Weight	OSHA:	1 mg/m3 TWA3 mg/m3 STEL
		ACGIH:	1 mg/m3 TWA3 mg/m3 STEL
		NIOSH:	1 mg/m3 TWA3 mg/m3 STEL1000 mg/m3 IDLH
		Supplier:	No Data Available
		OHSA, CAN:	1 mg/m3 TWAEV3 mg/m3 STEV
		Mexico:	1 mg/m3 TWA3 mg/m3 STEL
		Brazil:	No Data Available
		Source	Health Data
		NIOSH:	Mild irritation of the eyes upper respiratory tract and skin
		Source	Carcinogen Data

OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No;
 Group 2b: No; Group 3: No; Group 4: No

3. HAZARD IDENTIFICATION

Overview: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.

Inhalation: May be harmful or fatal if inhaled. Causes lung irritation. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.

Eyes: Causes eye burns. Do not get in eyes.

Skin: Causes skin burns. May be harmful if absorbed through the skin.

Ingestion: Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.

Chronic Effects: Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient). Birth defect hazard. Contains an ingredient which can cause birth defects (See Section 2 and Section 15 for each ingredient). Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.

HMIS Rating: Health: 2 Flammability: 3 Reactivity: 0

4. FIRST AID MEASURES

General: Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin: In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.

Ingestion: If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory: Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.

Eyes: Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.

Skin/Hand: Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.

Engineering Controls: Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.

Other Work Practices: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:	F: 25 C: -4
Lower Explosive Limit (LEL):	1 (%vol in air) at Normal Atmospheric Temp and Pressure
Fire and Explosion Hazards:	Flammable liquid and vapor. FLAMMABLE/COMBUSTIBLE MATERIALS: May be ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.
Fire Fighting Procedures:	CAUTION: This product has a low flashpoint. Use of water spray when fighting fire may be inefficient. SMALL FIRES: Use dry chemical, CO ₂ , water spray or alcohol-resistant foam. LARGE FIRES: Use water spray, fog, or alcohol-resistant foam. Do not use straight streams. Move containers from fire area if you can do so without risk. Runoff from fire control may cause pollution. Dike fire control water for later disposal. Do not scatter the material.

Also Reference Emergency Response Guide Number: 132

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
pH:	Not Determined
Specific Gravity:	0.972871
Boiling Point (F):	175
Vapor Density:	Heavier than air
VOC Content (lbs):	Refer to the Technical Data Sheet for this product.
Evaporation Rate:	Slower than ether

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:	Store between 32 and 120 F
Handling and Storage Precautions:	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.
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11. ECOLOGICAL DATA

General:	No additional information provided for this product. See Section 2 for chemical specific data.
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12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures: ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Fully encapsulated, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material. **LARGE SPILLS:** Dike far ahead of liquid spill to contain released material and runoff from fire control.

Public Safety: CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 50 to 100 meters (160 to 330 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. **LARGE SPILLS:** Consider initial downwind evacuation for at least 300 meters (1000 feet).

Also, Reference Emergency Response Guide Number: 132

13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (CONTAINS ISOPROPANOL, PHOSPHORIC ACID)	IMDG Proper Shipping Name:	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (CONTAINS ISOPROPANOL, PHOSPHORIC ACID)
DOT Hazard Class:	3	IMDG Hazard Class:	3.2 - Intermediate flashpoint flammable liquids
UN / NA Number:	UN 1219	UN Number:	UN 2924
DOT Packing Group:	II	IMDG Packing Group:	II
CERCLA/DOT RQ:	2128 gal. / 17241 lbs.	System Reference Code:	14

15. REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.
Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification: E; B2

Regulatory List

DOT Marine Pollutants (10%):
 (No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):
 (No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs (>.1%):

000078-93-3	Methyl ethyl ketone : 5000 lb final RQ; 2270 kg final RQ
007664-38-2	Phosphoric acid : 5000 lb final RQ; 2270 kg final RQ

EPCRA 302 Extremely Hazardous (>.1%):
 (No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals (>.1%):

000067-63-0	Isopropyl alcohol
000078-93-3	Methyl ethyl ketone
000107-98-2	Propylene glycol monomethyl ether

Mass RTK Substances (>1%):

000067-63-0	Isopropyl alcohol
000078-93-3	Methyl ethyl ketone
007664-38-2	Phosphoric acid
000107-98-2	Propylene glycol monomethyl ether

Product Ingredients on List

Mass Extraordinarily Haz Sub (>.01%) :**(No Product Ingredients Listed)****Penn RTK Substances (>1%) :**

000067-63-0	Isopropyl alcohol
000078-93-3	Methyl ethyl ketone
007664-38-2	Phosphoric acid
000107-98-2	Propylene glycol monomethyl ether

Penn Special Hazardous Substances (>.01%) :**Rhode Island Hazardous Substances (>.1%) :**

000067-63-0	Isopropyl alcohol
000078-93-3	Methyl ethyl ketone
007664-38-2	Phosphoric acid
000107-98-2	Propylene glycol monomethyl ether

RCRA Status (>.01%) :

000078-93-3	Methyl ethyl ketone : 200.0 mg/L regulatory level; waste number D035
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N.J. RTK Substances (>1%) :

000067-63-0	Isopropyl alcohol
000078-93-3	Methyl ethyl ketone
007664-38-2	Phosphoric acid
000107-98-2	Propylene glycol monomethyl ether

N.J. Special Hazardous Substances (>.01%) :

000067-63-0	Isopropyl alcohol
000078-93-3	Methyl ethyl ketone
007664-38-2	Phosphoric acid
000107-98-2	Propylene glycol monomethyl ether

N.J. Env. Hazardous Substances (>.1%) :

000067-63-0	Isopropyl alcohol
000078-93-3	Methyl ethyl ketone
000107-98-2	Propylene glycol monomethyl ether

Proposition 65 - Carcinogens (>0%):**(No Product Ingredients Listed)****Proposition 65 - Female Repro Toxins (>0%):****(No Product Ingredients Listed)****Proposition 65 - Male Repro Toxins (>0%):****(No Product Ingredients Listed)****Proposition 65 - Developmental Toxins (>0%):****(No Product Ingredients Listed)****(No Product Ingredients Listed)****16. OTHER INFORMATION**

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

MATERIAL SAFETY DATA SHEET

TRILUX 33 RED



International Paint LLC
6001 Antoine Drive
Houston, Texas 77091

Sales Order: (SalesOrd)
MSDS Revision No: A5 -13
MSDS Revision Date: 02/21/2006
EMERGENCY NUMBERS:
(800) 424-9300 CHEMTREC (USA)
(703) 527-3887 CHEMTREC (Intl)
(800) 854-6813 Poison Control Center
CUSTOMER SERVICE: (Non-Emergency)
(800) 389-1267 International Paint
(800) 611-7481 Interlux

1. GENERAL INFORMATION

Product Identity: TRILUX 33 RED

Bulk Sales Reference No: YBA062

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

NOTICE: OSHA hazardous chemicals are listed in Section 2 if present at 1% or more. Carcinogens and extraordinarily/special hazardous chemicals are listed in Section 2 if present at .1% or more. Additional regulatory information for specific chemical categories is included in Section 15.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000095-63-6	Pseudocumene 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	25 ppm TWA; 125 mg/m3 TWA
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
000100-41-4	Ethyl benzene 0.10 - 1.0% by Weight	OSHA:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
		ACGIH:	100 ppm TWA125 ppm STEL
		NIOSH:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL800 ppm IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV125 ppm STEV; 540 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
		Brazil:	78 ppm TWA; 340 mg/m3 TWA
		Source	Health Data
		NIOSH:	Eye skin
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		

YBA062_A5

IARC: Group 1: No; Group 2A: No;
Group 2b: Yes; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
000108-67-8	TRIMETHYLBENZENE 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	25 ppm TWA; 125 mg/m3 TWA
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
000115-86-6	Triphenyl phosphate 1.0 - 10% by Weight	OSHA:	3 mg/m3 TWA
		ACGIH:	3 mg/m3 TWA
		NIOSH:	3 mg/m3 TWA 1000 mg/m3 IDLH
		Supplier:	No Established Limit
		OHSA, CAN:	3 mg/m3 TWAEV
		Mexico:	3 mg/m3 TWA 6 mg/m3 STEL
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	Neurotoxicity in animals
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
001111-67-7	Thiocyanic acid, copper(1+) salt 10 - 25% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
		IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
001314-13-2	Zinc oxide 10 - 25% by Weight	OSHA:	5 mg/m3 TWA (fume); 15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction) 10 mg/m3 STEL (fume)
		ACGIH:	2 mg/m3 TWA (respirable fraction) 10 mg/m3 STEL (respirable fraction)
		NIOSH:	

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5 mg/m3 TWA (dust and fume)10 mg/m3 STEL (fume)15 mg/m3 Ceiling (dust)500 mg/m3 IDLH
 Supplier: No Established Limit
 OHSA, CAN: 5 mg/m3 TWAEV (fume); 10 mg/m3 TWAEV (dust)10 mg/m3 STEV (fume)
 Mexico: 5 mg/m3 TWA (fume); 10 mg/m3 TWA (dust)10 mg/m3 STEL (fume)
 Brazil: No Established Limit
 Source Health Data
 NIOSH: Metal fume fever
 Source Carcinogen Data
 OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
001330-20-7	Xylenes (o-, m-, p- isomers) 1.0 - 10% by Weight	OSHA:	100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
		ACGIH:	100 ppm TWA150 ppm STEL
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV150 ppm STEV; 650 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
		Brazil:	78 ppm TWA; 340 mg/m3 TWA
		Source	Health Data
		NIOSH:	Central nervous system depressant; respiratory and eye irritation
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: Yes; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
002786-76-7	NAPHTHALENECARBOXAMIDE, 4-[[4-(AMINOCARBONYL)PHENY 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
008050-09-7	Rosin 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit

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Brazil: No Established Limit
 Source Health Data
 NIOSH: No Established Limit
 Source Carcinogen Data
 OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 IARC: Group 1: No; Group 2A: No;
 Group 2b: No; Group 3: No; Group 4: No

CAS No.	Ingredient Name & %	Source	Exposure Data
013463-41-7	Zinc pyrithione 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
064742-95-6	Petroleum naphtha, light aromatic 10 - 25% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
068937-41-7	Propylated triphenyl phosphate mixture 1.0 - 10% by Weight	OSHA:	No Established Limit
		ACGIH:	No Established Limit
		NIOSH:	No Established Limit
		Supplier:	No Established Limit
		OHSA, CAN:	No Established Limit
		Mexico:	No Established Limit
		Brazil:	No Established Limit
		Source	Health Data
		NIOSH:	No Established Limit
		Source	Carcinogen Data
		OSHA:	Select Carcinogen: No
		NTP:	Known Carcinogen: No; Suspected Carcinogen: No
IARC:	Group 1: No; Group 2A: No; Group 2b: No; Group 3: No; Group 4: No		

3. HAZARD IDENTIFICATION

Overview:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing. Contains 1,2,4-Trimethylbenzene which can cause central nervous system depression, anemia and bronchitis.		
Inhalation:	May be harmful or fatal if inhaled. May cause lung injury. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.		
Eyes:	Causes eye burns. Do not get in eyes.		
Skin:	Causes skin burns. May be harmful if absorbed through the skin.		
Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.		
Chronic Effects:	Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient). Cancer hazard. Contains an ingredient which can cause cancer (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.		
HMIS Rating:	Health: Unknown	Flammability: Unknown	Reactivity: Unknown

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes:	Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin/Hand:	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls:	Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
Other Work Practices:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:	F: 80 C: 27
Lower Explosive Limit (LEL):	1 (%vol in air) at Normal Atmospheric Temp and Pressure
Fire and Explosion Hazards:	Flammable liquid and vapor. FLAMMABLE/COMBUSTIBLE MATERIALS: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined

areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.

Fire Fighting Procedures:

Also Reference Emergency Response Guide Number: Not Determined

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
 pH: No Established Limit
 Specific Gravity: 1.285861
 Boiling Point (F): 270
 Vapor Density: Heavier than air
 VOC Content (lbs): Refer to the Technical Data Sheet for this product.
 Evaporation Rate: Slower than ether

8. STABILITY AND REACTIVITY DATA

General: This product is stable and hazardous polymerization will not occur.
 Incompatible Materials: Strong oxidizing agents.
 Hazardous Decomposition: May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature: Store between 40–100°F (4–38°C).
 Handling and Storage Precautions: Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General: NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.

11. ECOLOGICAL DATA

General: No additional information provided for this product. See Section 2 for chemical specific data.

12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures: ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material. CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).
 Public Safety: Also, Reference Emergency Response Guide Number: Not Determined

13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)
DOT Proper Shipping Name: CONSUMER COMMODITY, ORM-D	IMDG Proper Shipping Name: Paint
DOT Hazard Class: NR	IMDG Hazard Class: Flammable Liquid, 3
UN / NA Number: Not Regulated	UN Number: UN 1263
DOT Packing Group: Not Regulated	IMDG Packing Group: III
CERCLA/DOT RQ: 138 gal. / 1479 lbs.	System Reference Code: 181

15. REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.
Note: Any chemical ingredients listed in Section 15, that do not also appear in Section 2, are contained in the product at a concentration below the applicable OSHA threshold level of 1% or 0.1%.

WHMIS Classification: No Established Limit

Regulatory List: Product Ingredients on List

DOT Marine Pollutants (10%):
(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):
(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs (>.1%):
(No Product Ingredients Listed)

EPCRA 302 Extremely Hazardous (>.1%):
(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals (>.1%):

000098-82-8	Cumene
000100-41-4	Ethyl benzene
000095-63-6	Pseudocumene
001330-20-7	Xylenes (o-, m-, p- isomers)

Mass RTK Substances (>1%):

000095-63-6	Pseudocumene
000108-67-8	TRIMETHYLBENZENE
000115-86-6	Triphenyl phosphate
001330-20-7	Xylenes (o-, m-, p- isomers)
001314-13-2	Zinc oxide

Mass Extraordinarily Haz Sub (>.01%):

014808-60-7	Quartz
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Penn RTK Substances (>1%):

000095-63-6	Pseudocumene
000115-86-6	Triphenyl phosphate
001330-20-7	Xylenes (o-, m-, p- isomers)
001314-13-2	Zinc oxide

Penn Special Hazardous
Substances (>.01%) :
(No Product Ingredients
Listed)

Rhode Island Hazardous
Substances (>.1%) :
(No Product Ingredients
Listed)

RCRA Status (>.01%) :
(No Product Ingredients
Listed)

N.J. RTK Substances (>1%) :
(No Product Ingredients
Listed)

N.J. Special Hazardous
Substances (>.01%) :
000098-82-8 Cumene
000100-41-4 Ethyl benzene
001330-20-7 Xylenes (o-, m-, p- isomers)

N.J. Env. Hazardous Substances
(>.1%) :
000098-82-8 Cumene
000100-41-4 Ethyl benzene
000095-63-6 Pseudocumene
001330-20-7 Xylenes (o-, m-, p- isomers)

Proposition 65 - Carcinogens
(>0%):
000100-41-4 Ethyl benzene
014808-60-7 Quartz

Proposition 65 - Female Repro
Toxins (>0%):
(No Product Ingredients
Listed)

Proposition 65 - Male Repro
Toxins (>0%):
(No Product Ingredients
Listed)

Proposition 65 - Developmental
Toxins (>0%):
(No Product Ingredients
Listed)

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

IPS
WELD-ON

MATERIAL SAFETY DATA SHEET

Date Revised: SEP 2003
Supersedes: MAY 2002

Information on this form is furnished solely for the purpose of compliance with the Occupational Safety and Health Act and shall not be used for any other purpose. IPS Corporation urges the customers receiving this Material Safety Data Sheet to study it carefully to become aware of the hazards, if any, of the product involved. In the interest of safety, you should notify your employees, agents and contractors of the information on this sheet.

SECTION I

MANUFACTURER'S NAME IPS Corporation ADDRESS 17109 S. Main St., P.O. Box 379, Gardena, CA. 90248	Transportation Emergencies: CHEMTREC: (800) 424-9300 or 3 E COMPANY (800) 451-8346 Medical Emergencies: 3 E COMPANY (24 Hour No.) (800) 451-8346 Business: (310) 898-3300
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CHEMICAL NAME and FAMILY Solvent Cement for Plastic Pipe Mixture of Synthetic Resin and Organic Solvents	TRADE NAME: WELD-ON 790 Multi-Purpose Cement for Plastic Pipe FORMULA: Proprietary
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SECTION II - HAZARDOUS INGREDIENTS

None of the ingredients below are listed as carcinogens by IARC, NTP or OSHA	CAS#	APPROX %	ACGIH-TLV	ACGIH-STEL	OSHA-PEL	OSHA-STEL	DUPONT	
							(A) AEL	(B) STEL
Chlorinated Polyvinyl Chloride Resin (CPVC)	NON/HAZ		N/A		N/A			
Tetrahydrofuran (THF)**	109-99-9	40 - 55	200 PPM	250 PPM	200 PPM	250 PPM	50 PPM	75 PPM
Methyl Ethyl Ketone (MEK)	78-93-3	25 - 45*	200 PPM	300 PPM	200 PPM	300 PPM		
Cyclohexanone	108-94-1	2 - 10	25 PPM Skin			25 PPM Skin		

All of the constituents of Weld-On adhesive products are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from such listing.

* Title III Section 313 Supplier Notification: This product contains toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40CFR372. This information must be included in all MSDS's that are copied and distributed for this material.

(A) Dupont and BASF mfg's Acceptable Exposure Limit (AEL) guidelines for 8 hour and 12 hour TWA. (B) Dupont/BASF recommended STEL for 15 minute TWA.

**Information found in a report from the National Toxicology Program (NTP) on an inhalation study in rats and mice suggests that Tetrahydrofuran (THF) can cause tumors in animals. In the study the rats and mice were exposed to THF vapor levels up to 1800 PPM for two years (their lifetime), 6 hours/day, 5 days/week. Test results showed evidence of liver tumors in female mice and kidney tumors in male rats. No evidence of tumors was seen in female rats and male mice. There is no data linking Tetrahydrofuran exposure with cancer in humans.

BULK SHIPPING INFORMATION / CONTAINERS LARGER THAN ONE LITER DOT Shipping Name: Adhesive DOT Hazard Class: 3 Identification Number: UN 1133 Packaging Group: II Label Required: Flammable Liquid	SPECIAL HAZARD DESIGNATIONS		
	HEALTH:	HMIS	NFPA
SHIPPING INFORMATION FOR CONTAINERS LESS THAN ONE LITER DOT Shipping Name: Consumer Commodity DOT Hazard Class: ORM-D	FLAMMABILITY:		HAZARD RATING
	REACTIVITY:		0 - MINIMAL
	PROTECTIVE		1 - SLIGHT
	EQUIPMENT:	B - H	2 - MODERATE
			3 - SERIOUS
			4 - SEVERE
			B = Eye, Hand/Skin (for normal solvent-welding, small spill, clean-up activities)
			H = Eye, Hand/Skin, Respiratory Protection and Impermeable Apron (splash/immersion risks)

SECTION III - PHYSICAL DATA

APPEARANCE Clear, medium syrupy liquid	ODOR Ethereal	BOILING POINT (°F/°C) 151°F (67°C) Based on first boiling component: THF
SPECIFIC GRAVITY @ 73°F ± 3.6° (23°C ± 2°) Typical 0.940 ± 0.040	VAPOR PRESSURE (mm Hg.) 143 mm Hg. based on first boiling component, THF @ 68°F (20°C)	PERCENT VOLATILE BY VOLUME (%) Approx: 80 - 90%
VAPOR DENSITY (Air = 1) 2.49	EVAPORATION RATE (BUAC = 1) > 1.0	SOLUBILITY IN WATER Solvent portion completely soluble in water. Resin portion separates out.

VOC STATEMENT: VOC as manufactured 850 Grams/Liter (g/l). Maximum VOC emissions as applied and tested per SCAQMD Rule 1168, Test Method 316A: 600 g/l.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT -4°F (-20°C) T.C.C. Based on THF	FLAMMABLE LIMITS (PERCENT BY VOLUME)	LEL 2.0	UEL 11.8
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FIRE EXTINGUISHING MEDIA
Ansul "Purple K" potassium bicarbonate dry chemical, any appropriately sized ABC dry chemical, carbon dioxide or foam extinguisher can be used for small fires. Use of a water fog by trained personnel can extinguish small/large fires.

SPECIAL FIRE FIGHTING PROCEDURES
Evacuate enclosed areas. Stay upwind. Close quarters or confined spaces require self-contained breathing apparatus, positive pressure mask or airline mask. Use of a water fog by trained personnel can extinguish small/large fires and avoid water flow or water streams/spray distributing burning material or contaminated water over a large area or into sewers or storm drains. Use water spray to cool containers, to flush spills from source of ignition and to disperse vapors.

UNUSUAL FIRE AND EXPLOSION HAZARDS
Fire hazard because of low flash point and high volatility. Vapors are heavier than air and may travel to source(s) of ignition at or near ground or lower level(s) and flash back.

SECTION V - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY:

Inhalation
 Skin Contact
 Eye Contact
 Ingestion

EFFECT OF OVEREXPOSURE ACUTE:

Inhalation: Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
Skin Contact: Skin irritant. Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
Skin Absorption: Prolonged or widespread exposure may result in the absorption of harmful amounts of material.
Eye Contact: Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid. Vapors slightly uncomfortable.
Ingestion: Moderately toxic. May cause nausea, vomiting, diarrhea. May cause mental sluggishness.
CHRONIC: Symptoms of respiratory tract irritation and damage to respiratory epithelium were reported in rats exposed to 5000 ppm THF for 90 days. Elevation of SGPT suggests a disturbance in liver function. The NOEL was reported to be 200 ppm.

REPRODUCTIVE EFFECTS	TERATOGENICITY	MUTAGENICITY	EMBRYOTOXICITY	SENSITIZATION TO PRODUCT	SYNERGISTIC PRODUCTS
N. AP.	N. AP.	N. AP.	N. AP.	N. AP.	N. AV.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing diseases of the eyes, skin or respiratory system may have increased susceptibility to the toxicity of excessive exposures.

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: If overcome by vapors, remove to fresh air and if breathing stopped, give artificial respiration. If breathing is difficult, give oxygen. Call physician.
Eye Contact: Flush eyes with plenty of water for 15 minutes and call a physician.
Skin Contact: Remove contaminated clothing and shoes. Wash skin with plenty of soap and water for at least 15 minutes. If irritation develops, get medical attention.
Ingestion: Give 1 or 2 glasses of water or milk. Do not induce vomiting. Call physician or poison control center immediately.

SECTION VI - REACTIVITY

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATIBILITY (MATERIALS TO AVOID) Caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.

HAZARDOUS DECOMPOSITION PRODUCTS
When forced to burn, this product gives out carbon monoxide, carbon dioxide, hydrogen chloride and smoke.

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Eliminate all ignition sources. Avoid breathing of vapors. Keep liquid out of eyes. Flush with large amount of water. Contain liquid with sand or earth. Absorb with sand or nonflammable absorbent material and transfer into steel drums for recovery or disposal. Prevent liquid from entering drains.

WASTE DISPOSAL METHOD
Follow local, State and Federal regulations. Consult disposal expert. Can be disposed of by incineration. Excessive quantities should not be permitted to enter drains. Empty containers should be air dried before disposing. Hazardous Waste Code (CA): 214.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)
Atmospheric levels should be maintained below established exposure limits contained in Section II. If airborne concentrations exceed those limits, use of a NIOSH approved organic vapor cartridge respirator with full face-piece is recommended. The effectiveness of an air purifying respirator is limited. Use it only for a single short-term exposure. For emergency and other conditions where short-term exposure guidelines may be exceeded, use an approved positive pressure self-contained breathing apparatus.

VENTILATION
Use only with adequate ventilation. Provide sufficient ventilation in volume and pattern to keep contaminants below applicable exposure limits set forth in Section II. Use only explosion proof ventilation equipment.

PROTECTIVE GLOVES PVA coated rubber gloves for frequent dipping/immersion. Use of latex/nitrile surgical gloves or solvent resistant barrier cream should provide adequate protection when normal solvent-cement welding practices and procedures are used for making plastic welded pipe joints.	EYE PROTECTION Splashproof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as appropriate for exposure.
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OTHER PROTECTIVE EQUIPMENT AND HYGIENIC PRACTICES
Impervious apron and a source of running water to flush or wash the eyes and skin in case of contact.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Store in the shade between 40°F - 90°F (5°C - 32.5°C). Keep away from heat, sparks, open flame and other sources of ignition. Avoid prolonged breathing of vapor. Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Train employees on all special handling procedures before they work with this product.

OTHER PRECAUTIONS
Follow all precautionary information given on container label, product bulletins and our solvent cementing literature. All material handling equipment should be electrically grounded.

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

VINYLUX SOLVENT

MSDS Revision No: A2-2
MSDS Revision Date: 01/19/2002



International Paint Inc.

6001 Antoine Drive
Houston, Texas 77091

EMERGENCY NUMBERS:

(800) 424-9300 CHEMTREC (USA)
(703) 527-3887 CHEMTREC (Intl)
(800) 854-6813 Poison Control Center
CUSTOMER SERVICE: (Non-Emergency)
(800) 589-1267 International Paint
(800) 631-7481 Interlux

1. GENERAL INFORMATION

Product Identity: VINYLUX SOLVENT

Bulk Sales Reference No: Y355

IMPORTANT: Read this MSDS before handling or disposing of this product, and provide this information to the employee, customers, and users of this product. PLEASE NOTE THE MSDS REVISION NUMBER AT THE TOP OF THIS PAGE. If the MSDS Revision Number posted at the top of this page does not match the MSDS Revision Number on the product label, please contact Customer Service at the phone number included above for the correct MSDS. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard.

2. HAZARDOUS INGREDIENT INFORMATION

CAS No.	Ingredient Name & %	Source	Exposure Data
000100-41-4	Ethyl benzene 1.0 - 10% by Weight	OSHA:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
		ACGIH:	100 ppm TWA125 ppm STEL
		NIOSH:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL800 ppm IDLH
		Supplier:	No Data Available
		OHSA, CAN:	100 ppm TWAEV; 435 mg/m3 TWAEV125 ppm STEV; 540 mg/m3 STEV
		Mexico:	100 ppm TWA; 435 mg/m3 TWA125 ppm STEL; 545 mg/m3 STEL
		Brazil:	78 ppm; 340 mg/m3; medium degree of harm
		Source	Health Data
		NIOSH:	Eye skin
		Source	Carcinogen Data
OSHA:	Select Carcinogen: No		
NTP:	Known Carcinogen: No; Suspected Carcinogen: No		
IARC:	Group 1: No; Group 2A: No; Group 2b: Yes; Group 3: No; Group 4: No		

CAS No.	Ingredient Name & %	Source	Exposure Data
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000108-10-1

Methylisobutyl ketone
25 - 50% by Weight

OSHA: 100 ppm TWA; 410 mg/m3 TWA75 ppm STEL; 300 mg/m3 STEL
 ACGIH: 50 ppm TWA75 ppm STEL
 NIOSH: 50 ppm TWA; 205 mg/m3 TWA75 ppm STEL; 300 mg/m3 STEL500 ppm IDLH
 Supplier: No Data Available
 OHSA, CAN: 50 ppm TWAEV; 205 mg/m3 TWAEV75 ppm STEV; 305 mg/m3 STEV
 Mexico: 50 ppm TWA; 203 mg/m3 TWA75 ppm STEL; 300 mg/m3 STEL
 Brazil: No Data Available

Source Health Data

NIOSH: Irritation liver

Source Carcinogen Data

OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 Group 1: No; Group 2A: No;
 IARC: Group 2b: No; Group 3: No; Group 4: No

CAS No.

Ingredient Name & %

Source

Exposure Data

000123-42-2

Diacetone alcohol
25 - 50% by Weight

OSHA: 50 ppm TWA; 240 mg/m3 TWA
 ACGIH: 50 ppm TWA
 NIOSH: 50 ppm TWA; 240 mg/m3 TWA1800 ppm IDLH
 Supplier: No Data Available
 OHSA, CAN: 50 ppm TWAEV; 240 mg/m3 TWAEV75 ppm STEV; 360 mg/m3 STEV
 Mexico: 50 ppm TWA; 240 mg/m3 TWA75 ppm STEL; 360 mg/m3 STEL
 Brazil: No Data Available

Source Health Data

NIOSH: Irritation; liver kidney

Source Carcinogen Data

OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 Group 1: No; Group 2A: No;
 IARC: Group 2b: No; Group 3: No; Group 4: No

CAS No.

Ingredient Name & %

Source

Exposure Data

001330-20-7

Xylenes (o-, m-, p- isomers)
25 - 50% by Weight

OSHA: 100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
 ACGIH: 100 ppm TWA150 ppm STEL
 NIOSH: 100 ppm TWA; 435 mg/m3 TWA900 ppm IDLH
 Supplier: No Data Available
 OHSA, CAN: 100 ppm TWAEV; 435 mg/m3 TWAEV150 ppm STEV; 650 mg/m3 STEV
 Mexico: 100 ppm TWA; 435 mg/m3 TWA150 ppm STEL; 655 mg/m3 STEL
 Brazil: 78 ppm; 340 mg/m3; skin absorber; medium degree of harm

Source Health Data

NIOSH: Central nervous system depressant; respiratory and eye irritation

Source Carcinogen Data

OSHA: Select Carcinogen: No
 NTP: Known Carcinogen: No; Suspected Carcinogen: No
 Group 1: No; Group 2A: No;
 IARC: Group 2b: No; Group 3: Yes; Group 4: No

3. HAZARD IDENTIFICATION

Overview:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Avoid contact with eyes, skin and clothing.		
Inhalation:	Harmful if inhaled. Causes nose and throat irritation. Vapors may affect the brain or nervous system causing dizziness, headache or nausea.		
Eyes:	Causes severe eye irritation. Do not get in eyes.		
Skin:	Causes skin irritation. May be harmful if absorbed through the skin.		
Ingestion:	Harmful if swallowed. May cause abdominal pain, nausea, vomiting, diarrhea, or drowsiness.		
Chronic Effects:	Contains an ingredient which can cause organ damage (See Section 2 and Section 15 for each ingredient). Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data (See Section 2 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.		
HMIS Rating:	Health: 2*	Flammability: 3	Reactivity: 0

4. FIRST AID MEASURES

General:	Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin:	In case of contact, immediately flush skin with soap and plenty of water. Get medical attention immediately.
Ingestion:	If swallowed, immediately contact Poison Control Center at 1-800-854-6813. DO NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person.

5. PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory:	Select equipment to provide protection from the ingredients listed in Section 2 of this document. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates dust, vapor, or mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. FOR USERS OF 3M RESPIRATORY PROTECTION ONLY: For information and assistance on 3M occupational health and safety products, call OH&ESD Technical Service toll free in U.S.A. 1-800-243-4630, in Canada call 1-800-267-4414. Please do not contact these numbers regarding other manufacturer's respiratory protection products. 3M does not endorse the accuracy of the information contained in this Material Safety Data Sheet.
Eyes:	Do not get in eyes. Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, safety glasses, chemical goggles, and/or head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Skin/Hand:	Protective equipment should be selected to provide protection from exposure to the chemicals listed in Section 2 of this document. Depending on the site-specific conditions of use, protective gloves, apron, boots, head and face protection may be required to prevent contact. The equipment must be thoroughly cleaned, or discarded after each use.
Engineering Controls:	Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.
Other Work Practices:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, using toilet facilities, etc. Promptly remove soiled clothing and wash clothing thoroughly before reuse. Shower after work using plenty of soap and water.

6. FIRE AND EXPLOSION INFORMATION

Flash Point:	F: 60
	C: 16
Lower Explosive Limit (LEL):	1 (%vol in air) at Normal Atmospheric Temp and Pressure

Fire and Explosion Hazards:

Flammable liquid and vapor. FLAMMABLE/COMBUSTIBLE MATERIALS. Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) creating a vapor explosion hazard. Runoff to sewers may create fire or explosion hazard. Containers may explode when heated.

Fire Fighting Procedures:

Also Reference Emergency Response Guide Number: Not Determined

7. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
pH:	Not Determined
Specific Gravity:	0.868008
Boiling Point (F):	175
Vapor Density:	Heavier than air
VOC Content (lbs):	Refer to the Technical Data Sheet for this product
Evaporation Rate:	Slower than ether

8. STABILITY AND REACTIVITY DATA

General:	This product is stable and hazardous polymerization will not occur.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition:	May produce hazardous fumes when heated to decomposition as in welding. Fumes may produce Carbon Dioxide and Carbon Monoxide.

9. HANDLING AND STORAGE

Storage Temperature:	Store between 32 and 120 F
Handling and Storage Precautions:	Keep away from heat, sparks and flame. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Vapors may cause flash fire or ignite explosively. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Do not get in eyes, on skin or clothing. Close container after each use. Wash thoroughly after handling.

10. TOXICOLOGICAL DATA

General:	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. No additional information provided for this product. See Section 2 for chemical specific data.
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11. ECOLOGICAL DATA

General:	No additional information provided for this product. See Section 2 for chemical specific data.
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12. ACCIDENTAL RELEASE MEASURES

Spill Response Procedures:	ELIMINATE ALL IGNITION SOURCES (no smoking, flares, sparks or flames in immediate area). Use only non-sparking equipment to handle spilled material and absorbent. Do not touch or walk through spilled material. Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to containers. Use non-sparking tools to collect absorbed material.
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CALL CHEMTREC at (800)-424-9300 for emergency response. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. LARGE SPILLS: Consider initial downwind evacuation for at least 300 meters (1000 feet).

Also, Reference Emergency Response Guide Number: Not Determined

13. DISPOSAL CONSIDERATION

Waste Disposal: Dispose of in accordance with local, state and federal regulations. (Also reference RCRA information in Section 15 if listed).

14. TRANSPORTATION INFORMATION

DOT (Domestic Surface Transportation)		IMO / IMDG (Ocean Transportation)	
DOT Proper Shipping Name:	CONSUMER COMMODITY, ORM-D	IMDG Proper Shipping Name:	CONSUMER COMMODITY, ORM-D
DOT Hazard Class:	NR	IMDG Hazard Class:	Not Regulated
UN / NA Number:	Not Regulated	UN Number:	Not Regulated
DOT Packing Group:	Not Regulated	IMDG Packing Group:	Not Regulated
CERCLA/DOT RQ:	51 gal. / 368 lbs.	System Reference Code:	5

15. REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

WHMIS Classification:

B2

Regulatory List

Product Ingredients on List

DOT Marine Pollutants (10%):
(No Product Ingredients Listed)

DOT Severe Marine Pollutants (1%):
(No Product Ingredients Listed)

EPCRA 311/312 Chemicals and RQs:
000100-41-4
000108-10-1
001330-20-7

Ethyl benzene : final RQ = 1000 pounds (454 kg)
Methylisobutyl ketone : final RQ = 5000 pounds (2270 kg)
Xylenes (o-, m-, p- isomers) : final RQ = 100 pounds (45.4 kg)

EPCRA 302 Extremely Hazardous:
(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals:
000100-41-4
000108-10-1
001330-20-7

Ethyl benzene
Methylisobutyl ketone
Xylenes (o-, m-, p- isomers)

Mass RTK Substances:
000123-42-2
000100-41-4
000108-10-1
001330-20-7

Diacetone alcohol
Ethyl benzene
Methylisobutyl ketone
Xylenes (o-, m-, p- isomers)

Mass Extraordinarily Haz Substances:
(No Product Ingredients Listed)

Penn RTK Substances:
000123-42-2
000100-41-4
000108-10-1
001330-20-7

Diacetone alcohol
Ethyl benzene
Methylisobutyl ketone
Xylenes (o-, m-, p- isomers)

Penn Special Hazardous Substances:
(No Product Ingredients Listed)

Rhode Island Hazardous Substance:
000123-42-2
000100-41-4
000108-10-1
001330-20-7

Diacetone alcohol
Ethyl benzene
Methylisobutyl ketone
Xylenes (o-, m-, p- isomers)

RCRA Status:
(No Product Ingredients Listed)

N.J. RTK Substances:

000123-42-2 Diacetone alcohol
000100-41-4 Ethyl benzene
000108-10-1 Methylisobutyl ketone
001330-20-7 Xylenes (o-, m-, p- isomers)

N.J. Special Hazardous Substances:

000100-41-4 Ethyl benzene
000108-10-1 Methylisobutyl ketone
001330-20-7 Xylenes (o-, m-, p- isomers)

N.J. Env. Hazardous Substance

000100-41-4 Ethyl benzene
000108-10-1 Methylisobutyl ketone
001330-20-7 Xylenes (o-, m-, p- isomers)

Proposition 65 - Carcinogens:

(No Product Ingredients Listed)

Proposition 65 - Female Reproductive

Toxins:

(No Product Ingredients Listed)

Proposition 65 - Male Reproductive Toxins:

(No Product Ingredients Listed)

Proposition 65 - Developmental Toxins:

(No Product Ingredients Listed)

16. OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

End Of Document

Material Safety Data Sheet

BIN # 925

•587088

HMIS®



HEALTH

2

REACTIVITY

0

FLAMMABILITY

2

PERSONAL PROTECTION

B

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identity: Metal Marking Yellow Item No.: 16060,16063,16064,26063,26064 Other Names: Tex-Pen, Dalo Formula: A419M	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.
Another Exclusive Product of: ITW Dykem	Emergency Telephone Number 1-800-535-5053 (Domestic), 1-352-323-3500 (International)
Address (Number, Street, City, State, and ZIP Code) 805 East Old 56 Highway Olathe, KS 66061-4914	Telephone Number for Information 1-800-443-9536 or 1-913-397-9889
Product Class: Solvent based marker.	Date Prepared 9/05/06
	Signature of Preparer (Optional) Regulatory Dept.

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components (Specific Chemical Identity, Common Name(s))	CAS No.	OSHA PEL	ACGIH-TLV	Other Limits Recommended	%(Opt.)
Aromatic Hydrocarbon	64742-95-6	TWA 100 ppm	TWA 100 ppm	No data	20 - 30
Titanium Dioxide	13463-67-7	TWA 10 mg/m3	TWA 10 mg/m3	Nuisance dust*	20 - 30
Clay, Silica	1332-58-7	TWA 15 mg/m3	TWA 15 mg/m3	Nuisance dust*	15 - 25
1,2,4 Trinitethyl Benzene	95-63-6	TWA 100 ppm	TWA 100 ppm	No data	1 - 10
Organic Yellow(s)	6358-31-2 6528-34-3	TWA 10 mg/m3	TWA 10 mg/m3	Nuisance dust*	1 - 10
Xylene	1330-20-7	TWA 100 ppm	TWA 100 ppm	No data	1 - 5

*Nuisance dust as free dust only, not as bound in paint or ink.

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW – Yellow opaque thick viscosity liquid with aromatic odor. Warning! Combustible liquid and vapor. Keep away from heat sparks and flames. May cause eye, skin and respiratory tract irritation. If swallowed do not induce vomiting. Get immediate medical attention.

POTENTIAL HEALTH EFFECTS

Eyes: Liquid is moderately irritating to the eyes.

Skin: Liquid is mildly irritating to the skin.

Ingestion: Ingestion of liquid may cause vomiting.

Inhalation: High concentration of vapors may produce irritation of the respiratory tract, headache, dizziness, and nausea.

CHRONIC HEALTH EFFECTS

Prolonged or repeated contact may cause skin sensitization or dermatitis. Reports have associated repeated and prolonged occupational overexposure to solvents with irreversible brain and nervous system damage. Intentional misuse by deliberately concentrating or inhaling this product may be harmful or fatal.

SECTION 4 FIRST AID MEASURES

Eyes – Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Inhalation – Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Skin – Flush skin with plenty of water. Remove contaminated clothing and shoes.

Ingestion – If large quantities of this material are swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

SECTION 5 FIRE FIGHTING MEASURES

Flash Point (Method Used) 108°F	Flammable Limits	LEL 1.9	UEL 12.6
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Extinguishing Media -

Use water fog, foam, dry chemical or CO2. Use water spray to cool fire-exposed containers and to protect personnel.

Special Fire Fighting Procedures -

Keep containers cool and vapors down with water spray. Prevent spill from entering drains, sewers, streams or other bodies of water. If run-off occurs, notify proper authorities. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus.

Unusual Fire and Explosion Hazards – Vapors are heavier than air and may travel along ground, or be moved by ventilation and be ignited by ignition source.

SECTION 6 ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Absorb liquid with non-combustible floor absorbent and place in non-leaking container; seal properly and dispose of properly in compliance with federal, state, and local regulations.

LARGE SPILL: Evacuate area of unprotected personnel. Eliminate all ignition sources. Stop spill at source if safe to do so. Handling equipment must be grounded to prevent sparking. Prevent spill from entering drains, sewers, streams or other bodies of water. If run-off occurs, notify proper authorities. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal. Dispose of properly in compliance with federal, state, and local regulations.

SECTION 7 HANDLING AND STORAGE

HANDLING: Empty containers retain residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, sparks, flames, static electricity, or other sources of ignition. Many hot organic chemical vapors or mists are susceptible to sudden spontaneous combustion when mixed with air. Ignition may occur at temperatures below those published in the literature as “autoignition” or ignition temperatures. Ignition temperatures decrease with increasing vapor volume and vapor volume and vapor/air contact time, and are influenced by pressure changes. Ignition of organic chemical vapors may occur at typical elevated-temperature process conditions, especially in processes operating under vacuum if subjected to sudden ingress of air, or outside process equipment operating under elevated pressure if sudden escape of vapors or mists to the atmosphere occurs. Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained.

STORAGE:

Keep away from heat, sparks and open flames. Keep out of reach of children. Keep container tightly sealed when not in use. Store in cool, well-ventilated place away from incompatible materials. Information on this Material Safety Data Sheets refers to ink used in pens and markers, however, it applies to these inks in bulk. The inks are contained in capillary or valve reservoirs and will not spill or leak under normal conditions.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**Respiratory Protection (Specify Type) –**

Not usually necessary. Use with adequate ventilation. Use NIOSH/MSHA approved respirator if PELs or TLVs are exceeded.

Engineering Controls	Local Exhaust	Not usually needed	Special	None
	Mechanical (General)	Yes	Other	None

Protective Gloves – Chemical resistant gloves if skin contact is possible (consult your safety equipment supplier).

Eye Protection – Not normally required if used as intended. Wear chemical splash goggles in compliance with OSHA regulation if splashing is possible.

Other Protective Clothing or Equipment -

Not usually necessary. For bulk material, if direct contact is possible, wear apron, boots, face shield, etc. as needed.

Work/Hygienic Practices -

Follow label instructions. Wash hands after use and before eating, drinking, smoking, using restrooms, etc.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point	318 to 338 ^o F	Specific Gravity (H ₂ O = 1) @70 ^o F	>1
Vapor Pressure (mm-Hg @ 70 ^o F)	No Data	Melting Point	No Data
Vapor Density (AIR = 1)	Greater than one (1)	Evaporation Rate (Butyl Acetate = 1)	Less than one (1)
Solubility in Water	Negligible	pH	No Data

Appearance and Odor – Yellow opaque thick viscosity liquid with aromatic odor.

VOC: This product contains 351 grams per liter or 28.73% by weight VOC's.

SECTION 10 STABILITY AND REACTIVITY

Chemical	Unstable		Conditions to Avoid – None known.
Stability	Stable	X	

Incompatibility (Materials to Avoid) -

Strong oxidizing and reducing agents, strong alkalies and strong acids.

Hazardous Decomposition or Byproducts -

Carbon dioxide, carbon monoxide, smoke, soot and various organic oxidation by-products.

Hazardous Polymerization	May Occur		Conditions to Avoid - No data
	Will Not Occur	X	

SECTION 11 TOXICOLOGICAL INFORMATION

Please refer to Section 3 for available information on potential health effects.

SECTION 12 ECOLOGICAL INFORMATION

No specific ecological data are available for this product. Please refer to Section 6 for information regarding accidental releases and Section 15 for regulatory reporting information.

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable local, state and federal regulations.

SECTION 14 TRANSPORT INFORMATION (Not meant to be all inclusive)

Domestic Highway (Containers < 1 Quart are ORM-D)	Domestic Air Shipments (Pens)
Proper Shipping Name: Paint/ Ink	Proper Shipping Name: Consumer Commodity
Hazard Class/Subsidiary Hazard: 3	Hazard Class/Subsidiary Hazard: 9
UN/NA No.: UN1263	UN/NA No.: I.D. 8000
Packing Group: III	Packing Group: None
Label Required: Combustible Liquid (2)	Label Required: Class 9

SECTION 15 REGULATORY INFORMATION (Not meant to be all inclusive - selected regulations represented)

U.S. FEDERAL REGULATIONS:

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	No	No	No

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

SECTION 313: This product contains Xylene (1330-20-7) and 1,2,4 Tri Methyl Benzene (95-63-6) which are listed and may require reporting under SARA Title III Sec. 313 if used over the threshold reporting quantity. This information must be included in all MSDSs that are copied and distributed for this material.

INTERNATIONAL REGULATIONS:

CANADIAN WHMIS: Not WHMIS controlled (pens)	Bulk: Class B2, D2A
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STATE REGULATIONS:

CALIFORNIA PROPOSITION 65:

This product contains a chemical known to the State of California to cause cancer. Benzene, Ethyl benzene.

This product contains chemicals known to the State of California to cause birth defects or other reproductive harm. Toluene, Benzene.

SECTION 16 OTHER INFORMATION

MSDS Status: Revised Section(s): Section 15 has been updated.

WARNING! The use of this product is beyond the control of the manufacturer and distributor; therefore, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice. The user must assume all responsibility, including injury or damage, resulting from its misuse as such, or in combination with other materials. The manufacturer and distributor warrant only that this product meets the specifications for such product. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AS TO DESCRIPTION, QUALITY, MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, PRODUCTIVENESS, OR ANY OTHER MATTER OF THIS PRODUCT. THE MANUFACTURER AND DISTRIBUTOR SHALL BE IN NO WAY RESPONSIBLE FOR THE IMPROPER USE OF THIS PRODUCT. The sole and exclusive remedy against the manufacturer and distributor for breach of warranty shall be reimbursement of the purchase price of the product in the event that a defective condition of the product shall be found to exist. NO OTHER REMEDY (INCLUDING BUT NOT LIMITED TO INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR INJURY TO PERSON OR PROPERTY OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE.

MA 830 ADHESIVE

This product appears in the following stock number(s):

IT185 IT186 IT187

Last revised: 12/05/05

Printed: 12/6/2005

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Tradename: MA 830 ADHESIVE

General use: Adhesive

Chemical family: Acrylate

MANUFACTURERITW Plexus
30 Endicott St.
Danvers, MA 01923**EMERGENCY INFORMATION**Emergency telephone number
(CHEMTREC): (800) 424-9300
Other Calls: (978) 777-1100**2. COMPOSITION/INFORMATION ON INGREDIENTS****HAZARDOUS CONSTITUENTS****Exposure limits**

Constituent	Abbr.	CAS No.	Weight percent	ACGIH TLV	OSHA PEL	Other Limits
Methacryloxyethyl acid phosphate		52628032	1-10	n/e	n/e	n/e
Methacrylic acid	MAA	79414	1-10	20 ppm	20 ppm	4 ppm (Manufacturer)
Methyl Methacrylate Monomer	MMA	80626	40-70	50 ppm	100 ppm	100 ppm (Canada)
Metallic Dimethacrylate		*	< 5	n/e	n/e	n/e

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) established by the American Conference of Governmental Industrial Hygienists. "STEL" indicates a short-term exposure limit. "PEL" indicates the OSHA Permissible Exposure Limit. "n/e" indicates that no exposure limit has been established. An asterisk (*) indicates a substance whose identity is a trade secret of our supplier and unknown to us.

3. HAZARDS IDENTIFICATION**Emergency Overview**

Appearance, form, odor: Off-white paste with varied fragrant odor.

WARNING! Flammable. Eye, skin and respiratory irritant. Skin sensitizer. Harmful if inhaled or absorbed through skin. Chronic overexposure may cause liver and kidney effects.

Potential health effects

Primary routes of exposure: Skin contact Skin absorption Eye contact Inhalation Ingestion

Symptoms of acute overexposure:

Skin: May cause irritation and sensitization (itching, redness, rashes, hives, burning, swelling). May be absorbed through the skin.

Eyes: May be corrosive (burns). Liquid and vapors causes moderate to severe irritation (pain, tearing, redness, swelling). May cause destruction of eye tissue and corneal damage.

Inhalation

: High concentration is irritant to respiratory tract and may cause coughing accompanied by chest pain, nasal discomfort

Ingestion

: Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain. May cause nausea and vomiting.

Effects of chronic overexposure:

Prolonged exposure may lead to kidney, lung, liver and heart damage; not likely to cause cancer. Not believed to represent a carcinogenic or mutagenic hazard. May cause dermatitis and/or skin sensitization (itching, redness, rashes, hives, burning, swelling) and/or numbness/prickling of the skin. Repeated or prolonged inhalation exposure may cause asthma. May effect the central and/or peripheral nervous systems.

Carcinogenicity -- OSHA regulated: No

ACGIH: No

National Toxicology Program: No

International Agency for Research on Cancer:No

Medical conditions which may be aggravated by exposure:

Eye disease, skin disorders and allergies (e.g.eczema), asthma and lung disorders.

Other

MMA: Developmental toxicity observed in animal tests, but only at levels toxic to the mother. MMA is reported to impair human olfactory function.

4. FIRST AID MEASURES**First aid for eyes:**

Flush eye with clean water for at least 15 minutes while gently holding eyelids open. Get immediate medical attention.

First aid for skin:

Immediately remove contaminated clothing and excess contaminant. Flush skin with water. Wash thoroughly with warm soap and water. Consult a physician if irritation develops.

First aid for inhalation:

Remove patient to fresh air. Administer oxygen if breathing is difficult. If not breathing, give artificial respiration. Get medical attention if symptoms persist.

First aid for ingestion:

Do NOT induce vomiting. Rinse mouth out with water, then sip 2 glasses of water. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips (if sitting) or to the side (if lying down) to prevent aspiration. Get medical attention.

5. FIRE FIGHTING MEASURES**General fire and explosion characteristics:**

Vapor forms explosive mixture with air.

Extinguishing media: Water Carbon dioxide Dry chemical Foam Alcohol foam**Flash Point (°F):** 50**Method:** TCC**Explosive limits in air (percent) -- Lower:** 1.7**Upper:** 12.5**Special firefighting procedures:**

Approach fire from upwind. Wear self contained breathing apparatus and full protective equipment. Cool tank with water spray, but do not direct a solid stream of water or foam into burning material. Fight fire from a distance as the heat may rupture the tanks.

Unusual fire and explosion hazards:

Sealed containers at elevated temperatures may rupture due to polymerization. Vapors are heavier than air and may travel to ignition sources and flash back. Burning liquid may float on water. Personnel in vicinity and downwind should be evacuated.

Hazardous products of combustion:

Carbon monoxide, carbon dioxide, hydrogen chloride, organic acids, aldehydes, alcohols, sulfur dioxide, metallic

6. ACCIDENTAL RELEASE MEASURES**Spill control:**

Avoid personal contact. Evacuate area. Eliminate ignition sources. Ventilate area.

Containment:

Dike, contain and absorb with clay, sand or other suitable non-combustible material.

Cleanup:

For large spills, pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand, or other suitable material and dispose of properly (RCRA hazardous waste). Add inhibitor as contaminated monomer may polymerize.

Special procedures:

Prevent spill from entering drainage/sewer systems, waterways, and surface waters. Spills on porous surfaces can contaminate groundwater. Prevent material from entering low areas. Notify authorities immediately if liquid enters sewer/public waters. Use bonding/ grounding lines and non-sparking tools. Have proper fire extinguishers manned by

7. HANDLING AND STORAGE**Handling precautions:**

Do not breathe vapor or mist. Do not get in eyes, on skin or clothing. Wash thoroughly with soap and water after using and particularly before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Air dry and then launder contaminated clothing and protective gear before reuse. Close container after each use. Ground/bond container when pouring. Keep away from heat, flame or sparks. Use non-sparking tools and explosion-proof equipment.

Storage:

Keep in a cool and ventilated place, without direct exposure to sunlight. Keep container tightly closed and otherwise in accordance with NFPA regulations. Maintain air space in storage containers, inhibitor requires oxygen contact to function. Vapors are uninhibited and may form polymers in vents or flame arrestors, resulting in blockage of vents. Check inhibitor levels after 6 months and return to original level.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

Ventilation :

Use ventilation that is adequate to keep employee exposure to airborne concentrations below exposure limits.

Other engineering controls :

Have emergency eye wash and safety shower present.

Personal protective equipment

Eye and face protection:

Wear safety glasses. Wear coverall chemical splash goggles and face shield when eye and face contact is possible.

Skin protection:

Chemical-resistant gloves (i.e. butyl, nitrile) and other gear as required to prevent skin contact. The breakthrough time

Respiratory protection:

A NIOSH/MSHA air purifying respirator with an organic vapor cartridge may be permissible as exposure levels dictate. However use a positive pressure air supplied respirator if there is any potential for uncontrolled release, or unknown exposure levels, or when airborne concentrations exceed 10 times the TLV or PEL.

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific gravity:	n/d	Boiling point (°F):	n/d
Melting point (°F):	n/d	Vapor density (air = 1):	> 1
Vapor pressure (mmHg):	n/d at 0 °F	Evaporation rate (butyl acetate = 1):	n/d
VOC (grams/liter):	< 50 mixed	Solubility in water:	n/d
Percent volatile by volume:	n/d	pH (5% solution or slurry in water):	n/d
Percent solids by weight:	n/d		

10. STABILITY AND REACTIVITY

This material is chemically stable. Hazardous polymerization may occur.

Conditions to avoid :

Heat, sparks, open flames and other ignition sources. UV light. Inerting. Oxygen-free atmospheres. Corrosion of storage containers. Material can soften paint and rubber.

Incompatible materials:

Incompatible with strong oxidizing agents (e.g. peroxides, nitrates), reducing agents, acids, bases, azo-compounds, catalytic metals (e.g. copper, iron), halogens.

Hazardous products of decomposition:

Oxides of carbon/nitrogen. Hydrocarbons, acrolein, metal fumes, hydrogen chloride, organic acids, aldehydes, alcohols, phosphoric compounds.

Conditions under which hazardous polymerization may occur:

Excessive heat, excessive aging, storage in the absence of inhibitor, oxygen-free atmospheres, ultraviolet light (sunlight), inadvertent addition of catalyst and contamination.

11. TOXICOLOGICAL INFORMATION

Acute oral effects: LD50 (rat): Not available
Toxicity exposed near LD50 include blood in the urine and liver changes.

Acute dermal effects: LD50 (rabbit): Not available
Dermatitis. May cause sensitization by skin contact.

Acute inhalation effects: LC50 (rat): Not available Exposure: 4 hours.
Toxicity at 8-100 times TLV from respiratory and gastrointestinal irritation, lung damage, nervous system effects and

Eye
Irritant.

Subchronic effects:
Inhalation: Repeated exposure at 5-100 times the TLV of MMA include lung damage, pulmonary irritation, liver changes, eye irritation, nasal tissue changes, incoordination and upper respiratory irritation. Ingestion: Liver and

Carcinogenicity, teratogenicity, and mutagenicity:
Possible reproductive hazard based on animal data. MMA did not cause birth defects, malformations or fetal toxicity in pregnant rats inhaling concentrations up to 2028 ppm.

Other chronic effects:
MMA: Inhalation: long term exposure caused inflammation of the nasal cavity, changes in nasal sensory cells and decreased body weight. Produced adverse effects on the nasal epithelium of animals inhaling airborne concentrations of 100 and 400 ppm. Ingestion: Can cause decreased body weight, and increased kidney weight.

Toxicological information on hazardous chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
Methacryloxyethyl acid phosphate	n/d	n/d	n/d
Methacrylic acid	1060 mg/kg	500 mg/kg	>1300 ppm
Methyl Methacrylate Monomer	7872 mg/kg	> 5,000 mg/kg	7093 ppm
Metallic Dimethacrylate	n/d	n/d	n/d

'n/d' = 'not determined'

12 ECOLOGICAL INFORMATION**Ecotoxicity:**

MMA: Low toxicity to fish; LC50 (fish): typically > 100 mg/L; estimate of 96 hr median threshold limit: 100-1,000 ppm; LC50 (fathead minnow, 96 hr) - 150 ppm; LC50 (bluegill sunfish, 96 hr) - 232 ppm. Harmful to aquatic invertebrates; EC50 (Daphnia Magna, 48 hr) - 69 mg/L. Low toxicity to algae; EC50 (Selenastrum Capricornutum, 96 hr) - 170 mg/L. NOEC (Zebra fish, 35 day, flow through) - 8.4 mg/L. MAA has: LC50 = 85mg/l, 96 hr, Rainbow trout (slightly toxic); EC50 > 130 mg/l, 48 hr, Daphnia magna (practically non-toxic); EC50 = 0.6 mg/l, 96 hr, Algae (highly toxic).

Mobility and persistence:

MMA: partially biodegradable in water. BOD-5 day: 0.14 g/g - 0.90 g/g; THOD : 1.92 g/g; Chemical Oxygen Demand - 28 day: 88%; Inherent Biodegradation - Dissolved Organic Carbon Removal: > 95% (28 day). MAA readily biodegraded (86% within 28 days) under aerobic conditions.

biodegraded (86% within 28 days) under aerobic conditions.

Environmental fate:

MMA: produces high tonnage material in wholly contained systems. Liquid with moderate mobility. Sparingly soluble in water. Low potential for bioaccumulation. Predicted to have high mobility in soil. Substantially removed in biological treatment processes. MAA is highly mobile, not adsorbed to soil.

13. DISPOSAL CONSIDERATIONS

Please see also Section 15, Regulatory Information.

Waste management recommendations:

If this product becomes a waste, it would be a hazardous waste by RCRA criteria (40CFR 261). Dispose of according to applicable federal, state, and local regulations. Do not dispose of in a landfill. Incineration is the preferred method of disposal. Empty containers still contain hazardous product residue (vapors and/or liquid). Follow all MSDS and label warnings even after container is emptied. Residual vapors in empty containers may explode on ignition - DO NOT pressurize, or expose to heat, flame, sparks, static electricity or other sources of ignition (i.e. cutting, drilling, grinding, or welding on or near container).

14. TRANSPORT INFORMATION

Proper shipping name: Adhesives *

Technical name : N/A

Hazard class : 3

UN number: 1133

Packing group: II

Emergency Response Guide no.: 128

IMDG page number: N/A

Other: Containers < 30 liters are PG III

*Depending upon the size and type of container, this material may be reclassified as "Consumer Commodity, ORM-D" for shipments within the United States, or "Limited Quantity" elsewhere. Refer to the appropriate regulation.

15. REGULATORY INFORMATION**U.S. Federal Regulations****TSCA**

All ingredients of this product are listed, or are exempt from listing, on the TSCA inventory.

The following RCRA code(s) applies to this material if it becomes waste:

D001

Regulatory status of hazardous chemical constituents of this product:

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Methacryloxyethyl acid phosphate	No	No	0.0	Not required

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Methacrylic acid	No	No	0.0	Not required
Methyl Methacrylate Monomer	No	Yes	1000.0	Required
Metallic Dimethacrylate	No	Yes	0.0	Not required

*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance list.

**Substances for which the "Toxic Chemical" column is marked "Yes" are on the SARA Section 313 list of Toxic Chemicals, for which release reporting may be required. For specific requirements, consult the appropriate regulations.

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: - Immediate health hazard -- Delayed health hazard -- Fire hazard -- Reactivity hazard -

Canadian regulations

WHMIS hazard class(es): B2; D2B

All components of this product are on the Domestic Substances List.

Regulatory notes:

In normal use, the methyl methacrylate in this product is polymerized during cure. For purposes of air quality regulations, the maximum amount of VOC (i.e. MMA) emitted is negligible (less than 5 %). Actual emissions are a function of substrate and process and should be considered on an individual basis.

16. OTHER INFORMATION

Hazardous Materials Identification System (HMIS) ratings:	Health	Flammability	Reactivity
	1 2*	3	2

The information and recommendations in this document are based on the best information available to us at the time of preparation, but we make no other warranty, express or implied, as to its correctness or completeness, or as to the results of reliance on this document.

MA 830/MA 832/MA 833 GRAY ACTIVATOR

This product appears in the following stock number(s):

IT182 IT186 IT261 IT262 IT264 IT281 IT284 IT332

Last revised: 12/01/04

Printed: 2/20/2006

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**Tradename:** MA 830/MA 832/MA 833 GRAY ACTIVATOR**General use:** This information applies to the activator component of the two-part kit. After curing, the product is not hazardous.**Chemical family:** Epoxy resin**MANUFACTURER**ITW Plexus
30 Endicott St.
Danvers, MA 01923**EMERGENCY INFORMATION****Emergency telephone number**
(CHEMTREC): (800) 424-9300
Other Calls: (978) 777-1100**2. COMPOSITION/INFORMATION ON INGREDIENTS****HAZARDOUS CONSTITUENTS****Exposure limits**

Constituent	Abbr.	CAS No.	Weight percent	ACGIH TLV	OSHA PEL	Other Limits
Bisphenol A diglycidyl ether resin	DGEBPA	25068386	10-30	n/e	n/e	n/e
Diisodecyl phthalate		TRADE SECRET	< 5	n/e	n/e	n/e
Butyl benzyl phthalate	BBP	85687	10-30	n/e	n/e	5 mg/m ³
Benzoyl peroxide	BPO	94360	10-30	5 mg/m ³	5 mg/m ³	5 ppm (Canada)

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) established by the American Conference of Governmental Industrial Hygienists. "STEL" indicates a short-term exposure limit. "PEL" indicates the OSHA Permissible Exposure Limit. "n/e" indicates that no exposure limit has been established. An asterisk (*) indicates a substance whose identity is a trade secret of our supplier and unknown to us.

3. HAZARDS IDENTIFICATION**Emergency Overview**

Appearance, form, odor: gray viscous liquid with little odor.

WARNING! Eye and skin irritant. Potential skin sensitizer.**Potential health effects**

Primary routes of exposure: Skin contact Skin absorption Eye contact Inhalation Ingestion

Symptoms of acute overexposure:

Skin: Moderate irritant. Contact at elevated temperatures can cause thermal burns which may result in permanent damage. May cause skin sensitization (itching, redness, rashes, hives, burning, swelling).

Eyes: Moderate irritant (stinging, burning sensation, tearing, redness, swelling). Contact at elevated temperatures can cause thermal burns which may result in permanent damage or blindness.

Inhalation:

The low vapor pressure of the resin makes inhalation unlikely in normal use. In applications where vapors (caused by high temperature) or mists (caused by mixing) are created, breathing may cause a mild burning sensation in the nose, throat and lungs.

Ingestion:

Acute oral toxicity is low. May cause gastric distress (nausea, vomiting, diarrhea). May cause adverse reproductive affects at high doses.

Effects of chronic overexposure:

Prolonged or repeated skin contact may cause sensitization, with itching, swelling, or rashes on later exposure. Pure benzoyl peroxide is reported to be an allergen.

Carcinogenicity -- OSHA regulated: No

ACGIH: No

National Toxicology Program: No

International Agency for Research on Cancer:No

Cancer-suspect constituent(s) : None

Medical conditions which may be aggravated by exposure:

Preexisting eye and skin disorders. Development of preexisting skin or lung allergy symptoms may increase.

Other effects:

See section 11.

4. FIRST AID MEASURES

First aid for eyes:

Flush eye with clean water for at least 20 minutes while gently holding eyelids open, lifting upper and lower lids. Get immediate medical attention.

First aid for skin:

Immediately remove contaminated clothing and excess contaminant. Flush skin with water for at least 15 minutes. Wash thoroughly with soap and warm water. Consult a physician if irritation develops.

First aid for inhalation:

Remove patient to fresh air. Administer oxygen if breathing is difficult. Get medical attention if symptoms persist.

First aid for ingestion:

Do NOT induce vomiting. Rinse mouth out with water, then sip 2 glasses of water. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips (if sitting) or to the side (if lying down) to prevent aspiration. Get medical attention.

5. FIRE FIGHTING MEASURES

General fire and explosion characteristics:

Decomposition products can be flammable. Self accelerating decomposition temperature is 129 F (estimated).

Extinguishing media:

Water

Carbon dioxide

Dry chemical

Foam

Alcohol foam

Flash Point (°F): n/d

Method: (No flashpoint method for peroxides)

Explosive limits in air (percent) -- Lower: n/d

Upper: n/d

Special firefighting procedures:

If large amounts of material are involved, evacuate area and fight fire from safe distance. Do not enter confined space without full bunker gear. Firefighters should wear self-contained breathing apparatus and protective clothing. Cool fire exposed containers with water.

Unusual fire and explosion hazards:

Benzoyl peroxide can decompose violently if heated strongly while confined. Personnel in vicinity and downwind should be evacuated.

Hazardous products of combustion:

When heated to decomposition it emits fumes of Cl-, carbon monoxide, other fumes and vapors varying in composition and toxicity.

6. ACCIDENTAL RELEASE MEASURES**Spill control:**

Avoid personal contact. Eliminate ignition sources. Ventilate area.

Containment:

Dike, contain and absorb with clay, sand or other suitable material.

Cleanup:

For large spills, pump to storage/ salvage vessels. Soak up residue with an absorbent such as clay, sand, or other suitable material and dispose of properly. Flush area with water to remove trace residue.

Special procedures:

Prevent spill from entering drainage/ sewer systems, waterways, and surface waters. Notify appropriate authorities as required. Use non-sparking tools.

7. HANDLING AND STORAGE**Handling precautions:**

Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after using and particularly before eating, drinking, smoking, applying cosmetics, or using toilet facilities.

Laundry contaminated clothing and protective gear before reuse. Discard contaminated leather articles.

Provide appropriate ventilation/ respiratory protection against decomposition products (see Section 10) during welding/ flame cutting operations and against particulates during sanding/ grinding. Use nonsparking equipment.

Storage:

Store in a cool, dry area away from high temperatures and flames. Storage above 100 F will reduce useful life of the material. Keep from heat, sparks, and open flame. Exposure to high heat may cause a reaction.

Do not store near combustibles.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Engineering controls****Ventilation :**

Use ventilation that is adequate to keep employee exposure to airborne concentrations below exposure limits.

Other engineering controls :

Have emergency shower and eye wash available.

Personal protective equipment**Eye and face protection:**

Chemical goggles if liquid contact is likely, or Safety glasses with side shields.

Skin protection:

Chemical-resistant gloves and other gear as required to prevent skin contact. The breakthrough time of the selected glove(s) must be greater than the intended use period.

Respiratory protection:

None required at normal handling temperatures and conditions. Use NIOSH approved organic vapor cartridges for uncured resin and dust/ particle respirators during grinding/ sanding operations of cured resin as exposure levels dictate.

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific gravity:	1.06	Boiling point (°F):	n/d
Melting point (°F):	n/d	Vapor density (air = 1):	n/d
Vapor pressure (mmHg):	n/d at 171 °F	Evaporation rate (butyl acetate = 1):	<<1
VOC (grams/liter):	< 50 mixed	Solubility in water:	slight
Percent volatile by volume:	n/d	pH (5% solution or slurry in water):	neutral
Percent solids by weight:	n/d		

10. STABILITY AND REACTIVITY

This material is chemically stable. Hazardous polymerization will not occur.

Conditions to avoid :

Heat, spark, open flame, contamination, and friction.

Incompatible materials:

Strong Lewis or mineral acids, strong oxidizing agents, strong mineral and organic bases (especially primary and secondary aliphatic amines). Polymerization accelerators.

Hazardous products of decomposition:

Oxides of carbon; aldehydes, acids, flammable and toxic fumes, nitrogen oxides, ammonia, sulfur oxides, and other organic substances may be formed during combustion.

Conditions under which hazardous polymerization may occur:

Heat is generated when activator is mixed with adhesive; Run-a-way cure reactions may char and decompose the activator, generating unidentified fumes and vapors which may be toxic.

11. TOXICOLOGICAL INFORMATION

Acute oral effects: LD50 (rat): > 5000 mg/kg

BPO: slightly toxic to practically non-toxic to rats.

Acute dermal effects: LD50 (rabbit): Not available

BPO: non-irritating to rabbits (4-hr exposure). Repeated controlled human skin contact studies produced skin allergy.

Acute inhalation effects: LC50 (rat): Not available

Exposure: 8 hours.

BPO: practically non-toxic to rats (LC50 > 22.4 mg/L, 4-hr).

Eye irritation:

BPO: severely irritating to rabbits.

Subchronic effects:

No data available.

Carcinogenicity, teratogenicity, and mutagenicity:

1) **MUTAGENICITY:** Liquid resins based on diglycidyl ether of Bisphenol A (DGEBA), have proved to be inactive when tested by in vivo mutagenicity assays. These resins have shown activity in in vitro microbial mutagenicity screening and have produced chromosomal aberrations in cultured rat liver cells. The significance of these tests to man is unknown. 2) **CARCINOGENICITY:** Recent 2-year bioassays in rats and mice exposed by the dermal route to DGEBA yielded no evidence of carcinogenicity to the skin or any other organs. This study clarifies prior equivocal results from a 2-year mouse skin painting study, which were suggestive, but not conclusive, for weak carcinogenic activity. 3) The International Agency for Research on Cancer (IARC) concluded that DGEBA is not classifiable as a carcinogen (IARC group 3), that is human and animal evidence of carcinogenicity is inadequate. BPO: both positive and negative (mutagenic and non-mutagenic) responses occurred in tests with animal or bacterial cells. Repeated skin application with a known carcinogen enhanced skin tumor production in mice by the carcinogen.

Other chronic effects:

DGEBA: Prolonged or repeated skin contact may cause sensitization, with itching, swelling, or rashes on later exposure. Studies have shown bisphenol A diglycidyl ether resin to cause allergic contact dermatitis. BPO: Rats fed dose of 2800 mg/kg for 2-yrs showed increase incidence of testicular atrophy.

Toxicological information on hazardous chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
Bisphenol A diglycidyl ether resin	11.4 g/kg	>20 ml/kg	no deaths
Diisodecyl phthalate	64gm/kg	>3160 mg/kg	n/d
Butyl benzyl phthalate	2330 mg/kg	>10 mg/kg	n/d
Benzoyl peroxide	7710 mg/kg	n/d	n/d

'n/d' = 'not determined'

12 ECOLOGICAL INFORMATION**Ecotoxicity:**

BPO: 96 hr, LC50 guppy (semi-static) = 2.0 mg/l, moderately toxic.

Mobility and persistence:

BPO: almost 60 % biodegradation was reached after 28 days in the closed bottle ready biodegradability test.

Environmental fate:

BPO: EC50 = 35 mg/L absorbed to gel for activated sludge respiration inhibition.

13. DISPOSAL CONSIDERATIONS

Please see also Section 15, Regulatory Information.

Waste management recommendations:

If this product becomes a waste, it would not be a hazardous waste by RCRA criteria (40CFR 261). Dispose of according to applicable federal, state, and local regulations. Incineration is the preferred method of disposal.

14. TRANSPORT INFORMATION

Proper shipping name: Environmentally hazardous substances, liquid, n.o.s.
Technical name : Butyl Benzyl Phthalate
Hazard class : 9
UN number: 3082
Packing group: III
Emergency Response Guide no.: 171
IMDG page number: N/A
Other: RQ > 985 lbs (< 985 lbs is non-regulated ground & air). Marine pollutant.

15. REGULATORY INFORMATION**U.S. Federal Regulations****TSCA**

All ingredients of this product are listed, or are exempt from listing, on the TSCA inventory.

The following RCRA code(s) applies to this material if it becomes waste:

None

Regulatory status of hazardous chemical constituents of this product:

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Bisphenol A diglycidyl ether resin	No	No	0.0	Not required
Diisodecyl phthalate	No	No	0.0	Required
Butyl benzyl phthalate	No	No	100.0	Required
Benzoyl peroxide	No	Yes	0.0	Not required

*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance list.

**Substances for which the "Toxic Chemical" column is marked "Yes" are on the SARA Section 313 list of Toxic Chemicals, for which release reporting may be required. For specific requirements, consult the appropriate regulations.

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: - Immediate health hazard -- Delayed health hazard -- Reactivity hazard -

Canadian regulations

WHMIS hazard class(es) : D2B

All components of this product are on the Domestic Substances List.

16. OTHER INFORMATION

Hazardous Materials Identification System (HMIS) ratings:	Health 2*	Flammability 2	Reactivity 1
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The information and recommendations in this document are based on the best information available to us at the time of preparation, but we make no other warranty, express or implied, as to its correctness or completeness, or as to the results of reliance on this document.

MATERIAL SAFETY DATA SHEET

MSDS Name: STA'-PUT S245 E/F HIGH SOLIDS SPRAY ADHESIVE
S Number: S245-05C

MSDS Last Updated: NOV-25-2002 Printed On: 12/10/02
Page Number: 1

SECTION I - PRODUCT AND COMPANY INFORMATION

Product Name: STA'-PUT S245 E/F HIGH SOLIDS SPRAY
ADHESIVE
CAS Number: MIXTURE
Hazard Rating: Health: 2 Fire: 3 Reactivity: 0 PPI: B

Company Identification: ITW TACC
AIR STATION INDUSTRIAL PARK
ROCKLAND MA 02370

Telephone/Fax: (781) 878-7015 (781) 871-6727
Chemtrec (24 Hour): (800) 424-9300

Trade Name: STA'-PUT S245
Product Code: S245
DOT Hazard Class: 3
UN Number: 1133
Shipping Name: ADHESIVES
Packaging Group: II

SECTION II - HAZARDOUS INFORMATION

Ingredient Name	CAS Number	Percent	TSCA
ACETONE	67-64-1	25-50	Y
METHYL ACETATE	79-20-9	7-13	Y
TOLUENE	108-88-3	3-7	Y
LIGHT ALIPHATIC NAPHTHA	64742-89-8	1-5	Y
HEXANE	110-54-3	1-5	Y

SECTION III - PHYSICAL DATA

Boiling Range: 0.0F - 315.0F

MATERIAL SAFETY DATA SHEET

MSDS Name: STA'-PUT S245 E/F HIGH SOLIDS SPRAY ADHESIVE
MSDS Number: S245-05C

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Evaporation Rate: Faster than n-Butyl Acetate
% Volatile Weight: 59.0%
% Volatile Volume: Not Available
Specific Gravity: 0.92558
Weight/Volume Measure: 7.7084
EPA Method 24 VOC: 243.5 g/L

=====
SECTION IV - FIRE AND EXPLOSION HAZARD DANGER
=====

Flammability Class: IB
Flash Range: < 0
Explosive Range: 1.0%
16.0%

EXTINGUISHING MEDIA:

Foam, dry chemical, carbon dioxide, water spray or fog.

SPECIAL FIREFIGHTING PROCEDURES:

Avoid breathing smoke. Use air supplied rescue equipment for enclosed area. Water tends to spread burning liquid if large funnels used.

UNUSUAL FIRE & EXPLOSION HAZARDS:

Vapors are heavier than air and may travel to an ignition source distant from the material handling point.

=====
SECTION V - HEALTH HAZARD DATA
=====

PERMISSIBLE EXPOSURE LEVEL:

SEE SECTION VIII.

EFFECTS OF OVEREXPOSURE:

INGESTION: Can cause gastrointestinal irritation, nausea and vomiting. Aspiration of material into lungs may cause chemical pneumonitis which can be fatal.

INHALATION: May cause nose or throat irritation. High concentrations may cause acute central nervous system depression characterized by headaches, dizziness, nausea and confusion.

EYES: May cause severe eye irritation and corneal damage.

SKIN: May cause dermatitis. May cause defatting and irritation of the skin.

FIRST AID:

EYES: Flush with large amounts of water, lifting upper and lower lids occasionally. Get medical attention.

MATERIAL SAFETY DATA SHEET

MSDS Name: STA'-PUT S245 E/F HIGH SOLIDS SPRAY ADHESIVE

MSDS Number: S245-05C

MSDS Last Updated: NOV-25-2002

Printed On: 12/10/02

Page Number: 3

SKIN: Prolonged or repeated contact can cause irritation and possible defatting of skin.

INGESTION: Do not induce vomiting, keep person warm, quiet, and get medical attention (aspiration of this material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal.

INHALATION: Remove individual to fresh air and if breathing is difficult, administer oxygen.

SECTION VI - REACTIVITY DATA

Stability: This product is stable
Hazardous Polymerization: Hazardous polymerization will not occur

INCOMPATIBILITY:

Strong oxidizing agents, strong acids and bases.

CONDITIONS TO AVOID:

Fire, sparks, static electricity.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon monoxide, carbon dioxide.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Keep spectators away. Eliminate all ignition sources (flames, hot surfaces and sources of electrical, static or frictional sparks). Dike and contain spill with inert material (e.g. sand, earth). Transfer liquids to covered metal containers for recovery or disposal, or remove with inert absorbent. Use only non-sparking tools. Place absorbent diking materials in covered metal containers for disposal. Prevent contamination of sewers, streams and groundwater with spilled material or used absorbent.

WASTE DISPOSAL METHOD:

Dispose of in accordance with local, state and federal

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:

ACGIH TLV ACGIH TLV-C ACGIH STEL OSHA STEL OSHA PEL

ACETONE

MATERIAL SAFETY DATA SHEET

MSDS Name: STA'-PUT S245 E/F HIGH SOLIDS SPRAY ADHESIVE

MSDS Number: S245-05C

MSDS Last Updated: NOV-25-2002

Printed On: 12/10/02

Page Number: 4

	500.00 PPM	N/est	750.00 PPM	N/est	1000.00 PPM
METHYL ACETATE	200.00 PPM	N/est	250.00 PPM	N/est	200.00 PPM
TOLUENE	50.00 PPM	N/est	N/est	N/est	200.00 PPM
LIGHT ALIPHATIC NAPHTHA	100.00 PPM	N/est	N/est	N/est	500.00 PPM
HEXANE	400.00 PPM	N/est	500.00 PPM	N/est	500.00 PPM

RESPIRATORY PROTECTION:

If workplace exposure limit of product is exceeded, a NIOSH/MSHA approved air supplied respirator must be used in absence of proper environmental control. Engineering or administrative controls should be implemented to reduce exposure.

VENTILATION:

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below PEL.

PROTECTIVE GLOVES:

Chemical resistant gloves.

EYE PROTECTION:

Chemical splash goggles in compliance with OSHA regulations are advised.

OTHER PROTECTIVE EQUIPMENT:

To prevent repeated, prolonged skin contact, wear impervious clothing and boots.

=====
SECTION IX - SPECIAL PRECAUTIONS
=====

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Keep container closed when not in use. Store at 60-95 degrees F and out of the sun. Use adequate ventilation to avoid breathing vapors when cover is removed. Ground all equipment when handling flammable solventborne materials.

OTHER PRECAUTIONS:

Containers may be hazardous when empty. Never use welding or cutting torch on or near drum (even when empty).

=====
SECTION X - ADDITIONAL REGULATORY INFORMATION
=====

MATERIAL SAFETY DATA SHEET

MSDS Name: STA'-PUT S245 E/F HIGH SOLIDS SPRAY ADHESIVE

MSDS Number: S245-05C

MSDS Last Updated: NOV-25-2002

Printed On: 12/10/02

Page Number: 5

=====

-SARA TITLE III SECTION 313:

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372:

Ingredient Name	CAS Number	Percent
TOLUENE	108-88-3	3-7
HEXANE	110-54-3	1-5

-PROP 65 (TERATOGEN)

WARNING: This product contains a chemical known to the state of California to cause birth defects or other reproductive harm.

Ingredient Name	CAS Number	Percent
TOLUENE	108-88-3	3-7

The following ingredients are registered for TSCA 12B

Ingredient Name	CAS Number	Percent
TONE	67-64-1	25-50
HEXANE	110-54-3	1-5

DISCLAIMER

***** NOTICE *****

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of ITW TACC. The data on this sheet relates only to the specific material designated herein. ITW TACC assumes no legal responsibility for use or reliance upon these data.

MATERIAL SAFETY DATA SHEET

PRODUCT
Eperan or Eperan-PP

KANEKA TEXAS CORPORATION
 200 NORTHPOINT DR., SUITE 200
 HOUSTON, TX 77060

I. GENERAL			
Trade Name: Eperan or Eperan-PP		Telephone Number: (713) 447-0755	
Other Names (Synonyms):		Emergency: (713) 474-7534	
Chemical Family: Polyethylene or Ethylene Propylene Copolymer		DOT Proper Shipping Name: Not regulated	
Generic Name:		DOT Hazard Class: Regulated	
		DOT Hazard Label: Not required	
		DOT ID#: Not Required	
II. COMPONENTS			
Product	Component Name	CAS No.	Composition amount (Wt.)
Eperan (Polyethylene beads)	Polyethylene	9002-88-4	>99%
	Calcium Phosphate	1306-06-5	less than 2000 ppm
Eperan-PP (Polypropylene beads)	Ethylene Propylene Copolymer	9010-79 1	>99%
	Calcium Phosphate	1306-06-5	less than 1500 ppm
III. SUMMARY OF HAZARDS			
Combustible solid. Vapors or fumes from molten processes may be irritating.			
IV. FIRE AND EXPLOSION			
Flash Point (Method) N/A	Auto-ignition Temperature: >600F	Flammable Limits: LEL=N/A UEL=N/A	

MATERIAL SAFETY DATA SHEET

PRODUCT

Eperan or Eperan-PP

Extinguishing Media: Dry Chemical, CO ₂ , Foam, Water.	
Special Firefighting: Procedures:	Do not enter fire area without proper protection. See decomposition products. Fight fire from safe distance/protected location. For large fire, use lots of water, solid stream to "DIG" into molten mass and open up, cool interior, prevent reignition. Use spray/fog for surface cooling. Keep above burning material. Molten material forms flaming drops after igniting. Notify authorities if liquid enters sewer/public waters.
Unusual Fire and Explosion Hazards:	Beads are likely to be charged with static electricity and may become an ignition source.
V. HEALTH HAZARDS	
Acute Toxicity:	No known effects.
Chronic Toxicity:	No known effects.
Eyes:	Vapors or fumes from molten polymer may cause irritation.
Skin:	Not expected to present a skin hazard under anticipated conditions of normal use.
Inhalation:	Not expected to present a respiratory problem. Vapors or fumes from molten polymers or beads may be irritating to the respiratory tract. See Respiratory Protection.
VI. PROTECTIVE EQUIPMENT AND OTHER CONTROL MEASURES	
Ventilation:	Local exhaust is recommended. Maintain low dust concentration. See Fire and Explosion Hazard section.
Respiratory Protection:	Use NIOSH approved high efficiency dust respirator when dusty conditions prevail. No TLV-TWA has been established for this dust. The ACGIH recommends that nuisance particulates be limited to 10 mg/M ³ , total dust. OSHA and ACGIH recommends that nuisance dust, respirable 5 mg/M ³ for 8 hours. An organic vapor respirator may be needed during molten or heating processes if ventilation is inadequate.
Eye and Face Protection:	Chemical worker's goggles may be needed during molten or heating process if ventilation is inadequate. Do not wear contact lenses.

MATERIAL SAFETY DATA SHEET

PRODUCT

Eperan or Eperan-PP

Other Clothing/ Equipment:	An eyewash should be readily available.	
VII. EMERGENCY AND FIRST AID		
Inhalation:	Move exposed individual to fresh air. Call a physician.	
Eye Irritation:	Immediately flush eyes with flowing water for at least 15 minutes, occasionally lifting upper and lower lids, until no evidence of irritant remains. Get medical attention.	
Skin Irritation:	Wash area with mild soap and water. Get medical attention if irritation persists.	
VIII. SPILL AND DISPOSAL		
Spill Response:	On land, sweep or shovel into suitable disposal containers. On water, material is insoluble. Collect and contain as any solid. Report per regulatory requirements.	
Recommended Disposal:	Reuse when possible. Landfill solids. Federal, State and Local regulations should be observed when disposing. See regulatory information.	
IX. PHYSICAL AND CHEMICAL DATA		
Specific gravity: 0.05 - 0.06	Volatiles: <1%	Odor: None
Appearance: Expanded beads, molded planks or other shapes, in white, black and other colors.		
Solubility in Water: Insoluble		
Stability: Stable	Conditions to avoid: Avoid exposing dust to ignition sources of high temperatures.	
Incompatibility (Materials to avoid): None		
Hazardous decomposition products: Normal products of hydrocarbon combustion.		

01444

MATERIAL SAFETY DATA SHEET**PRODUCT**

Eperan or Eperan-PP

X.

ADDITIONAL PRECAUTIONS

Storage and Handling: Store in dry area to maintain product quality. No hazard will occur if product becomes wet. All equipment conveying beads should be grounded to avoid static spark. Do not store near open flames or other sources of ignition.

XI.

REGULATORY INFORMATION**FEDERAL REGULATIONS:**

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200;
Based on our hazard evaluation, none of the ingredients in this product are hazardous.

CERCLA, 40 CFR 117. 302:
Notification of spills of this product is not required.

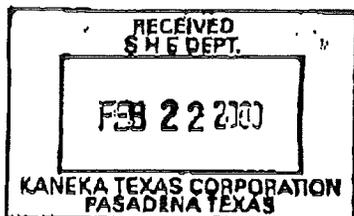
SARA 302 - EXTREMELY HAZARDOUS SUBSTANCES, 40 CFR 355:
This product does not contain ingredients listed in Appendix A and B as an Extremely Hazardous Substance.

SARA 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS, 40 CFR 370:
Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

SARA 313 - LIST OF TOXIC CHEMICALS, 40 CFR 372:
This product does not contain ingredients on the List of Toxic Chemicals at greater than the de minimis reporting level.

TOXIC SUBSTANCES CONTROL ACT (TSCA), 40 CFR 710:
The ingredients in this product are on the 8(b) Inventory List.
RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D:
If this product becomes a waste, in original form, it does not meet the criteria of a hazardous waste as defined by RCRA.

01444

MATERIAL SAFETY DATA SHEET**PRODUCT**

Eperan or Eperan-PP

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 (formerly Sec. 307), 40 CFR 116 (formerly Sec. 311):
None of the ingredients are specifically listed.

CLEAN AIR ACT, Sec. 111 (40 CFR 60), Sec. 112 (40 CFR 61, 1990 Amendments), Sec. 611 (40 CFR 82), CLASS I and II Ozone depleting substances):
This product does not contain ingredients covered by the Clean Air Act.

STATE REGULATIONS:**CALIFORNIA PROPOSITION 65:**

This product does not contain any chemicals which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS:

This product does not contain ingredients listed on the Michigan Critical Materials Register.

STATE RIGHT TO KNOW LAWS:

This product does not contain ingredients listed by State Right To Know Laws.

XII.

USER'S RESPONSIBILITY

Individuals handling this product should be informed of the recommended safety precautions and should have access to this information.

The information on this MSDS has been gathered from standard reference materials and Kaneka Corporation data and to our best knowledge and belief accurate and reliable. Such information is offered solely for your consideration, investigation and verification, and it is not suggested or guaranteed that the precautions or procedures mentioned are the only ones which exist. Kaneka Corporation makes no warranties, expressed or implied, with respect to the use of such information or the use of the specific material identified herein in combination with any other material or process and, therefore, assumes no responsibility. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, handling and use remains the responsibility of the customer.

MOST CURRENT MSDS UPDATE

MSDS ID: P50077

Revised 03/17/03

SUPER SLIDE DRY LUBE 10.25OZNW

*NONE

Replaces 11/23/99

Kent Automotive

1666 East Touhy Avenue
Des Plaines, Illinois

Emergency/Information Telephone:

60018

888-426-4851

Formula: 55960
MSDS Effective: 11/23/99

Section I - Product Identification

Part Number: P50077
Product Name: SUPER SLIDE DRY LUBE 10.25OZNW
Trade Name/Synonyms: SPRAY DRY LUBE
Chemical Family: AEROSOL LUBRICANT

Section II - Hazardous Ingredients

Ingredient	CAS No.	WT %	Pel	TLV	Stel	Units	LC50,PPM	LD50,MG/KG
HEPTANE	00142-82-5	65-70	400	400	500	PPM	MIC 18333	N/A
N-BUTANE	00106-97-8	15	800	800	N/A	PPM	RAT277374	N/A
PROPANE	00074-98-6	15	1000	N/A	N/A	PPM	MLO 10000	N/A
ISOPROPANOL	00067-63-0	<5	400	400	500	PPM	RAT>12000	RAT I 5045 RAB A12800
BENZENE	#00071-43-2	TRACE						
TOLUENE	#00108-88-3	TRACE						

Section III - Physical Data

Boiling Pt Deg F/C: < 0F/-18C
Vapor Pressure(MM HG):N/A
Vapor Density(Air=1):Heavier than air
Solubility In Water: NIL
Physical State: AEROSOL
Freeze PT Deg F/C: N/A
Appearance And Odor: Clear liquid, solvent odor
Voc:Lbs/Gal=5.29; Grams/Liter=634 ; Grams Voc/Gram Solid=N/A ; % Voc 99.7
Specific Gravity:0.64
%Volatile Volume:99.9
Evaporation Rate:Faster than ether
Water/Oil Dist Coeff:0
PH: N/A
Threshold Odor,PPM: N/A

Section IV - Fire and Explosion Hazard Data

Classification: FLAMMABLE AEROSOL
Combustion Products: CO, CO2
Flash Point Deg F/C: Propellant < 0 F/-18 C
Extinguishing Media: Foam, dry chemical, carbon dioxide
Auto Ign. Temp Deg F/C: N/A
Special Fire Fighting Procedures:
Firefighters should wear self-contained breathing equipment.
NFPA Rating: 2,4,0 HMIS: 2,4,0
Lel%:1.1 Uel%:12.7

Unusual Fire And Explosion Hazards:

Exposure to fire, heat or prolonged sunlight may cause bursting. If used in confined spaces, hazardous vapors may spread or build up in low areas.
Burning Rate: HIGH
Static Sensitive: Yes FLAMMABLE

Section V - Health Hazard Data

Routes Of Entry: SKIN CONTACT,EYE,INHALATION

Effects Of Overexposure:

Causes eye & skin irritation. Excess inhalation of vapors may cause respiratory irritaiton, dizziness, weakness, fatigue, nausea, headache & possible

unconsciousness, even death. Prolonged & repeated inhalation may be harmful to respiratory system & central nervous system. Misuse or deliberate inhalation may be harmful or fatal. Warning: This product contains chemicals known to the State of California to cause cancer & birth defects or other reproductive harm.

Any suspected carcinogen = or > 0.1%?: No

Emergency and First Aid Procedures:

EYE: Immediately flush with plenty of water for 15 min. and call physician.
SKIN: Wash thoroughly with plenty of water & soap. INHALATION: If affected, remove to fresh air, administer oxygen & call physician. INGESTION: Accidental ingestion is unlikely. If ingested, call a physician immediately.

Section VI - Reactivity Data

Stable: Yes Conditions to Avoid: Heat, sparks, flames, ignition sources.
Incompatibility(Materials to Avoid): No
Hazardous Decomposition Products: Yes CO,CO2
Hazardous Polymerization: No

Section VII - Spill or Leak Procedures

Listed In: SARA Title III; #302: No #304,Cercla: No #313: No
Steps to be Taken in Case Material is Released or Spilled:
Remove all sources of ignition. Ventilate the area. Clean up with absorbent material.
Disposal Method:
Dispose of wastes in accordance with federal, state and local regulations.
Do not puncture, incinerate or burn containers.

Section VIII - Safe Handling and Protection Information

Ventilation-Local: Recommended Special:N/A
Mechanical: Recommended Other: N/A
Protective Gloves: See Below Eye Protection:Safety glasses
Precautions in Use:
If ventilation is inadequate, wear approved respiratory equipment. Do not

spray near sparks, flame or heated surface. Gloves: None required under normal application where skin contact is minimal.

Estimated LD50, MG/KG: No

Estimated LC50, PPM: No

Sensitization: No

Irritant: Yes EYES, SKIN

Synergistic Agents: No

Section IX - Special Precautions

Precautions to be Taken in Handling and Storing:

Keep away from heat, sparks, flames or sources of ignition. Do not puncture, incinerate, burn or store containers above 120F(47C). Use only in well ventilated areas. Do not breathe vapor or spray mist. Avoid contact with eyes, skin & clothing. Wash thoroughly after using. In case of accident or illness, seek physician immediately, show label or MSDS.

Other Precautions:

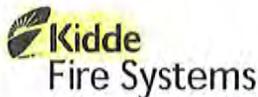
Keep out of reach of children. Always read & follow directions on product label. Additional technical data sheets and/or material safety data sheets (MSDS) are available upon request. For professional & industrial use only.

Symbols, Abbreviations and Notations:

#=Listed in SARA Title III Section 313; @=Non-hazardous ingredient among the Normal product usage should not result in respirable dust that would be hazardous to the respiratory system; N/A=Not available or applicable; *=If found as dust, mist or fume; C=Ceiling limit; S=Skin designation; M=Human; RAB=Rabbits; GPG=Guinea Pigs; MIC=Mice; I=Ingestion; A=Skin absorption; LO=Little observable effect; NO=No effect; Pel=OSHA permissible exposure limit; TLV=ACGIH threshold limit value; Stel=Short term exposure limit.

Final determination of suitability of the chemical(s) is the sole responsibility of the user. Users of any chemicals should satisfy

themselves that the conditions and methods of use assure that the chemical is used safely. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO THE INFORMATION CONTAINED HEREIN OR THE CHEMICAL TO WHICH THE INFORMATION REFERS.



ABC Dry Chemical

MATERIAL SAFETY DATA SHEET

Emergency # (800) 424-9300

4251 Seminole Trail

Charlottesville, VA 22911 (434) 973-4361

Date: July, 2002

SECTION 1 - NAME & HAZARD SUMMARY

Material name: **DRY CHEMICAL** Multipurpose Ammonium Phosphate
Manufacturer: Badger Fire Protection, Inc. Phone (434) 973-4361

SECTION 2 - INGREDIENTS

Material name: Siliceous Muscovite Mica, Mica
OSHA PEL: 20 MPPCF* ACGIH TLV: 20 MPPCF* Other Exposure Limits: None CAS No.: 12001-26-2
*Million particles per cubic foot

SECTION 3 - PHYSICAL DATA

Boiling Point: NA Specific Gravity (H₂O = 1): 1.80 Vapor Pressure (mm Hg): NA
Vapor Density (Air - 1): NA Solubility In Water: Slightly water soluble
Appearance Yellow powder w/and odor: no appearable odor Melting Point: 374° Fahrenheit

SECTION 4 - FIRE & EXPLOSION HAZARD

Flash Point: Noncombustible Method Used: NA
Flammable Limits in Air % by Volume: LEL Lower: NA UEL Upper: NA
Auto-Ignition Temperature: NA Extinguisher Media: NA, This material is a fire extinguisher agent
Special Fire Fighting Procedures: NA Unusual Fire and Explosion Hazards: NA

SECTION 5 - REACTIVITY DATA

Stability: Stable Conditions to Avoid: NA
Incompatibility: (Materials to Avoid): Do not mix with different types of dry chemical extinguishing agents.
Hazardous Polymerization: Will Not Occur Conditions to Avoid: NA

SECTION 6 - HEALTH HAZARD ASSESSMENT

Acute: Transient cough, Irritation of airways, and shortness of breath Chronic: Pneumonconiosis
Signs and Symptoms of Exposure: Coughing and irritation of airways
Medical Conditions Generally Aggravated by Exposure: Asthma, Bronchitis, or other respiratory illness
Chemical Listed as Carcinogen or Potential Carcinogen: N/A
Emergency and First Aid Procedures: Move victims to fresh air. Wash affected area with soap and water. Flush from eyes with large amounts of water for at least 15 minutes. Seek medical attention if necessary.
Routes of entry: Inhalation, Eyes, Skin, Ingestion

SECTION 7 - SPILL OR LEAK PROCEDURES

Precautions to be Taken in Handling and Storage: Multipurpose (ABC) Dry Chemical should be stored in original container or in sealed extinguishers.
Other Precautions: None
Steps to be Taken in Case Material is Released or Spilled: Sweep up. Store in covered containers. Do not reuse.

SECTION 8 - SPECIAL PROTECTION INFORMATION

Respiratory Protection: Dust respirator approved by NIOSH/MSHA schedule TC-ZIC

Ventilation: NA **Local Exhaust:** NA **Mechanical General:** NA **Special:** NA **Other:** NA

Protective Gloves: Sensitive individuals should wear gloves

Eye Protection: Safety glasses are recommended **Other Protective Clothing or Equipment:** NA

Work/Hygienic Practices: Avoid breathing of dust. Wash off with soap and water.

The information herein is given in good faith but no warranty, expressed or implied, is made.



MATERIAL SAFETY DATA SHEET

Kidde 55 Multi-Purpose Dry Chemical (Fire Extinguishing Agent)

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Kidde 55 Multi-Purpose Dry Chemical (Fire Extinguishing Agent)
Other Trade Names ABC, Ammonium Phosphate, Monoammonium Phosphate
Manufacturer/Supplier Kidde - Residential and Commercial
A United Technologies Company
Address 1016 Corporate Park Drive
Mebane, NC 27302
USA
Phone Number (919) 304-8200
(919) 563-5911
Chemtrec Number (800) 424-9300
(for emergencies only) (703) 527-3887 (International)
Revision Date: August 7, 2007
MSDS Date: January 15, 2007

This MSDS has been compiled in accordance with - EC Directive 91/155/EC - OSHA's Hazcom Standard (29 CFR 1910.1200)

2. COMPOSITION/INFORMATION ON THE COMPONENTS

Component Name	CAS#/Codes	Concentration	R Phrases	EU Classification
Monoammonium Phosphate	7722-76-1 EC#2317645	55 - 65%	None	None
Ammonium Sulfate	7783-20-2 EC#2319841	30 - 40%	None	None
Mica	12001-26-2	1 - 4%	None	None
Clay	8031-18-3	<2%	None	None
Amorphous Silica	7631-86-9 EC#2315454	<2%	None	None
Dye	NA	<0.1%	None	None

3. HAZARD IDENTIFICATION

EU Main Hazards

Non Hazardous Powder

Routes of Entry

- Eye contact - Inhalation - Skin contact

Carcinogenic Status

See Section 11 - Toxicity

Target Organs

- Respiratory System - Skin - Eye

Health Effects - Eyes

Contact for short periods of time may cause irritation.

Health Effects - Skin

Contact may cause mild irritation.



MATERIAL SAFETY DATA SHEET

Kidde 55 Multi-Purpose Dry Chemical (Fire Extinguishing Agent)

3. HAZARD IDENTIFICATION

Health Effects - Ingestion

Ingestion is not an expected route of exposure.

Health Effects - Inhalation

May irritate the respiratory tract. May cause transient cough and shortness of breath.

4. FIRST AID MEASURES

Eyes

Immediately flood the eye with plenty of water or warm water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin

Wash affected area with soap and water. Obtain medical attention if irritation persists.

Ingestion

Dilute by drinking large quantities of water and obtain medical attention.

Inhalation

Move victim to fresh air. Obtain medical attention immediately for any breathing difficulty.

Advice to Physicians

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Extinguishing Media

This preparation is used as an extinguishing agent and therefore is not a problem when trying to control a blaze. Use extinguishing agent appropriate to other materials involved. Keep pressurized extinguishers and surroundings cool with water spray as they may rupture or burst in the heat of a fire.

Unusual Fire and Explosion Hazards

Pressurized containers may explode in heat of fire.

Protective Equipment for Fire-Fighting

Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Sweep up or vacuum. Prevent skin and eye contact. Wear appropriate protective equipment.

7. HANDLING AND STORAGE

Pressurized extinguishers should be properly stored and secured to prevent falling or being knocked over. Do not drag, slide or roll extinguishers. Do not drop extinguishers or permit them to strike against each other. Never apply flame or localized heat directly to any part of the extinguisher or plastic container. Store pressurized extinguishers and plastic containers away from high heat sources. Storage area should be: - cool - dry - well ventilated - under cover - out of direct sunlight



MATERIAL SAFETY DATA SHEET

Kidde 55 Multi-Purpose Dry Chemical (Fire Extinguishing Agent)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Standards

Occupational exposure limits are listed below, if they exist.

Mica

ACGIH TLV: 3 mg/m³ TWA, measured as respirable fraction of the aerosol.

OSHA PEL: 20 mppcf, <1% crystalline silica

Nuisance Dust Limit

OSHA PEL: 50 mppcf or 15 mg/m³ TWA, total dust

15 mppcf or 5 mg/m³ TWA, respirable fraction

Engineering Control Measures

Use with adequate ventilation. There should be local procedures for the selection, training, inspection and maintenance of this equipment. When used in large volumes, use local exhaust ventilation.

Respiratory Protection

Not normally required. Use dust mask where dustiness is prevalent, or TLV is exceeded.

Hand Protection

Not normally needed when used as a portable fire extinguisher. Use gloves if irritation occurs.

Eye Protection

Chemical goggles or safety glasses with side shields.

Body Protection

Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Powder
Color	Pale Yellow
Odor	Odorless
Specific Gravity	Not available
Boiling Range/Point (°C/F)	Not applicable
Flash Point (PMCC) (°C/F)	Not Flammable
Solubility in Water	Not applicable
Vapor Density (Air = 1)	Heavier than air.
Vapor Pressure	Not applicable
Evaporation Rate	Not applicable

10. STABILITY AND REACTIVITY

Stability

Stable under normal conditions.

Conditions to Avoid

- Heat - High temperatures - Exposure to direct sunlight

Materials to Avoid

- Strong oxidizing agents - strong acids - sodium hypochlorite



MATERIAL SAFETY DATA SHEET

**Kidde 55 Multi-Purpose Dry Chemical
(Fire Extinguishing Agent)**

10. STABILITY AND REACTIVITY

Hazardous Polymerization

Will not occur.

Hazardous Decomposition Products

- oxides of carbon - ammonia - oxides of phosphorus - nitrogen oxides

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Low order of acute toxicity.

Chronic Toxicity/Carcinogenicity

This product is not expected to cause long term adverse health effects.

Mica and clay may contain small quantities of quartz (crystalline silica) as an impurity. Prolonged exposure to respirable crystalline silica dust at concentrations exceeding the occupational exposure limits may increase the risk of developing a disabling lung disease known as silicosis. IARC found limited evidence for pulmonary carcinogenicity of crystalline silica in humans.

Genotoxicity

This product is not expected to cause any mutagenic effects.

Reproductive/Developmental Toxicity

This product is not expected to cause adverse reproductive effects.

12. ECOLOGICAL INFORMATION

Mobility

No relevant studies identified.

Persistence/Degradability

No relevant studies identified.

Bio-accumulation

No relevant studies identified.

Ecotoxicity

No relevant studies identified.

13. DISPOSAL

Dispose of container in accordance with all applicable local and national regulations. Do not cut, puncture or weld on or near to the container. No harm to the environment is expected from this preparation.

14. TRANSPORT INFORMATION

DOT CFR 172.101 Data	Not regulated
UN Proper Shipping Name	Not regulated
UN Class	None
UN Number	None
UN Packaging Group	None



MATERIAL SAFETY DATA SHEET

**Kidde 55 Multi-Purpose Dry Chemical
(Fire Extinguishing Agent)**

15. REGULATORY INFORMATION

EU Label Information

Classification and labelling have been performed according to EU directives 67/548/EEC and 99/45/EC including amendments.

EU Hazard Symbol and Indication of Danger.

This preparation is not classified as dangerous.

R phrases

None

S phrases

None.

US REGULATIONS (Federal, State) and INTERNATIONAL CHEMICAL REGISTRATION LAWS

TSCA Listing

This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Substance Inventory.

EINECS Listing

All ingredients in this product have not been verified for listing on the European Inventory of Existing Commercial Chemical Substances (EINECS) or the European List of New Chemical Substances (ELINCS).

DSL/NDSL (Canadian) Listing

All ingredients in this product are listed on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL) or are exempt from listing.

WHMIS Classification

D2B

This product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all the information required by these regulations.

MA Right To Know Law

All components have been checked for inclusion on the Massachusetts Substance List (MSL). Those components present at or above the de minimus concentration include: - Mica (12001-26-2) 1-4% - Amorphous Silica (7631-86-9) <2% - Ammonium Sulfate (7783-20-2) 30 - 40%

PA Right To Know Law

This product contains the following chemicals found on the Pennsylvania Hazardous Substance List: - Mica (12001-26-2) 1-4% - Amorphous Silica (7631-86-9) <2% - Ammonium Sulfate (7783-20-2) 30 - 40%

NJ Right To Know Law

This product contains the following chemicals found on the NJ Right To Know Hazardous Substance List: - Mica (12001-26-2) 1-4% - Amorphous Silica (7631-86-9) <2%

California Proposition 65

This product does not contain materials which the State of California has found to cause cancer, birth defects or other reproductive harm.

SARA Title III Sect. 302 (EHS)

This product does not contain any chemicals subject to SARA Title III Section 302.

SARA Title III Sect. 304

This product does not contain any chemicals subject to SARA Title III Section 304.



MATERIAL SAFETY DATA SHEET

**Kidde 55 Multi-Purpose Dry Chemical
(Fire Extinguishing Agent)**

15. REGULATORY INFORMATION

SARA Title III Sect. 311/312 Categorization

- Immediate (Acute) Health Hazard

SARA Title III Sect. 313

This product does not contain any chemicals that are listed in Section 313 at or above de minimis concentrations.

16. OTHER INFORMATION

NFPA Ratings

NFPA Code for Health - 1

NFPA Code for Flammability - 0

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards - None

HMIS Ratings

HMIS Code for Health - 1

HMIS Code for Flammability - 0

HMIS Code for Reactivity - 0

HMIS Code for Personal Protection - See Section 8

Abbreviations

N/A: Denotes no applicable information found or available

CAS#: Chemical Abstracts Service Number

ACGIH: American Conference of Governmental Industrial Hygienists

OSHA: Occupational Safety and Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit

NTP: National Toxicology Program

IARC: International Agency for Research on Cancer

R: Risk

S: Safety

Prepared By: EnviroNet LLC.

The information contained herein is based on data believed to be accurate. However, no representation, warranty, or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for its own particular use. Badger Fire Protection assumes no responsibility for personal injury or property damage resulting from use, handling or from contact with this product.



MATERIAL SAFETY DATA SHEET

Regular Dry Chemical
(Fire Extinguishing Agent)

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Regular Dry Chemical (Fire Extinguishing Agent)
Other Trade Names BC, SDC, Sodium Bicarbonate
Manufacturer/Supplier Kidde – Residential and Commercial
A United Technologies Company
Address 1016 Corporate Park Drive
Mebane, NC 27302
USA
Phone Number (919) 304-8200
(919) 563-5911
Chemtrec Number (800) 424-9300
(for emergencies only) (703) 527-3887 (International)
Revision Date: August 7, 2007
MSDS Date: January 15, 2007
This MSDS has been compiled in accordance with - EC Directive 91/155/EC - OSHA's Hazcom Standard (29 CFR 1910.1200)

2. COMPOSITION/INFORMATION ON THE COMPONENTS

Component Name	CAS#/Codes	Concentration	R Phrases	EU Classification
Sodium Bicarbonate	144-55-8 EC#2056338	75 - 90%	None	None
Calcium Carbonate	471-34-1 EC#2074399	10 - 20%	None	None
Mica	12001-26-2	1- 4%	None	None
Clay	8031-18-3	<2%	None	None
Amorphous Silica	7631-86-9 EC#2315454	<2%	None	None

3. HAZARD IDENTIFICATION

EU Main Hazards
Non Hazardous Powder

Routes of Entry
- Eye contact - Inhalation - Skin contact

Carcinogenic Status
See Section 11 - Toxicity

Target Organs
- Respiratory System - Skin - Eye

Health Effects - Eyes
Contact for short periods of time may cause irritation.

Health Effects - Skin
Contact may cause mild irritation.



MATERIAL SAFETY DATA SHEET

Regular Dry Chemical
(Fire Extinguishing Agent)

3. HAZARD IDENTIFICATION

Health Effects - Ingestion

Ingestion is not an expected route of exposure.

Health Effects - Inhalation

May irritate the respiratory tract. May cause transient cough and shortness of breath.

4. FIRST AID MEASURES

Eyes

Immediately flood the eye with plenty of water or warm water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin

Wash affected area with soap and water. Obtain medical attention if irritation persists.

Ingestion

Dilute by drinking large quantities of water and obtain medical attention.

Inhalation

Move victim to fresh air. Obtain medical attention immediately for any breathing difficulty.

Advice to Physicians

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Extinguishing Media

This preparation is used as an extinguishing agent and therefore is not a problem when trying to control a blaze. Use extinguishing agent appropriate to other materials involved. Keep pressurized extinguishers and surroundings cool with water spray as they may rupture or burst in the heat of a fire.

Unusual Fire and Explosion Hazards

Pressurized containers may explode in heat of fire.

Protective Equipment for Fire-Fighting

Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Sweep up or vacuum. Prevent skin and eye contact. Wear appropriate protective equipment.

7. HANDLING AND STORAGE

Pressurized extinguishers should be properly stored and secured to prevent falling or being knocked over. Do not drag, slide or roll extinguishers. Do not drop extinguishers or permit them to strike against each other. Never apply flame or localized heat directly to any part of the extinguisher or plastic container. Store pressurized extinguishers and plastic containers away from high heat sources. Storage area should be: - cool - dry - well ventilated - under cover - out of direct sunlight



MATERIAL SAFETY DATA SHEET

Regular Dry Chemical
(Fire Extinguishing Agent)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Standards

Occupational exposure limits are listed below, if they exist.

Mica

ACGIH TLV: 3 mg/m³ TWA, measured as respirable fraction of the aerosol.

OSHA PEL: 20 mppcf, <1% crystalline silica

Calcium Carbonate

OSHA PEL: 15 mg/m³ TWA, total dust

5 mg/m³ TWA, respirable fraction

Nuisance Dust Limit

OSHA PEL: 50 mppcf or 15 mg/m³ TWA, total dust

15 mppcf or 5 mg/m³ TWA, respirable fraction

Engineering Control Measures

Use with adequate ventilation. There should be local procedures for the selection, training, inspection and maintenance of this equipment. When used in large volumes, use local exhaust ventilation.

Respiratory Protection

Not normally required. Use dust mask where dustiness is prevalent, or TLV is exceeded.

Hand Protection

Not normally needed when used as a portable fire extinguisher. Use gloves if irritation occurs.

Eye Protection

Chemical goggles or safety glasses with side shields.

Body Protection

Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Powder
Color	White
Odor	Odorless
Specific Gravity	Ca. 2.2
Boiling Range/Point (°C/F)	Not applicable
Flash Point (PMCC) (°C/F)	Not Flammable
Solubility in Water	16.4g/100g
Vapor Density (Air = 1)	Heavier than air.
Vapor Pressure	Not applicable
Evaporation Rate	Not applicable

10. STABILITY AND REACTIVITY

Stability

Stable under normal conditions.

Conditions to Avoid

- Heat - High temperatures - Exposure to direct sunlight



MATERIAL SAFETY DATA SHEET

Regular Dry Chemical
(Fire Extinguishing Agent)

10. STABILITY AND REACTIVITY

Materials to Avoid

- Strong oxidizing agents - strong acids

Hazardous Polymerization

Will not occur.

Hazardous Decomposition Products

- oxides of carbon

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Low order of acute toxicity.

Chronic Toxicity/Carcinogenicity

This product is not expected to cause long term adverse health effects.

Calcium carbonate, mica, and clay may contain small quantities of quartz (crystalline silica) as an impurity. Prolonged exposure to respirable crystalline silica dust at concentrations exceeding the occupational exposure limits may increase the risk of developing a disabling lung disease known as silicosis. IARC found limited evidence for pulmonary carcinogenicity of crystalline silica in humans.

Genotoxicity

This product is not expected to cause any mutagenic effects.

Reproductive/Developmental Toxicity

This product is not expected to cause adverse reproductive effects.

12. ECOLOGICAL INFORMATION

Mobility

No relevant studies identified.

Persistence/Degradability

No relevant studies identified.

Bio-accumulation

No relevant studies identified.

Ecotoxicity

No relevant studies identified.

13. DISPOSAL

Dispose of container in accordance with all applicable local and national regulations. Do not cut, puncture or weld on or near to the container. No harm to the environment is expected from this preparation.



MATERIAL SAFETY DATA SHEET

Regular Dry Chemical
(Fire Extinguishing Agent)

14. TRANSPORT INFORMATION

DOT CFR 172.101 Data	Not regulated
UN Proper Shipping Name	Not regulated
UN Class	None
UN Number	None
UN Packaging Group	None

15. REGULATORY INFORMATION

EU Label Information

Classification and labelling have been performed according to EU directives 67/548/EEC and 99/45/EC including amendments.

EU Hazard Symbol and Indication of Danger.

This preparation is not classified as dangerous.

R phrases

None

S phrases

None.

US REGULATIONS (Federal, State) and INTERNATIONAL CHEMICAL REGISTRATION LAWS

TSCA Listing

This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Substance Inventory.

EINECS Listing

All ingredients in this product have not been verified for listing on the European Inventory of Existing Commercial Chemical Substances (EINECS) or the European List of New Chemical Substances (ELINCS).

DSL/NDSL (Canadian) Listing

All ingredients in this product are listed on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL) or are exempt from listing.

WHMIS Classification

D2B

This product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all the information required by these regulations.

MA Right To Know Law

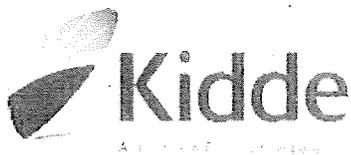
All components have been checked for inclusion on the Massachusetts Substance List (MSL). Those components present at or above the de minimus concentration include: - Mica (12001-26-2) 1-4% - Amorphous Silica (7631-86-9) <2% - Calcium Carbonate (471-34-1) 10-20%

PA Right To Know Law

This product contains the following chemicals found on the Pennsylvania Hazardous Substance List: - Mica (12001-26-2) 1-4% - Amorphous Silica (7631-86-9) <2% - Calcium Carbonate (471-34-1) 10-20%

NJ Right To Know Law

This product contains the following chemicals found on the NJ Right To Know Hazardous Substance List: Mica (12001-26-2) 1-4% - Amorphous Silica (7631-86-9) <2%



MATERIAL SAFETY DATA SHEET

Regular Dry Chemical
(Fire Extinguishing Agent)

15. REGULATORY INFORMATION

California Proposition 65

This product does not contain materials which the State of California has found to cause cancer, birth defects or other reproductive harm.

SARA Title III Sect. 302 (EHS)

This product does not contain any chemicals subject to SARA Title III Section 302.

SARA Title III Sect. 304

This product does not contain any chemicals subject to SARA Title III Section 304.

SARA Title III Sect. 311/312 Categorization

- Immediate (Acute) Health Hazard

SARA Title III Sect. 313

This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.

16. OTHER INFORMATION

NFPA Ratings

NFPA Code for Health - 1

NFPA Code for Flammability - 0

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards - None

HMIS Ratings

HMIS Code for Health - 1

HMIS Code for Flammability - 0

HMIS Code for Reactivity - 0

HMIS Code for Personal Protection - See Section 8

Abbreviations

N/A: Denotes no applicable information found or available

CAS#: Chemical Abstracts Service Number

ACGIH: American Conference of Governmental Industrial Hygienists

OSHA: Occupational Safety and Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit

NTP: National Toxicology Program

IARC: International Agency for Research on Cancer

R: Risk

S: Safety

Prepared By: EnviroNet LLC.

The information contained herein is based on data believed to be accurate. However, no representation, warranty, or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for its own particular use. Kidde – Residential and Commercial assumes no responsibility for personal injury or property damage resulting from use, handling or from contact with this product.

Material BoatLife Stock#: 1140, 1150
Safety Common Name: Silicone - Clear
Data MSDS#: 0035
Sheet 1-800 424-9300 24 hour Emergency (USA) 1-703 527-3887 24 hour Emergency (Outside USA) 1-800 262-8200 All Others

Life Industries Corporation
 2081 Bridgeview Drive
 North Charleston, SC 29405

Signature of Person Responsible for Preparation: *James J. Anderson* Date Prepared: July 22, 1997

Section I: Identity

Common Name: Silicone - Clear
 Chemical Name: N/A
 Formula: Proprietary Chemical Family: Silicone Sealant

Section II: Hazardous Ingredients

Principal Hazardous Components (Chemical & common names)	%	Threshold
DBTL	0.10	.1 mg/m ³
Liquid Isocyanate	0.1-10	0.02 ppm
Silane Crosslinker	5	NE
Filler	6	

Section III: Physical & Chemical Characteristics (Fire & Explosion Data)

Boiling Point: N/A Specific Gravity: 1.00 Vapor Pressure: N/D Percent Volatile by Volume: N/A
 Vapor Density: N/A Evaporation Rate: N/A Flash Point: >200°F Flammable Limits in Air & by Volume Lower: N/A Upper: N/A
 Solubility: Insoluble Reactivity: Will Cure Extinguishers: Foam, CO₂, dry chemical
 Appearance: Translucent paste - mild characteristic odor Special Firefighting Procedures: Firefighters should wear approved self-contained breathing apparatus Unusual Hazards: Uncured material may ignite if in contact with open flames or sparks at high temp

Section IV: Physical Hazards

Stability Unstable Stable **Hazardous Polymerization** May Occur Will Not Occur
 Conditions To Avoid: N/A
 Incompatibility (Materials to Avoid): Strong oxidizing agents
 Hazardous Decomposition Products: CO, CO₂, oxides of silicone

Material
Safety
Data
Sheet

BoatLife Stock#: 1141, 1151
Common Name: Silicone - White
MSDS#: 0036

Life Industries Corporation
2081 Eridgeview Drive
North Charleston, SC 29405

1-800 424-9300 24 hour Emergency (USA) 1-703 527-3887 24 hour Emergency (Outside USA) 1-800 262-8200 All Others

Signature of Person Responsible for Preparation: *James D. Anderson* Date Prepared: July 22, 1997

Section I: Identity

Common Name: Silicone - White
Chemical Name: N/A
Formula: Proprietary Chemical Family: Silicone Sealant

Section II: Hazardous Ingredients

Principal Hazardous Components (Chemical & common names)	%	Threshold
DBTL	0.10	.1 mg/m
Liquid Isocyanate	0.1-10	0.02ppm
Silane Crosslinker	5	NE
Filler	6	

Section III: Physical & Chemical Characteristics (Fire & Explosion Data)

Boiling Point: N/A Specific Gravity: 1.0 Vapor Pressure: N/D Percent Volatile by Volume: N/A
 Vapor Density: N/A Evaporation Rate: N/A Flash Point: >200°F Flammable Limits in Air & by Volume: Lower: N/A, Upper: N/A
 Solubility: Insoluble Reactivity: Will cure Extinguisher: Foam, CO2, dry chemical
 Appearance: White paste - mild characteristic odor Special Firefighting Procedures: Firefighters should wear approved self-contained breathing apparatus Unusual Hazards: Uncured material may ignite if in contact with open flames or sparks at high temp

Section IV: Physical Hazards

Stability **Hazardous Polymerization** **Conditions to Avoid:**
 Unstable May Occur N/A
 Stable Will Not Occur
Incompatibility (Materials to Avoid) **Hazardous Decomposition Products:**
 Strong oxidizing agents CO, CO2, oxides of silicon

Section V: Health Hazards

Product Codes (continue):

1141, 1151

MSDS#:

00036

Threshold Limit Value:

N/A

Acute Overexposure

Possible eye irritation if contact occurs

Chronic Overexposure:

N/A

Medical Conditions Generally Aggravated by Exposure:

N/A

Yes No

Nat'l Toxicology Program

OSHA Limits:

N/A

I.A.R.C. Monographs

ACGIH Limit:

N/A

Other Limits:

N/A

OSHA

Emergency Procedures:

1. Inhalation:

Remove victim to fresh air. Assist breathing if necessary

2. Eyes:

Wash with plenty of water for 15 mins. Consult physician

3. Skin

Wash with soap and water

4. Ingestion:

Not likely. Do not induce vomiting. Consult physician

Section VI: Special Protection Information

Respiratory Protection:

Generally not required

Ventilation:

Adequate

Eye Protection:

Safety goggles

Local Exhaust

Mechanical (Gen.)

Special

Other: N/A

Protective Gloves:

PVC or Rubber

Other Protective Clothing or Equipment:

None

Section VII: Special Precautions And Spill/Leak Procedures

Precautions to be Taken in Handling and Storage:

Store in original closed containers in cool, dry location

Other Precautions:

Keep away from open flames, sparks or other ignition sources

Steps to be Taken in Case Material is Released or Spilled:

Put in container, allow to cure. Remove uncured product with dry rags

Waste Disposal Methods:

Follow local, state and federal guidelines. Do not incinerate

MATERIAL SAFETY DATA SHEET

SILICONE RUBBER CLEAR

FILE NO.: 0035
MSDS DATE: 05/16/06

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Silicone Rubber (Clear)**
SYNONYMS: **Silicone Sealant, Silicone Caulk**
PRODUCT CODES: **1110, 1140, 1150**

MANUFACTURER: **Life Industries Corporation**
DIVISION: **Manufacturing**
ADDRESS: **4060 Bridge View Drive
N. Charleston, SC 29405**

EMERGENCY PHONE (USA): 1-800-424-9300
EMERGENCY PHONE (Outside USA): 1-703-527-3887
OTHER CALLS: 1-800-262-8200
FAX PHONE: (843)-566-1275

PRODUCT USE: **Deck Sealant, Bedding Compound, General Sealant**
PREPARED BY: **Travis G. Gevedon, M.S.**

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT(S):

1.) Dibutyltindilaurate (DBTL)

<u>CAS NO.</u>	<u>% WT</u>	<u>% VOL</u>	<u>SARA 313 REPORTABLE</u>
77-58-7	< 0.10	NA	NA
	<u>ppm</u>	<u>mg/m3</u>	
OSHA PEL-TWA:	NA	NA	
OSHA PEL STEL :	NA	NA	
OSHA PEL CEILING:	NA	NA	
ACGIH TLV-TWA:	NA	NA	
ACGIH TLV STEL:	NA	NA	
ACGIH TLV CEILING:	NA	NA	

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: **DANGER!** Emits toxic fumes when exposed to open flames/excessively high temperatures.

ROUTES OF ENTRY: **INGESTION, SKIN CONTACT, EYE CONTACT**

POTENTIAL HEALTH EFFECTS

EYES: May cause irritation.

SKIN: May cause irritation.

INGESTION: Not known. See section 4 for course of action.

INHALATION: Inhalation is not an expected hazard unless misted or heated to high temperatures.

ACUTE HEALTH HAZARDS: N/A

CHRONIC HEALTH HAZARDS: No information found.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NA

MATERIAL SAFETY DATA SHEET

SILICONE RUBBER CLEAR
SECTION 3 NOTES:

FILE NO.: 0035
MSDS DATE: 05/16/06

SECTION 4: FIRST AID MEASURES

EYES: Immediately flush eyes with gentle but large stream of water for at least 15 minutes. Call a physician immediately.

SKIN: Immediately flush skin with plenty of water for at least 15 minutes. If irritation persists contact a physician.

INGESTION: If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

INHALATION (Burning Material): Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Treat symptomatically and supportively.

SECTION 4 NOTES:

SECTION 5: FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: Foam, CO₂, dry chemical. DO NOT ATTEMPT TO EXTINGUISH WITH WATER.

SPECIAL FIRE FIGHTING PROCEDURES: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Not considered to be an explosion hazard.

HAZARDOUS DECOMPOSITION PRODUCTS: Silicone Oxides, Carbon Oxides

SECTION 5 NOTES:

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Confine spill and place in a closed container. Wipe up excess with dry rags and place in a closed container.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Avoid contact with skin and eyes by using personal protective equipment; product is moisture sensitive (store in a dark, DRY place). BE SURE TO HAVE PROPER VENTILLATION TO MINIMIZE EXPOSURE TO VAPORS.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use adequate ventilation to keep airborne concentrations low.

RESPIRATORY PROTECTION: Not generally required.

EYE PROTECTION: Goggles

SKIN PROTECTION: PVC or rubber gloves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear Paste

MATERIAL SAFETY DATA SHEET

SILICONE RUBBER CLEAR

FILE NO.: 0035
MSDS DATE: 05/16/06

ODOR: Mild characteristic odor

PHYSICAL STATE: Paste

pH AS SUPPLIED: NA

pH (Other):

BOILING POINT:

F: NA

C: NA

MELTING POINT:

F: NA

C: NA

FREEZING POINT:

F: NA

C: NA

VAPOR PRESSURE (mmHg): NA

VAPOR DENSITY (AIR = 1): NA

SPECIFIC GRAVITY (H₂O = 1): NA

EVAPORATION RATE: NA

BASIS (=1):

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (con't)

SOLUBILITY IN WATER: Insoluble

PERCENT VOLATILE: 2 %

BY VOL @

F: NA

C: NA

SECTION 9 NOTES:

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under ordinary conditions of use and storage.

CONDITIONS TO AVOID (STABILITY): NA

INCOMPATIBILITY (MATERIAL TO AVOID): Strong oxidizing agents.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Sulfur Oxides (Contact with water could produce sulfuric acid; this is only a concern for large amounts of material engulfed in flames).

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID (POLYMERIZATION): N/A

SECTION 10 NOTES:

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

No toxicological information is available for this product.

SECTION 11 NOTES:

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION:

MATERIAL SAFETY DATA SHEET

SILICONE RUBBER CLEAR
No ecological information available.

FILE NO.: 0035
MSDS DATE: 05/16/06

SECTION 12 NOTES:

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION
PROPER SHIPPING NAME:
HAZARD CLASS:
ID NUMBER:
PACKING GROUP:
LABEL STATEMENT:

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS
TSCA (TOXIC SUBSTANCE CONTROL ACT): NA

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): NA

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): NA

311/312 HAZARD CATEGORIES: NA

313 REPORTABLE INGREDIENTS: NA

STATE REGULATIONS: NA

INTERNATIONAL REGULATIONS: NA

SECTION 15 NOTES:

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

European Risk Phrases:

R 25, R 36/38

European Safety Phrases:

S2, S3, S24/25, S37/39, S41, S51

PREPARATION INFORMATION:

Travis G. Gevedon, M.S.
Chemist—Life Industries

Signature 

DISCLAIMER: The information and recommendations contained herein are based upon data believed to be correct. Life Industries Corporation assumes no liability for misinterpretation of the data contained within this form as any type of warranty or guarantee of the product.

MATERIAL SAFETY DATA SHEET - 8 Point

SECTION 1 – PRODUCT INFORMATION

Mascoat Products
Houston, TX 77041

Emergency phone: (713) 465-0304
Fax: (713) 465-0302
Date Reviewed: Jan 2007

Product Name: Delta T Marine Gen 2 Thermal Insulation
Product ID: DTM 2
Common Chemical Name: Acrylic Insulation Emulsion
Synonyms: None
Molecular Formula: Mixture

Thermal Insulating Material	
HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0
Personnel Protection	G
Eye protection Gloves Dust mask	

SECTION 2 – HAZARDOUS INGREDIENTS DETERMINED BY OSHA (out of limits)

<u>Cas Number</u>	<u>Ingredients</u>	<u>% Range</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
	NONE as defined by OSHA % levels			

SECTION 3 – PHYSICAL PROPERTIES

Color :	White	Form/Appearance:	Thick emulsion mixture
Odor:	Slight ammonia	Melting Point:	N/A
Boiling Point:	No boiling point	Evaporation Rate (Butyl Ace =1):	<1
Freeze Point	32°F (0°C)	Solubility in H2O:	Dilutable
Specific Gravity:	0.56	Volume Solids:	80-82%
Pounds/Gallon:	5.1-5.2	VOC Content:	0.0 lbs/gallon
Non Volatile Solids:	53.3%		

SECTION 4 – FIRE FIGHTING MEASURES

Flash Point: Noncombustible

Auto ignition: N/A

Extinguished Media: (for dried film) carbon dioxide, dry chemical, or alcohol foam.

Special Fire Fighting Procedures: Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure buildup.

Unusual Fire and Explosion: Product will not burn but may spatter if temperature exceeds boiling point. Extreme heat may cause closed containers to burst. Dried film of product is capable of burning giving off oxides of carbon/nitrogen.

SECTION 5 – REACTIVITY DATA

Stability Data: Stable

Incompatibility: Solvents will coagulate the product.

Conditions or Hazards to Avoid: Extreme temperatures above 500°F (260°C)

Hazardous Decomposition: Hazardous polymerization will not occur.

Corrosive Properties: Not corrosive

Oxidizer Properties: Not an oxidizer

Chloride Properties: None

SECTION 6 – HEALTH HAZARD AND FIRST AID DATA

Routes of entry: skin-possible ingestion-possible inhalation-possible

Health Hazards Acute - In a confined area vapors in high concentration can bother some personnel. Extended periods of exposure without PP may result in health concerns.

Carcinogenicity: N/A

SECTION 6 – HEALTH HAZARD AND FIRST AID DATA (cont)

First aid procedure:

Eye exposure - flush eyes with water immediately. Get immediate medical attention.
Skin contact - wash area with soap and water. If redness persists, seek medical attention
Ingestion – If swallowed, dilute with water. **DO NOT INDUCE VOMITING.** Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get immediate medical attention.
Inhalation – Move to fresh air. Aid in breathing if needed and get immediate medical attention.
Notes to Physicians – none known.
Aggravated Medical Attention – No data is available at this time which addresses medical conditions that are generally recognized as being aggravated by exposure to this product. Please refer to the effects of overexposure section for effects (if any) observed in animals.
Special Precautions – No

SECTION 7 – ACCIDENTAL RELEASE MEASURES

Steps if material is released: Spills should be contained and placed in suitable containers for disposal by a licensed facility.

Waste Disposal Methods: Waste from this material is not hazardous as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Incinerate in approved facility. Do not incinerate closed containers. Dispose of in accordance with Federal, State, and Local regulations regarding pollution.

Precaution in handling and storage: Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using. Protect against dust which may be generated by sanding or abrading the dried film.

Other Precautions: Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. *Keep out of reach of children.*

General: Protect from freezing.
Other: Keep out of direct sunlight in storage area

SECTION 8 – PERSONNEL PROTECTION

Clothing: Gloves, coveralls, apron, and boots necessary to prevent contact.

Respiratory Protection: Ventilation and dust mask recommended during application. If sprayed in confined area respiratory equipment is recommended due to slight ammonia odor.

Ventilation: Local exhaust - *preferable* Mechanical (gen) - *acceptable*

Protective Gloves: Preferred.

Eye Protection: Spectacles with unperforated sideshields.

Other Protective Equipment: None needed

OTHER

Special Handling: **DO NOT LET PRODUCT FREEZE.**

Hazardous ratings: Mascoat Products currently uses the National Paint and Coatings Association rating system. The use of an asterisk (*) in the HMIS rating indicates the potential for chronic health effects

HMIS:	Health	Fire	Reactivity	Special
	1	1	0	0

Hazardous rating OSHA: **The product is considered NON HAZRDOUS by the OSHA Hazard Communication Standard.**

Trademark: Delta T Marine Thermal Insulating Coating is a registered trademark of Mascoat Product, Houston, TX USA.

Important: While descriptions, designs, data and other information contained herein are presented in good faith and believed to be accurate, it is provided for guidance only. Many factors may influence the processing or application/use, Mascoat recommends that tests are made for the suitability for the product in the intended purpose. The intended use of this document is for health and handling procedures and not intended for an ingredients list for reformulation.

Shipping: This product is acceptable for shipment as non-hazardous via motor, air or ocean freight without any specialized handling. (Class 55).



Delta T Marine²

Selection & Specification Data

Product Name	Delta T Marine Thermal Insulating Coating
Product Number	DTM GEN2
Generic Type	Water-based Acrylic Marine Insulation Coating
Description	Delta T Marine is a multi-purpose coating that provides thermal insulation and anti-condensation protection. It combines painting and insulating solutions for marine vessels and provides drastic reduction in temperatures for its thickness.
Features	<ul style="list-style-type: none"> ◆ IMO/SOLAS compatible ◆ MED Certification ◆ Provides anti-condensation protection ◆ Dramatically reduces heat absorption due to radiant heat gain ◆ Excellent personnel protection ◆ Easy application characteristics ◆ Applies to almost any surface ◆ Extended recoat window ◆ Fast drying and curing rates ◆ No harmful volatile organic compounds
Gloss	Flat
Color	White and Light Grey. Custom tinting can be done at special request.
Priming	Self-priming over non-ferrous materials (stainless steel & aluminum). Primers are required for carbon steel substrates.
Topcoats	Please consult Mascoat
Wet weight	5.10–5.20 lbs/gal (0.6 kg/liter)
Weight dry film to area	0.037lbs/ft ² at 20 mils dft (0.181 kg/m ² at 0.5 mm dft)
Volume Solids Content	80–82%
Average Coat Thickness	20–22 mils WFT at 70°–130°F (0.5 mm WFT at 21°–54°C)
Practical Wet Coat Coverage	60–65 ft ² /gal @ 20mils (1.6 m ² /liter @ 0.5 mm)
Practical Dry Coat Coverage	50–55 ft ² /gal @ 20mils (1.3 m ² /liter @ 0.5 mm)
VOC Content	0.0 lbs/gal (1.57 grams/liter)
Limitations	Applications should not exceed 225°F (107°C) or peak areas above. Do not subject wet coating in pail format to freezing conditions.



Substrates & Surface Preparation

Surface Prep	Surface should be dry and free of foreign matter. Surface prep can be used to NACE 1-3 (SSPC SP 5-6) when applicable.
Ferrous Surfaces	Should be primed prior to application of Delta T Marine. Since the coating is water-based, it is important to have a boundary layer of protection to eliminate flash rusting.
Non-ferrous Surfaces	The coating can be applied directly to non-ferrous surfaces. Surface should be clean and free of oil, dirt or any other foreign matter.

Application Equipment

Listed below are the general equipment guidelines for the application of this product.

Airless Sprayer	<table border="0"> <tr> <td>Pump Ratio:</td> <td>33:1 or larger</td> </tr> <tr> <td>Volume:</td> <td>1.5 gpm (5.6 lpm) or greater</td> </tr> <tr> <td>Hose:</td> <td>3/8" or larger with no more than 3' of 1/4" whip. 1/2" hose recommended for length above 50'.</td> </tr> <tr> <td>Tip Size:</td> <td>.017" (for tight spots) .019–.023" (for normal use)</td> </tr> <tr> <td>Pressure:</td> <td>Minimum of 3000 PSI</td> </tr> </table>	Pump Ratio:	33:1 or larger	Volume:	1.5 gpm (5.6 lpm) or greater	Hose:	3/8" or larger with no more than 3' of 1/4" whip. 1/2" hose recommended for length above 50'.	Tip Size:	.017" (for tight spots) .019–.023" (for normal use)	Pressure:	Minimum of 3000 PSI
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Hose:	3/8" or larger with no more than 3' of 1/4" whip. 1/2" hose recommended for length above 50'.										
Tip Size:	.017" (for tight spots) .019–.023" (for normal use)										
Pressure:	Minimum of 3000 PSI										
Small Spray Application	Please consult Mascoat for the sprayer. This gun is excellent for small applications & touchups.										
Brush	Brushing is only recommended for touchup of less than 0.5 ft ² (0.04 m ²). Brushing can inhibit coating performance. Please consult Mascoat for detailed instructions regarding brushing.										
Roller	Not recommended for this coating										

Application Conditions

Surface Temperatures	Surface temperatures for applications should be 60°F (15°C) or above. Lower surface temperatures will increase dry times.
Applications	<p><i>Ambient & Cold (60°–139°F, 15°–59°C):</i> For temperatures (surface or ambient – whichever is lower), an initial tack coat is recommended of 10 mils (0.25 mm or 250 microns). This tack coat will help to eliminate sag on vertical wall applications. Tack coat should be dry to touch prior to next pass. Typical coat thickness should not exceed 20–22 mils (0.50–0.55 mm) wet. Coating can be reapplied after each coat is thoroughly dry.</p> <p><i>Hot (>140°F, >60°C):</i> Application of Delta T Marine should be applied as per Mascoat detailed hot application instructions.</p>
Application Thickness	Product can be applied in successive coats to increase insulation abilities.
Forced Ventilation	Forced ventilation should be used to help coating dry and hang on vertical surfaces. Air movement should be both in/out during drying process.
Dryfall	Dryfall within a 3 ft. radius. Version: DTM 0705-1

Other Coating Specifications

Item	English Value (Metric Value)	Test Method
Cyclic Salt Fog	Excellent 2000 hrs	ASTM B-117
UV-A Exposure	Excellent 2000 hrs	ASTM D-5894
Humidity Cabinet	Excellent 2000 hrs	ASTM D-4585
QUV	Excellent 2000 hrs	ASTM G-154
Permeability	Low-4.98 perms (3.28grams/24hrs/m ² /mm/hg)	ASTM 1653-03
Transmission	Low-4.14 grains/hr/ft ² (0.64 grams/24 hrs/cm ²)	ASTM 1653-03
Cross Hatch Adhesion	100% 5 B	ASTM D-3359
Pull Apart Strength	260-300 psi	ASTM D-4541
Elongation Rate	Above 30%	ASTM D-638
Thermal Conductivity	0.660 Btu-in/ft ² -hr-°F (0.095 W/m/K)	ASTM C-177
	0.090 Btu-in/ft ² -hr-°F (0.0130 W/m/K)	RvE Testing
Emissivity	0.15	Calculated
Reflectivity	0.85	E-903
Transmittance	0.00	Calculated
Absorptance	0.15	Calculated
Flame Spread	5	ASTM E-84
Smoke Developed	5	ASTM E-87
Cone Calorimeter	>6	ASTM E-1384-97

Mixing & Thinning

- Mixing** Only a mud mixing paddle should be used. Use 1/2" drill motor to stir contents with paddle. *Make sure drill is set to reverse to ensure that the paddle will not mar the bucket's inner wall.* Please consult Mascoat for paddle, if needed.
- Thinning** Thinning is normally not needed in most applications. Please consult Mascoat for specific instructions, if thinning is desired. Thinning can also be used to help coating aesthetically.
- Pot Life** Coating is one part, so no catalization is needed. Pail can be reused if properly sealed.
- Container** 5 gallon pail (18.92 liters)

Package, Handling & Storage

- Package wet weight including pail & lid** 27.5-28.0 lbs (12.47-12.7 kg)
- Net Contents** 25.9 lbs (11.7 kg)
- Flash Point (Setflash)** None
- Storage** Product should be kept out of direct sunlight and stored in a climate controlled warehouse with temperatures ranging from 50°F to 110°F (10°C to 43°C).
- Shelf Life** One year shelf life from manufacture date
- Caution** Do not let product freeze.

Cleanup & Safety

- Cleanup** Equipment may be cleaned with soap and water.
- Safety** Half-face respirator recommended with ammonia cartridge or better. Eye protection recommended.
- Ventilation** Recommended for constricted areas.
- Caution** This material is not for human consumption.
- Clothing** Safety clothing & gloves are recommended.

Dry Times vs. Humidity

Surface Temperature	% Humidity	Time Between Coats (hours)
50-60 °F (10-15°C)	10-30%	6.00
	31-50%	8.00
	51-70%	10.00
	>70%	12.50
61-70°F (16-21°C)	10-30%	4.00
	31-50%	5.50
	51-70%	6.50
	>70%	8.00
71-80°F (22-26°C)	10-30%	2.00
	31-50%	3.00
	51-70%	3.50
	>70%	4.00
81-90°F (27-32°C)	10-30%	1.50
	31-50%	2.00
	51-70%	2.50
	>70%	3.00
91-100°F (33-37°C)	10-30%	1.25
	31-50%	1.50
	51-70%	1.75
	>70%	2.00
101-110°F (38-43°C)	10-30%	1.00
	31-50%	1.25
	51-70%	1.50
	>70%	1.75
111-120°F (44-49°C)	10-30%	0.75
	31-50%	1.00
	51-70%	1.25
	>70%	1.50
121-130°F (50-54°C)	10-30%	0.50
	31-50%	0.75
	51-70%	0.75
	>70%	1.00

Use 90° thumb test or moisture meter prior to recoat to ensure coating is dry. These are the estimated dry times for 15-20 mils (0.38-0.5mm) of Delta T Marine wet. Dry time may vary depending on other conditions such as wind or enclosed environments. Lighter thickness passes will expedite dry times. Forced ventilation in confined areas will also expedite dry times.

Curing Schedule

Temperature	Cure Time
50-60°F (10-15°C)	60-72 hrs
61-70°F (16-21°C)	48-60 hrs
71-80°F (22-26°C)	36-48 hrs
81-90°F (27-32°C)	20-24 hrs
91-100°F (33-37°C)	18-20 hrs
>100°F (>37°C)	14-16 hrs

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. We guarantee our products to conform to Mascoat quality control. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to replacement of products. Logos are registered properties of their respective owners.



Mascoat
P R O D U C T S

**Why Paint
And then
Insulate?**

The Industry Leaders in Insulation Coatings

Applications of Delta T Marine² Thermal Insulating Coating

The pictures below are just a small number of the applications areas when using Delta T Marine² Thermal Insulating Coating. All applications use the coating for thermal protection and/anti-condensation protection. The coating is normally applied no greater than 2.0 mm (80 mils) in 0.5 mm coats (20 mils). The colder environments (below 5°C) normally receive 1.5-2.00 mm (60-80) mils.



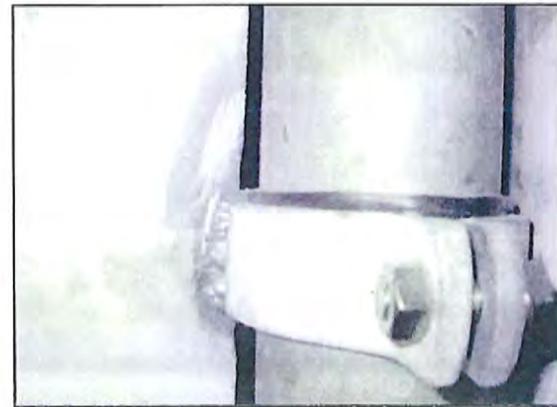
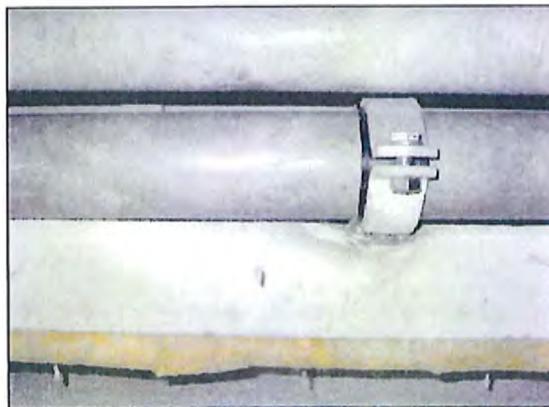
Delta T Marine applied to the outside wall of the vessel and framing supports to combat condensation/sweating. The coating is normally applied to 40-80 mils (1.0-2.0 mm) in a series of coats. By applying the coating to the side walls, stiffeners, overheads and shells of the vessel, protection is given as well as reducing radiant heat gain.



More applications using the coating in conjunction with conventional sound damping insulation. This method allows for thermal and sound control inside state of the art yachts. The pins and hangers also are used for structural fire protection.

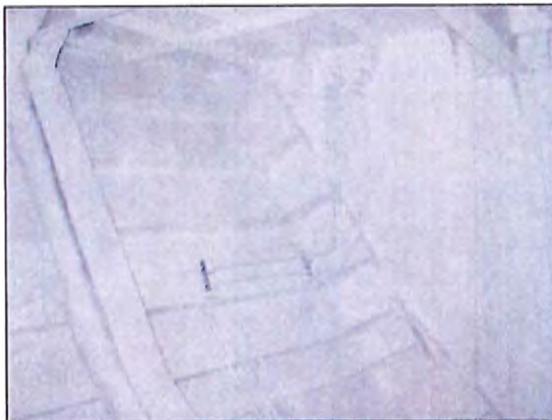


The two burn pictures directly below are the surfaces there were welded for a pipe hanger. The coating was applied prior to the fix and the weld. This shows that the coating can tolerate repairs with minimal degradation of the coating in the area adjacent to the weld.

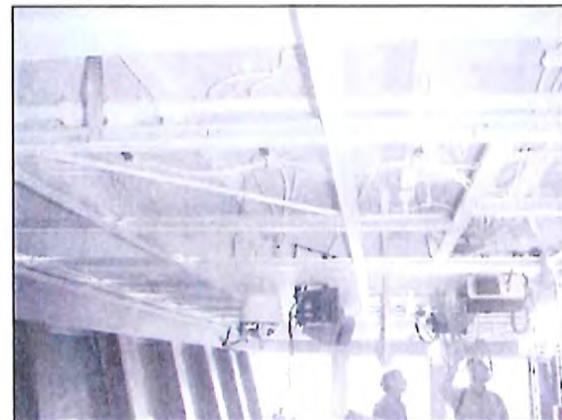


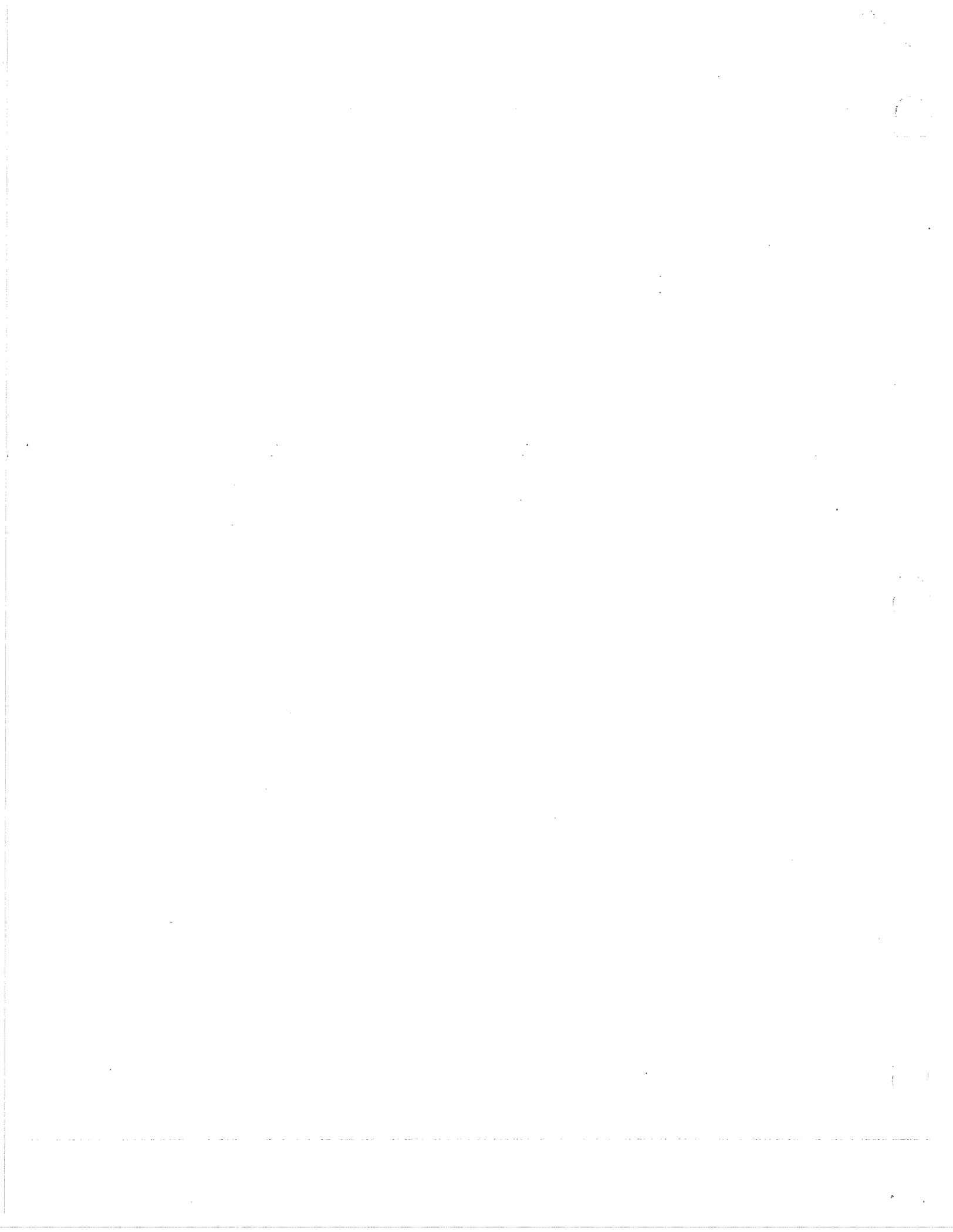


Complex geometrical shapes are easy to insulate by spraying of the coating. No longer is cut and paste insulation the only method to providing insulation qualities.



The coating can be sprayed prior to any rigging or after rigging with ease.





Medi-Kay Laboratories

NFPA

Isopropyl Alcohol 99%

4
1 1**SECTION 1 : Chemical Product and Company Identification**

MSDS Name: Isopropyl Alcohol 99%

Manufacturer Name: Medi-Kay Laboratories

Address:

440 E. Helm
Brookfield, MO. 64628

Emergency Telephone Numbers:

Day 816-258-2291

Night 816-258-5514

Manufacturer MSDS Revision Date:

9-1-93

Synonyms:

2-Propanol
Isopropanol Anhydrous
Isopropyl Alcohol 99%

CAS Number: 000067-63-0

Chemical Family: Aliphatic Alcohol

Chemical Formula: $\text{CH}_3\text{CH}(\text{OH})\text{CH}_3$

NFPA

Health: 1

Flammability: 4

Reactivity: 1

Other:

Hazard Rating:

Least = 0

Slight = 1

Moderate = 2

High = 3

Extreme = 4

Chemical Name:

2-Propanol
Isopropanol Anhydrous
Isopropyl Alcohol 99%

S.A.R.A. Information:

Hazards:

Fire: Yes
 Pressures: Not Applicable
 Reactivity: Not Applicable
 Acute: Yes
 Chronic: Not Applicable
 Physical Data: Not Applicable
 Mixture: Not Applicable
 Pure: Yes
 Solid: Not Applicable
 Liquid: Yes
 Gas: Not Applicable

Product Codes:

16-10869-06



TOP

SECTION 2 : Hazardous Ingredients/Identity Information

Chemical Name	CAS#	Percent	
Isopropyl Alcohol	67-63-0	99-100%	

OSHA PEL TWA: 8 hr 400 ppm

OSHA STEL/Ceiling: 500 ppm

ACGIH STEL/Ceiling: 500 ppm

NIOSH REL: 10 hr 400 ppm

NIOSH STEL/Ceiling: Ceiling: 15 min 800 PPM



TOP

SECTION 3 : Physical And Chemical Characteristics

Physical State/Appearance:

Liquid

Color:

Colorless

Odor:

Alcohol Type Odor

pH:

Neutral

Vapor Pressure:

(MM HG.): 32.8 @ 68 deg F.

30.003 (Anhydrous) @ 68 deg F.

Vapor Density:

(AIR=1): 2.1

Boiling Point:

177.4 deg F. Range 179.96 to 181.04 (Anhydrous)

Solubility:

In Water: Complete

Specific Gravity:

(H(2)O=1): 0.786 @ 68/68 deg C

Evaporation Point:

(n Butyl Acetate=1): 1.4, 2.4 (Anhydrous)

Percent Volatile:

By Volume: > 99

FlashPoint:

55 deg. F

Upper Flammable Explosive Limit:

(% Volume in Air): 12.1% at 151 deg F

Lower Flammable Explosive Limit:

(% Volume in Air): 2.5% at 79 deg F

TOP

SECTION 4 : Fire And Explosion Hazards

Flash Point:

55 deg. F

Flash Point Method:

TCC

Upper Flammable or Explosive Limit: (% Volume in Air): 12.1% at 151 deg F

Lower Flammable or Explosive Limit: (% Volume in Air): 2.5% at 79 deg F

Extinguishing Media:

Water fog, Dry chemical, CO(2), "Alcohol" Foam.

Fire Fighting Instructions:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Water may be ineffective for fire fighting. Use water spray to keep fire exposed containers cool and to protect personnel. If a leak or spill has not ignited, use water spray to disperse the vapors. Either allow fire to burn under controlled conditions or extinguish with alcohol type foam and dry chemical. Try to cover liquid spills with foam.

Unusual Fire Hazards:

Flammable liquid (see section 10). Vapors are heavier than air and may travel considerable distance to a source of ignition and flash back. Run-off from fire control may cause pollution.

TOP

SECTION 5 : Health Hazards

Isopropyl Alcohol:

Potential Health Effects:

Eye Contact:

Vapor irritates eyes. Liquid will damage eye tissue if not removed promptly.

Skin Contact:

Prolonged or repeated contact can cause dryness, irritation, defatting and dermatitis. Acute dermal LD(50) (Rabbit); 1300 mg/kg mildly irritating to the skin, low order of toxicity.

Inhalation:

High concentrations of vapor can irritate respiratory tract, are anesthetic, and may cause central nervous system (CNS) depression. Early CNS depression may be evidenced by giddiness, headache, dizziness and nausea. Acute Inhalation LC(50) (Rat) 8 Hrs: 12000 ppm. Negligible hazard at ambient temperatures 0 to 100 deg. F (18 to 38 deg. C)

Ingestion:

May cause marked and persistent nausea, vomiting and abdominal pain. Generally considered to have a low order of acute oral toxicity. Acute oral LD(50) (Rat): 5840 MG/KG. Small amounts of the liquid aspirated into the respiratory system during ingestion, or from vomiting, may cause bronchiopneumonia or pulmonary edema.

Aggravation of Pre-Existing Conditions:

Pre-existing skin. Eye and respiratory disorders may be aggravated by exposure to IPA.

Threshold Limit Value: As indicated - Section 1. 50% Odor Recognition Threshold is

7.5 ppm.

(For analytical method see section is reference (1).

Other Information:

Supplemental Health Information:

Intentional abuse, misuse or other massive exposure to IPA may result in difficult breathing, nausea, vomiting and headache accompanied by various degrees of CNS depression. Coma and/or death are even possible.

In Rats:

1 Liver and kidney enlargement has been seen at levels > 6250 ppm in drinking water.

2. Anemia has been seen at 12500 and 25000 ppm in drinking water.



TOP

SECTION 6 : Emergency And First Aid Procedures

Eye Contact:

Flush with water for 15 minutes while periodically holding eyelids open. Get medical attention.

Skin Contact:

Wash with soap and water. Remove contaminated clothing and shoes; do not reuse until cleaned. If persistent irritation occurs, get medical attention.

Inhalation:

Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

Ingestion:

Do not induce vomiting. Keep at rest. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs. Get medical attention at once!



TOP

SECTION 7 : Reactivity Data

Chemical Stability:

Stable

Incompatibilities with Other Materials:

(Materials to avoid for purposes of transport, handling and storage only): Alkylene oxides, acid anhydrides, Isocyanates, Organometallic contaminants, Inorganic Acids, Alkanolamines, Caustics, Amines, Ammonia, Chlorinated compounds, Organic Acids, Halogens, Phosphorus, Trichloride, Aldehydes, Monomers, Polymerizable esters, and storing this product in Aluminum vessels.

Avoid heat, sparks, open flames, and contact with strong oxidizing agents, will attack aluminum if the surface oxide film is penetrated (e.g. by abrasion or high temperature).



TOP

SECTION 8 : Precautions For Safe Handling

Small Spill:

Take up with an absorbent material and place in non-leaking containers: Seal tightly for proper disposal.

Waste Disposal:

Place in a disposal facility approved under RCRA regulations for hazardous waste, use non-leaking containers, seal tightly and label properly. Assure compliance with local, state, and federal regulations. EPA-Resource conservation and recovery act (RCRA) regulations, as produced, this material is a product and not a waste. If discarded or intended to be discarded as is, it is an ignitable hazardous waste as defined in RCRA (40 CFR 261.21).

EPA Waste Number:

D001

DOT Shipping Name:

Isopropanol

DOT Hazard Class: Flammable Liquid

DOT Identification Number: UN1219

DOT Subpart E Labeling Requirement: Flammable Liquid

Reportable Quantity: DOT: None

Other Information: Not Applicable



TOP

SECTION 9 : Control Measures

Ventilation System:

Required: Face velocity > 60 LFPM in confined space. Use explosion-proof ventilation equipment.

Skin Protection Description:

Chemically resistant gloves, Nitrile, Neoprene or natural rubber preferred.

Eye/Face Protection:

Chemical splash goggles or face shield.

Respiratory Protection:

For concentrations above PEL/TLV and up to 1000 PPM, use chemical cartridge respirator with a full facepiece and organic vapor cartridge(s), per NIOSH/OSHA, for higher concentrations, see Ref. (2), Sec. 10.

Other Protective:

An eye bath and washing facilities should be available.



TOP

SECTION 10 : Other Information

Isopropyl Alcohol:

SARA:

Physical Data: Not Applicable

Mixture: Not Applicable

Pure: Yes

Solid: Not Applicable

Liquid: Yes

Gas: Not Applicable

Section 304:

EPA-Comprehensive Environmental Response, Compensation and Liability Act. Under EPA-CERCLA ("Superfund") releases to air, land or water may be reportable to the national response center, 800-424-8802 (Circumstances surrounding the release and cleanup determine reportability). This product is not subject to CERCLA Reporting Requirements.

Section 312 Hazard Category:

Pressures: Not Applicable

Reactivity: Not Applicable

Chronic: Not Applicable

Acute: Yes

Fire: Yes

OSHA 29 CFR 1200:

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health

Standard Hazard Communication Rule.

NFPA:

Fire Hazard: 4 = Extrême

Health: 1 = Slight

Reactivity: 1 = Slight

Label Text:

Additional Information:

This information may be of importance to you.

Keep liquid and vapor away from heat, sparks and flame. Surfaces that are sufficiently hot may ignite even liquid product in the absence of sparks or flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors are gone.

Vapors may accumulate and travel to ignition sources distant from the handling site; flash fire can result. Keep containers closed when not in use. Use with adequate ventilation. Static electricity may accumulate and create a fire hazard. Ground fixed equipment. Bond and ground transfer containers and equipment. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat flame, sparks, static electricity, or other sources of ignition: They may explode and cause injury or death. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of. Aluminum containers are not recommended for storage. Minimize skin contact. Wash with soap and water before eating, drinking, smoking or using toilet facilities.

No smoking where material is used or stored.

MSDS Revision Date:

9-1-93

MSDS Author:

Robert Claiborne
Vice-President
Director of Regulatory Affairs
Quality control

BOB Claiborne,
Dir. Of Quality Cont. Regulatory Affairs.

Disclaimer:

Notice:

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The information provided in this material safety data sheet has been obtained from

sources believed to be reliable. L.T. York Co. provided no warranties. Either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your information, consideration and investigation. You should satisfy yourself that you have all current data relevant to your particular use. L.T. York knows of no medical condition, other than those noted on this material safety data sheet, which are generally recognized as being aggravated by exposure to this product.

Hazard Rating:

Least = 0

Slight = 1

Moderate = 2

High = 3

Extreme = 4

Reference:

(1) NIOSH manual of analytical methods. 2nd edition, volume 2. Issued by the national institute for occupational safety and health. Washington, U.S. Government printing office, 1977, method S65.

(2) NIOSH/OSHA pocket guide to chemical hazards DHHS (NIOSH) publication No. 85-114.

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Product: Gear Lube - High-Performance

Product #: 92-802851A 1, 92-802854A 1, 92-802854A40, 92-802856A 1, 802857A 1, 802858A 1

SECTION I - MANUFACTURER INFORMATION

Name: Mercury Marine **Emergency:** 800-424-9300 (ChemTrec)
Address: W6250 W. Pioneer Rd. **Information:** 920-929-5418
 PO Box 1939 **Date Prepared:** 08-24-87
 Fond du Lac WI 54936-1939 **Revised:** 05-03-00

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components*	OSHA PEL	ACGIH TLV	Other	% (Opt.)
Additive Package (Mixture)	N/A	N/A		17
Pour Point Additive (Mixture)	N/A	N/A		3
Refined Petroleum (64742-01-4)	N/A	N/A		80
Refined Petroleum (65741-88-4)	N/A	N/A		0

* Specific Chemical Identity, Common Name (CAS)

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: 665°F **Specific Gravity (H₂O=1):** 0.89
Vapor Pressure (mmhg): N/A **Melting Point:** N/D
Vapor Density (Air=1): > 1.0 **Evaporation Rate:** N/D
Solubility in Water: Negligible **(Butyl Acetate=1)**
Appearance and Odor: Green oil type liquid **HMIS Rating:** H-1 F-1 R-0 P-Section VIII

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): 392°F (TCC) **NFPA Rating:** H-1 F-1 R-0 S-None
Flammable Limits: LEL - N/A UEL - N/A
Extinguishing Media: Carbon dioxide, dry chemical, foam, water fog
Special Fire Fighting Procedures: None
Unusual Fire and Explosion Hazards: Water may cause frothing.

SECTION V - REACTIVITY DATA

Stability: Unstable () Stable (X)
Conditions to Avoid: Do not apply high heat or flame to container. Keep separate from strong oxidizing agents.
Incompatibility (Materials to Avoid): Strong oxidants
Hazardous Decomposition or Byproducts: Carbon dioxide (carbon monoxide under incomplete combustion)
Hazardous Polymerization: May Occur () Will Not Occur (X)

ADDITIONAL INFORMATION

Mercury Marine Emergency Information Number: 920-929-5000
 Manufacturer, Gold Eagle Co., Emergency Number: 773-376-4400

SECTION VI - HEALTH HAZARD DATA**Route(s) of Entry:** Inhalation (Y) Skin (Y) Ingestion (Y) Eye (Y)**Health Hazards (Acute and Chronic):** Inhalation - Low risk of inhalation. Mists above TLV may cause chemical pneumonitis. Skin - Mild irritant. Eye - Mild irritant. Ingestion - Toxicity is relatively low. There is a risk of aspiration of product into the lungs. Ingestion of large quantities may cause slight GI discomfort, diarrhea, and headache. Small doses may produce irritation and diarrhea.**Carcinogenicity:** NTP (N) IARC Monographs (N) OSHA Regulated (N)**Signs and Symptoms of Exposure:** See Health Hazards (Acute and Chronic)**Medical Conditions Generally Aggravated by Exposure:** None**Emergency and First Aid Procedures:** Inhalation - Remove to fresh air and call emergency medical care. If breathing has stopped, give artificial respiration. If breathing is difficult, give humidified oxygen. Skin - Remove contaminated clothing. Promptly wash affected area with soap and water for at least 15 minutes. Eye - Immediately flush with large quantities of water for at least 15 minutes, lifting eyelids. Get immediate medical attention. Ingestion - **DO NOT INDUCE VOMITING.** Get immediate medical assistance.**SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE****Steps to be Taken in Case Material is Released or Spilled:** **Small Spill:** Remove sources of heat or ignition. Provide adequate ventilation. Contain leak with absorbent, inert, non-combustible material.**Large Spill:** Contain spill. Transfer to secure containers. In the event of an uncontrolled material release, the user should determine if release is reportable under applicable laws and regulations.**Waste Disposal Method:** Dispose of product in accordance with federal, state, and local regulations. Before attempting cleanup, refer to other sections of this MSDS for hazard caution information.**Precautions to be taken in Handling and Storing:** Product is a combustible liquid. Keep away from heat and flames. Store below 150°F. Do not apply high heat or flame to container. Keep separate from strong oxidizing agents. Empty containers may contain product residue which could include flammable or explosive vapors.**Other Precautions:** **KEEP AWAY FROM CHILDREN!****SECTION VIII - CONTROL MEASURES****Respiratory Protection (Specify Type):** Normally none required. If high vapor or mist concentrations are expected, use appropriate NIOSH approved respirator for organic vapors and mists.**Ventilation:** **Local:** To maintain exposure levels below recommended exposure limits
Mechanical: In confined spaces**Protective Gloves:** Oil impervious gloves**Eye Protection:** Safety goggles or chemical-splash goggles**Other Protective Clothing or Equipment:** Wear body-covering work clothes to avoid prolonged exposure.**Work/Hygiene Practices:** Always follow good housekeeping and personal hygiene practices.

N/D = NOT DETERMINED (NO DATA)	N/E = NONE ESTABLISHED	Y = YES
N/A = NOT APPLICABLE	N/AV = NOT AVAILABLE	N = NO

Product: Quicksilver Storage Seal Rust Inhibitor (Liquid)

Product #: 92-86145A 2, 92-802879Q 1

SECTION I - MANUFACTURER INFORMATION

Name: Mercury Marine
Address: W6250 W. Pioneer Rd.
 PO Box 1939
 Fond du Lac WI 54936-1939

Emergency: 800-424-9300 (ChemTree)
Information: 920-929-5418
Date Prepared: 02-24-88
Revised: 05-03-00

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components*	OSHA PEL	ACGIH TLV	% (Opt.)
Additive Package (Mixture)	N/A	N/A	5
Refined Petroleum Oil (64742-65-0)	N/A	N/A	95

* Specific Chemical Identity, Common Name (CAS)

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: 665°F
Vapor Pressure (mmhg): N/A
Vapor Density (Air=1): >1.0
Solubility in Water: Negligible
Appearance and Odor: Amber, oil-type liquid

Specific Gravity (H₂O=1): 0.880
Melting Point: N/D
Evaporation Rate: N/D
(Butyl Acetate=1)
HMIS Rating: H-0 F-1 R-0 P-Section VIII

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): 392°F (TCC)
Flammable Limits: LEL - N/A UEL - N/A
Extinguishing Media: Carbon dioxide, dry chemical, foam, and/or water fog
Special Fire Fighting Procedures: Use SCBA apparatus operated in pressure demand or other positive pressure mode.
Unusual Fire and Explosion Hazards: Water may cause frothing. Empty containers may contain product residue which could include flammable or explosive vapors.

NFPA Rating: H-0 F-1 R-0 S-None

SECTION V - REACTIVITY DATA

Stability: Unstable () Stable (X)
Conditions to Avoid: High heat or flames
Incompatibility (Materials to Avoid): Strong oxidants
Hazardous Decomposition or Byproducts: Carbon dioxide (carbon monoxide under incomplete combustion)
Hazardous Polymerization: May Occur () Will Not Occur (X)

ADDITIONAL INFORMATION

Mercury Marine Emergency Information Number: 920-929-5000
 Manufacturer, Gold Eagle Co., Emergency Number: 800-424-9300 (ChemTree)

SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry: Inhalation (Y) Skin (Y) Ingestion (Y) Eye (Y)

Health Hazards (Acute and Chronic): Eye - Mild irritant. Skin - Mild irritant. Ingestion - Toxicity is relatively low. There is a risk of aspiration of product into the lungs. Ingestion of large quantities may cause slight gastrointestinal discomfort, diarrhea, and headache. Ingestion of small doses may produce irritation and diarrhea. Inhalation - Low risk. Mists above TLV may cause chemical pneumonitis.

Carcinogenicity: NTP (N/D) IARC Monographs (N/D) OSHA Regulated (N/D)

Signs and Symptoms of Exposure: See Health Hazards (Acute and Chronic)

Medical Conditions Generally Aggravated by Exposure: N/D

Emergency and First Aid Procedures: Eye - Immediately wash the eyes with large quantities of room temperature water for at least 15 minutes, occasionally lifting the lower and upper lids. Get medical attention immediately. Skin - Remove contaminated clothing and wash affected area with soap and water for 15 minutes. Launder contaminated clothing before reuse. Ingestion - DO NOT INDUCE VOMITING. Get immediate medical assistance. Inhalation - Move the exposed person to fresh air at once and call emergency medical care. If breathing has stopped, give artificial respiration. If breathing is difficult, give humidified Oxygen.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled: Small Spill - Remove sources of heat or ignition. Provide adequate ventilation. Contain leak with absorbent, inert, non-combustible material.

Large Spill - Contain spill. Transfer to secure containers. In the event of an uncontrolled material release, the user should determine if release is reportable under applicable laws and regulations.

Waste Disposal Method: Dispose of product in accordance with federal, state, and local regulations. Before attempting to clean up, refer to other sections of MSDS for hazard caution information.

Precautions to be taken in Handling and Storing: Store below 150°F. Keep away from heat and flames.

Other Precautions: KEEP AWAY FROM CHILDREN!

SECTION VIII - CONTROL MEASURES

Respiratory Protection (Specify Type): Normally none required. Use a NIOSH- approved respirator for organic vapors and mists if high vapor or mist concentrations are expected.

Ventilation: Local: To maintain exposure levels below any recommended limits.

Mechanical: In confined spaces.

Protective Gloves: Oil impervious

Eye Protection: Safety goggles or chemical-splash goggles

Other Protective Clothing or Equipment: Wear body covering clothes to avoid prolonged exposure.

Work/Hygiene Practices: Always follow good housekeeping and personal hygiene practices.

N/D = NOT DETERMINED (NO DATA) N/E = NONE ESTABLISHED Y = YES

N/A = NOT APPLICABLE N/AV = NOT AVAILABLE N = NO

Product: 4-Cycle/4-Stroke/MerCruiser Synthetic Blend Outboard Oil (25W-40)

Product #: 92-883722K01, 92-883723K01, 92-883724K01, 92-883725K01

SECTION I - MANUFACTURER INFORMATION

Name: Mercury Marine
Address: W6250 W. Pioneer Rd.
 PO Box 1939
 Fond du Lac WI 54936-1939

Emergency: 800-424-9300 (ChemTrec)
Information: 920-929-5418
Date Prepared: 03-09-04
Revised:

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components*	OSHA PEL	ACGIH TLV	Other	% (Opt.)
Distillates, petroleum, solvent-refined heavy paraffinic (64741-88-4)	5mg/m ³ **	5mg/m ³ **		70-90
Distillates, petroleum, hydrotreated heavy paraffinic (64742-54-7)	5mg/m ³ **	5mg/m ³ **		0-15
1-Decene trimer, hydrogenated (68649-12-7)	N/D	N/D		1-10
1-Decene homopolymer, hydrogenated (68037-01-4)	N/D	N/D		1-10
Proprietary Ingredients (Proprietary Mixture)	N/D	N/D		1-5
Zinc and Zinc Components (Proprietary)	N/D	N/D		0-2

* Specific Chemical Identity, Common Name (CAS)

**Oil Mist, Mineral Limits

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/AV
Vapor Pressure (mmhg): < .01 @ 20°C
Vapor Density (Air=1): > 1
Solubility in Water: Insoluble in cold water
Appearance and Odor: Amber liquid; mild petroleum odor
HMIS Rating: H - 1 F - 1 R - 0 P - Section VIII

Specific Gravity (H₂O=1): 0.89
Melting Point: N/AV
Evaporation Rate: N/D
(Butyl Acetate=1)

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): 392°F (Closed Cup) **NFPA Rating:** H - 0 F - 1 R - 0 P - Section VIII
Flammable Limits: LEL - N/D UEL - N/D
Extinguishing Media: Dry chemical, foam, carbon dioxide, or water fog
Special Fire Fighting Procedures: Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.
Unusual Fire and Explosion Hazards: When heated above its flash point temperature, this material will release vapors that can ignite when exposed to a source of ignition. In enclosed spaces, heated vapors can ignite with explosive force. Mists or sprays may burn at temperatures below the flash point.

SECTION V - REACTIVITY DATA

Stability: Unstable () Stable (X)
Conditions to Avoid: Keep away from extreme heat, sparks, open flame, and strongly oxidizing conditions.
Incompatibility (Materials to Avoid): Strong oxidizers
Hazardous Decomposition or Byproducts (Thermal): Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons, and trace oxides of sulfur, phosphorus, zinc, and/or nitrogen.
Hazardous Polymerization: May Occur () Will Not Occur (X)

ADDITIONAL INFORMATION

Mercury Marine Emergency Information Number: 920-929-5000
 Manufacturer, Citgo Petroleum Corp., Emergency Number: 800-424-9300 (ChemTrec)

SECTION VI - HEALTH HAZARD DATA**Route(s) of Entry:** Inhalation (Y) Skin (Y) Eye (Y) Ingestion (Y)**Health Hazards (Acute and Chronic):** Acute: Inhalation - No significant adverse health effects are expected to occur upon short-term exposure. Eye - Transient, mild irritation with short-term contact with liquid sprays or mists. Skin - Mild, transient skin irritation with short-term exposure. Ingestion - No significant adverse health effects are anticipated. Chronic: Prolonged or repeated skin contact can cause mild irritation and inflammation characterized by drying, cracking (dermatitis), or oil acne. Repeated or prolonged inhalation of petroleum-based mineral oil mists at concentrations above applicable workplace exposure levels can cause respiratory irritation and other pulmonary effects.**Carcinogenicity:** NTP (N) IARC Monographs (N) OSHA Regulated (N)**Signs and Symptoms of Exposure:** Inhalation - N/A Eye - Stinging, watering, redness, and swelling. Skin - Contact with hot material may result in severe burns. Ingestion - Can cause a laxative effect.**Medical Conditions Generally Aggravated by Exposure:** Pre-existing skin disorders.**Emergency and First Aid Procedures:** Inhalation - In case of overexposure, move victim to fresh air. Eye - Remove contact lenses if any. Flush eyes with cool, clean, low-pressure water while occasionally lifting and lowering eyelids. Seek medical attention if excessive tearing, redness, or pain persists. Skin - Remove contaminated clothing and shoes. Wipe off excess material from skin. Wash exposed skin area with mild soap and water. Seek medical attention if tissue appears damaged or irritation persists. If material is injected under the skin, into the muscle or into the bloodstream, seek medical attention immediately. Ingestion - DO NOT INDUCE VOMITING. Do not give anything to drink unless directed to by a physician. Never give anything by mouth to a person who is not fully conscious. Seek medical attention immediately.**SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE****Steps to be Taken in Case Material is Released or Spilled:** Do not touch damaged containers or spilled material unless wearing appropriate protective equipment. Slipping hazard; do not walk through spilled material. Stop leak if you can do so without risk. **Small Spill:** Absorb or cover with dry earth, sand, or other inert non-combustible absorbent material. Place into waste containers for later disposal. **Large Spill:** Contain spill. Prevent entry into waterways or sewers. In urban areas, clean up spill as soon as possible. In natural environments, seek cleanup advice from specialists to minimize physical habitat damage. This material will float on water. Absorbent pads and similar materials can be used. Transfer to secure containers.**Waste Disposal Method:** User to determine if material is a hazardous waste at time of disposal. Transportation, treatment, storage, and disposal of waste material must be conducted in accordance with RCRA regulations. State and/or local regulations may be more restrictive. Contact the RCRA/Superfund Hotline at (800) 424-9346 for guidance concerning case specific disposal issues.**Precautions to be taken in Handling and Storing:** Avoid water contamination and extreme temperatures to minimize product degradation. Empty containers may contain product residue that can ignite with explosive force. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to flames, sparks, heat or other potential ignition sources. Keep container closed when not in use. Do not store with strong oxidizing agents. Do not store at temperatures above 120°F or in direct sunlight.**Other Precautions:** KEEP AWAY FROM CHILDREN**SECTION VIII - CONTROL MEASURES****Respiratory Protection (Specify Type):** Normally none required. A NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used if elevated airborne concentrations are anticipated.**Ventilation: Local & Mechanical -** To keep airborne concentrations of mists and/or vapors below the recommended exposure limits.**Protective Gloves:** Use gloves constructed of chemical-resistant materials such as neoprene or heavy nitrile rubber if frequent or prolonged contact is expected.**Eye Protection:** Safety glasses w/side shields. Goggles and/or face shield if splashing/spraying is likely or material is heated above 125°F.**Other Protective Clothing or Equipment:** Wear clean protective clothing (e.g., neoprene or Tyvek®) for prolonged or repeated contact. Launder contaminated work clothes before reuse.**Work/Hygiene Practices:** Always follow good housekeeping and personal hygiene practices.

N/D = NOT DETERMINED (NO DATA)	N/E = NONE ESTABLISHED	Y = YES
N/A = NOT APPLICABLE	N/AV = NOT AVAILABLE	N = NO

Product: Power Steering Fluid SAE 0W30**Product #:** 92-858001K01, 92-858002K01**SECTION I - MANUFACTURER INFORMATION****Name:** Mercury Marine**Emergency:** 800-424-9300 (ChemTrec)**Address:** W6250 W. Pioneer Rd.**Information:** 920-929-5418

PO Box 1939

Date Prepared: 01-05-02

Fond du Lac WI 54936-1939

Revised:**SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Hazardous Components*	OSHA PEL	ACGIH TLV	Other	% (Opt.)
1-Decene homopolymer, hydrogenated (68037-01-4)	N/D	N/D		< 70
Distillates, petroleum, solvent-refined heavy paraffinic (64741-88-4)	5mg/m ³	5mg/m ³		< 30
Decanoic acid, ester with 2-ethyl-2-(hydroxymethyl)-1,3-propane diol octanoate (11138-60-6)	N/D	N/D		< 20
Distillates, petroleum, hydrotreated heavy paraffinic (64742-54-7)	5mg/m ³	5mg/m ³		< 20
Proprietary ingredients (Proprietary Mixture)	N/D	N/D		< 5
Zinc and zinc compounds (68649-42-3)	N/D	N/D		< 1

*Specific Chemical Identity, Common Name (CAS)

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS**Boiling Point:** N/AV**Specific Gravity (H₂O=1):** < 1**Vapor Pressure (mmhg):** < 0.1 @ 20°C**Melting Point:** N/AV**Vapor Density (Air=1):** > 1**Evaporation Rate:** N/D**Solubility in Water:** Insoluble in cold water.**(Butyl Acetate=1)****Appearance and Odor:** Amber to black liquid, mild petroleum odor**HMIS Rating:** H-1 F-2 R-0 P-See Section VIII**SECTION IV - FIRE AND EXPLOSION HAZARD DATA****Flash Point (Method Used):** 475°F (Cleveland)**NFPA Rating:** H-0 F-2 R-0 P-N/D**Flammable Limits:** LEL - N/D UEL - N/D**Extinguishing Media:** Carbon dioxide, dry chemical, foam, or water fog**Special Fire Fighting Procedures:** This material can burn but will not readily ignite. This material will release vapors when heated above the flash point temperature that can ignite when exposed to a source of ignition.

Firefighters must use full bunker gear including NIOSH-approved, positive-pressure, self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.

Unusual Fire and Explosion Hazards: In enclosed spaces, heater vapor can ignite with explosive force. Mists or sprays may burn at temperatures below the flash point.**ADDITIONAL INFORMATION**

Mercury Marine Emergency Information Number: 920-929-5000

Manufacturer, Citgo Petroleum Corp., Emergency Number: 800-424-9300 (Chemtrec)

SECTION V - REACTIVITY DATA

Stability: Unstable () Stable (X)

Conditions to Avoid: Keep away from extreme heat, sparks, open flame, and strongly oxidizing conditions.

Incompatibility (Materials to Avoid): Strong oxidizers

Hazardous Decomposition or Byproducts: Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons, and trace oxides of sulfur, phosphorus, zinc, and/or nitrogen.

Hazardous Polymerization: May Occur () Will Not Occur (X)

SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry: Inhalation (X) Skin (X) Eye (X) Ingestion (X)

Health Hazards (Acute and Chronic): This product contains a petroleum-based mineral oil. Prolonged or repeated skin contact can cause mild irritation and inflammation characterized by drying, cracking, (dermatitis) or oil acne. Repeated or prolonged inhalation of petroleum-based mineral oil mists at concentrations above applicable workplace exposure levels can cause respiratory irritation or other pulmonary effects.

Carcinogenicity: NTP (N) IARC Monographs (N) OSHA Regulated (N)

Signs and Symptoms of Exposure: Inhalation – No significant adverse health effects are expected to occur upon short-term exposure. Skin – This product can cause mild, transient skin irritation with short-term exposure. Skin contact with hot material may result in severe burns. Eye – This product can cause transient, mild eye irritation with short-term contact with liquid sprays or mists. Symptoms include stinging, watering, redness, and swelling. Ingestion – If swallowed, this material can cause a laxative effect.

Medical Conditions Generally Aggravated by Exposure: Skin

Emergency and First Aid Procedures: Inhalation – Vaporization is not expected at ambient temperatures. This material is not expected to cause inhalation-related disorders under anticipated conditions of use. In case of overexposure, move the affected person to fresh air. Skin – If burned by hot material, cool skin by quenching with large amounts of cool water. For contact with product at ambient temperatures, remove contaminated shoes and clothing. Wipe off excess material. Wash exposed skin with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists. Thoroughly clean contaminated clothing before reuse. Discard contaminated leather goods. If material is injected under skin, seek medical attention immediately. Eye – Check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water while occasionally lifting and lowering eyelids. Seek medical attention if excessive tearing, redness, or pain persists. Ingestion- Do not induce vomiting unless directed by a physician. Do not give anything to drink unless directed by a physician. Never give anything by mouth to a person who is not fully conscious. Seek medical attention immediately.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled: Do not touch damaged containers or spilled material unless wearing appropriate protective equipment. Slipping hazard; do not walk through spilled material. Stop leak if you can do so without risk. **Small Spills:** Absorb or cover with dry earth, sand, or other inert non-combustible absorbent material. Place into waste containers for later disposal. **Large Spills:** Contain to maximize product recovery or disposal. Prevent entry into waterways or sewers. In urban area, clean up spill as soon as possible. In natural environments, seek cleanup advice from specialists to minimize physical habitat damage. This material will float on water. Absorbent pads and similar materials can be used.

Waste Disposal Method: It is the responsibility of the user to determine if the material is a "hazardous waste" as the time of disposal. Transportation, treatment, storage, and disposal of waste material must be conducted in accordance with RCRA regulations (40 CFR 260 through 40 CFR 271). State and/or local regulations may be more restrictive.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Precautions to be taken in Handling: Avoid contamination and extreme temperatures to minimize product degradation. Empty containers may contain product residues that can ignite with explosive force. Do not pressurize, cut, weld, braze solder, drill, grind, or expose containers to flames, sparks, heat, or other potential ignition sources. Consult appropriate federal, state, and local authorities before reusing, reconditioning, reclaiming, recycling, or disposing of empty containers and/or waste residues of this product.

Precautions to be taken in Storing: Keep container closed. Do not store with strong oxidizing agents. Do not store at elevated temperatures. Avoid storing product in direct sunlight for extended periods of time. Consult appropriate federal, state, and local authorities before reusing, reconditioning, reclaiming, recycling, or disposing of empty containers and/or waste residues of this product.

Other Precautions: KEEP AWAY FROM CHILDREN!

SECTION VIII - CONTROL MEASURES

Respiratory Protection (Specify Type): If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with dust/mist/prefilter should be used.

Ventilation: Local Exhaust & Mechanical: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits.

Protective Gloves: Use gloves constructed of chemical-resistant materials such as neoprene or heavy nitrile rubber if frequent or prolonged contact is expected. Use heat-protective gloves when handling product at elevated temperatures.

Eye Protection: Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Wear goggles and/or face shield if splashing or spraying is anticipated. Wear goggles and face shield if material is heated above 125°F (51°C). Have suitable eye wash water available.

Other Protective Clothing or Equipment: Personal protective equipment should be selected based upon the conditions under which this material is used. Use clean and impervious protective clothing (e.g. neoprene or Tyvek) if splashing or spraying conditions are present. Protective clothing should include long sleeves, apron, boots, and additional face protection.

Work/Hygiene Practices: Always follow good housekeeping and personal hygiene practices. Launder oil-contaminated clothing before reuse. Contaminated leather goods should be removed promptly and discarded.

N/D = NOT DETERMINED (NO DATA) N/E = NONE ESTABLISHED Y = YES
N/A = NOT APPLICABLE N/AV = NOT AVAILABLE N = NO

MIL 4811



Material Safety Data Sheet

May be used to comply with

OSHA's Hazard Communication Standard 29 CFR 1910.1200

Standard must be consulted for specific requirements

IDENTITY (As used on label and list)

ALL NICKEL-CADMIUM BATTERY PACKS

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name Milwaukee Electric Tool Corporation	Emergency Telephone Number 1-800-424-9300
Address (Number, Street) 13135 West Lisbon Road	Telephone Number for Information 262-781-3600
(City, State, and Zip Code) Brookfield, Wisconsin 53005	Date Prepared September 2003

Section II - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common name (s))
This product is regarded as an "Article" by definition under 29CFR 1910.1200. The product contents are listed for information in the event that the battery cell case is breached due to fire, explosion, extreme abuse, misuse or improper disposal. The physical form of the product precludes exposure in normal use.

Ingredient	% by Weight	Reg. Y/N	CAS #	OSHA PEL	ACGIH TLV**	Other Limits Recommended	CARCINOGEN Y/N
Cadmium	0-26	Y	7440-43-9	0.005 TWA	0.05 TWA	NA	Y
Cadmium Hydroxide	3-26	Y	21041-95-2	0.005 TWA	0.05 TWA	NA	Y
Nickel (Powder)	8-17	NA	7440-02-0	1 TWA	1 TWA	NA	NA
Nickel Hydroxide	0-12	NA	12054-48-7	1 TWA	1 TWA	NA	NA
Potassium or Sodium Hydroxide	0-4	NA	1310-58-3	2 Ceiling	2 Ceiling	NA	NA
Lithium Hydroxide	0.4±	NA	NA	NA	NA	NA	NA
Nickel Oxide Hydroxide	1.12	NA	NA	NA	NA	NA	NA

DOT Hazard Classification: Non Hazardous

Pursuant to SARA 313, Title III, notification is unnecessary for "Articles"

HMIS [®] Rating Numbers	Health	Flammability	Reactivity	Personal Protection
	NA	NA	NA	NA
Hazard Ratings:	0 = Minimal hazard A = Goggles	1 = Slight hazard B = Goggles + Gloves	2 = Moderate hazard C = Face Shield, Gloves + Apron	3 = Serious hazard D = Special, See section VII of this sheet

Section III - Physical/Chemical Characteristics

Boiling Point > 392° F	Specific Gravity (H ₂ O=1) > 2.6
Vapor Pressure (mm/Hg.) NA	Melting Point NA
Vapor Density (Air=1) NA	Evaporation Rate NA
Solubility in Water Slightly soluble (electrolyte)	
Appearance and Odor Solid, sealed in a case NA	

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used) NA	Flammable Limits NA	LEL NA	UEL NA
Extinguishing Media Water CO ₂			
Special Fire Fighting Procedures NA			
Unusual Fire and Explosion Hazards Exposure to temperatures above 212°F can cause evaporation of the liquid content of the potassium hydroxide electrolyte resulting in rupture of the cell. Potential for exposure to cadmium fumes during fire; use self-contained breathing apparatus.			

Section V - Reactivity Data

Stability	Unstable		Conditions to avoid:
	Stable	X	Heat, open flames, sparks, moisture
Incompatibility (Material to avoid): Acids, aldehydes, and carbonate compounds.			
Hazardous Decomposition or Byproducts Oxides of cadmium and nickel			
Hazardous Polymerization	May Occur		Conditions to avoid:
	Stable	X	NA

Section VI - Health Hazard Data

Route(s) of Entry: During normal use	Inhalation?	Skin?	Ingestion?
	NA	NA	NA
Health Hazards (Acute and Chronic) NA during normal use. The electrolyte may cause skin or eye irritation.			
Carcinogenicity: Not during normal use.	NIIP?	IARC Monographs?	OSHA Regulated?
	NA	NA	NA
Signs and Symptoms of Exposure: The electrolyte may cause skin or eye irritation. Flush immediately with water.			
Medical Conditions Generally Aggravated by Exposure: NA during normal use.			
Emergency and First Aid Procedures: If electrolyte contacts skin or eyes, flush area with clean water.			

Section VII - Precautions for Safe handling and Use

Steps to Be Taken in Case Material is Released or Spilled Spill and leaks are unlikely. If disassembled avoid contact with skin and eyes.
Waste Disposal Method Cadmium batteries are hazardous waste and should be disposed of according to Federal, State and Local regulations.
Precautions to Be Taken in Handling and Storage Never short circuit cells. Personal injury and fire may result.
Other Precautions If battery contents are released, do not touch spilled material. Take up with sand or other absorbent and place in container for disposal as a hazardous waste per Federal, State and Local regulations.

Section VIII - Control Measures

Respiratory Protection (Specify Type) Unnecessary during normal use.			
Ventilation	Local Exhaust	NA	Special NA
	Mechanical	NA	Other NA
Protective Gloves NA during normal use	Eye Protection NA during normal use		
Other Protective Clothing or Equipment None			
Work/Hygienic Practices NA			

The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation. MILWAUKEE ELECTRIC TOOL CORP. makes no warranty, expressed or implied, regarding the accuracy of this data or the results to be obtained from the use thereof.

MOELLER MARINE PRODUCTS CO.
801 NORTH SPRING ST.
SPARTA, TENN.; 38583
USA

PRODUCT: 13004-14-021/5 025472 MOELLER GREEN ZINC CHROMATE



Section 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER MANUFACTURED FOR:
MOELLER MARINE PRODUCTS CO.
801 NORTH SPRINGS ST
SPARTA
TENN. 38583
USA
931-738-8090

PRODUCT NAME..... 13004-14-021/5 025472 MOELLER GREEN ZINC CHROMATE
CHEMICAL FAMILY..... ALKYD BASED COATING.
MOLECULAR WEIGHT..... NOT APPLICABLE.
CHEMICAL FORMULA..... NOT APPLICABLE.
TRADE NAMES & SYNONYMS..... 13004-14-021/5 025472 MOELLER GREEN ZINC CHROMATE
PRODUCT USES..... PRIMER.
FORMULATION #..... 14-521.
LAB BOOK #..... 002-17-142.
V.O.C.(M.I.R.)..... COMPLIES WITH AVIATION AND MARINE PRIMER CATERGORY <2 g OZONE / g PRODUCT.

Section 02: COMPOSITION/INFORMATION INGREDIENTS

Hazardous Ingredients	%	Exposure Limit	C.A.S.#	LD/50, Route,Species	LC/50 Route,Species
ACETONE	15-40	750 ppm	67-64-1	>9750 mg/kg ORAL - RAT	>16,000 ppm (4 hr) INHAL - RAT
OLUENE	7-13	50 ppm	108-88-3	5000 mg/kg ORAL - RAT	8000 ppm (4 hr) INHAL - RAT
LEAD CHROMATE	5-10	0.05 mg/m3	7758-97-6	NOT AVAILABLE	NOT AVAILABLE
XYLENE	1-5	100 ppm	1330-20-7	4.3 g/kg ORAL - RAT	6350 ppm (4 hr) INHAL - RAT
PROPYLENE GLYCOL METHYL ETHER ACETATE	1-5	100	108-65-6	8500 mg/kg ORAL - RAT	>4345 ppm (6 hr) INHAL - RAT
LEAD SULPHATE	1-5	0.05 mg/m3	7446-14-2	NOT AVAILABLE	NOT AVAILABLE
TALC (MAGNESIUM SILICATE HYDRATE)	1-5	2 mg/m 3	14807-96-6	NOT AVAILABLE	NOT AVAILABLE
SILICA, CRYSTALLINE	0.1-1.0	10 mg/m3	112926-00-8	NOT AVAILABLE	NOT AVAILABLE
ISOBUTANE	5 -10	1000 ppm	75-28-5	NOT APPLICABLE	142,500 ppm (4h) INHAL - RAT
PROPANE	10-30	1000 ppm	74-98-6	NOT APPLICABLE	NOT AVAILABLE

Section 03: HAZARDS IDENTIFICATION

ROUTE OF ENTRY:

INGESTION..... MAY CAUSE HEADACHE, NAUSEA, VOMITING AND WEAKNESS.
INHALATION..... INHALATION OF SOLVENTS MAY CAUSE IRRITATION. PROPELLANT IS A SIMPLE ASPHYXIANT.

EYE CONTACT..... MAY CAUSE IRRITATION.
SKIN ABSORPTION..... NO DATA AVAILABLE FOR THIS PRODUCT MIXTURE.
SKIN CONTACT..... MAY CAUSE IRRITATION.
EFFECTS OF ACUTE EXPOSURE..... DIZZINESS, NAUSEA. IRRITATION TO SKIN & EYES.
EFFECTS OF CHRONIC EXPOSURE..... SOLVENTS MAY CAUSE DEFATTING DERMATITIS.
EXPOSURE LIMIT OF MATERIAL..... SEE SECTION 2.

Section 04: FIRST AID MEASURES

EMERGENCY FIRST AID PROCEDURE IN CASE OF EYE CONTACT, FLUSH IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION. FOR SKIN, WASH THOROUGHLY WITH SOAP AND WATER. IF AFFECTED BY INHALATION OF VAPOUR OR SPRAY MIST, REMOVE TO FRESH AIR. IF SWALLOWED; DO NOT INDUCE VOMITING, GET MEDICAL ATTENTION.

PRODUCT: 13004-14-021/5 025472 MOELLER GREEN ZINC CHROMATE**Section 05: FIRE FIGHTING MEASURES**

AUTO IGNITION TEMPERATURE (°C).....	243-465.
SPECIAL PROCEDURES.....	WATER FROM FOGGING NOZZLES MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT BUILD-UP IF EXPOSED TO EXTREME TEMPERATURES. FULL PROTECTIVE EQUIPMENT INCLUDING SELF CONTAINED BREATHING APPARTATUS SHOULD BE WORN IN A FIRE INVOLVING THIS MATERIAL.
FLAMMABILITY.....	EXTREMELY FLAMMABLE.
IF YES, UNDER WHICH CONDITIONS?.....	EXCESSIVE HEAT, SPARKS AND OPEN FLAME.
EXTINGUISHING MEDIA.....	WATER, CARBON DIOXIDE, DRY CHEMICAL, FOAM.
UPPER FLAMMABLE LIMIT.....	12.6.
(% BY VOLUME)	
LOWER FLAMMABLE LIMIT.....	1.
(% BY VOLUME.)	
EXPLOSION DATA	
SENSITIVITY TO STATIC DISCHARGE.....	NOT APPLICABLE.
SENSITIVITY TO IMPACT.....	NOT APPLICABLE.
HAZARDOUS COMBUSTION	
PRODUCTS.....	HYDROCARBON FUMES AND SMOKE. CARBON MONOXIDE WHERE COMBUSTION IS INCOMPLETE.
AEROSOL FLAME PROJECTION	
CLASSIFIED AS:.....	> 45 CM.
FLASHBACK.....	NONE.
FLASH POINT(°C),TAG CLOSED-CUP	LOWEST VALUE KNOWN IS ACETONE @-18C.
(CONCENTRATE)	

Section 06: ACCIDENTAL RELEASE MEASURES

LEAK/SPILL.....	REMOVE ALL SOURCES OF IGNITION. USE AN INERT ABSORBENT MATERIAL, AND NON-SPARKING TOOLS. VENTILATE AREA. PREVENT FROM ENTERING A WATERCOURSE.
-----------------	---

Section 07: HANDLING AND STORAGE

STORAGE NEEDS.....	KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAMES.
ENGINEERING CONTROLS.....	VENTILATION - LOCAL (MECHANICAL IF USED INDOORS ON A CONTINUOUS BASIS).
HANDLING PROCEDURES AND EQUIPMENT.....	STORE IN A COOL, WELL VENTILATED AREA NOT TO EXCEED 50 DEG C.
SYNERGISTIC MATERIALS.....	NONE KNOWN.

Section 08: EXPOSURE CONTROLS/PERSONAL PROTECTION

GLOVES/ TYPE.....	WEAR CHEMICAL RESISTANT GLOVES.
RESPIRATORY/TYPE.....	IF USED INDOORS ON A CONTINUOUS BASIS, USE OF A CARTRIDGE TYPE RESPIRATOR (NIOSH/MSHATC 23C OR EQUIVALENT) IS RECOMMENDED.
EYE/TYPE.....	SAFETY GLASSES.
FOOTWEAR/TYPE.....	NOT NORMALLY REQUIRED.
OTHER/TYPE.....	NOT REQUIRED.

Section 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE.....	AEROSOL.
APPEARANCE.....	GREEN.
ODOR.....	KETONE.
ODOR THRESHOLD.....	NOT AVAILABLE.
VAPOUR PRESSURE(PSIG)-AEROSOL.....	55 - 65.
@ 20 C	
BOILING POINT (° C)(CONC).....	57-143.
EVAPORATION RATE.....	GREATER THAN 1.
n-BUTYL ACETATE = 1	
VAPOUR DENSITY (AIR=1).....	GREATER THAN 1.
(BY WEIGHT)	
SOLUBILITY IN WATER.....	NEGLIGIBLE.
pH.....	NOT APPLICABLE.
SPECIFIC GRAVITY (LIQUID).....	0.89-0.93.
COEFFICIENT OF WATER/OIL DIST.....	NOT AVAILABLE.
FREEZING POINT: (°C).....	NOT AVAILABLE.

Section 10: STABILITY AND REACTIVITY

HAZARDOUS PRODUCTS OF DECOMPOSITION.....	HYDROCARBON FUMES AND SMOKE. CARBON MONOXIDE WHERE COMBUSTION IS INCOMPLETE.
CHEMICAL STABILITY:	
YES.....	UNDER NORMAL CONDITIONS.

PRODUCT: 13004-14-021/5 025472 MOELLER GREEN ZINC CHROMATE

Section 10: STABILITY AND REACTIVITY

NO, WHICH CONDITIONS?..... NOT APPLICABLE.
 COMPATABILITY WITH OTHER SUBSTANCES:
 NO, WHICH ONES?..... STRONG OXIDIZING AGENTS.
 REACTIVITY CONDITIONS?..... NOT APPLICABLE.

Section 11: TOXICOLOGICAL INFORMATION

REPRODUCTIVE EFFECTS..... TOLUENE - PROLONGED AND REPEATED EXPOSURE OF PREGNANT ANIMALS TO TOLUENE (LEVELS GREATER THAN APPROXIMATELY 1500 ppm) HAS BEEN REPORTED TO CAUSE ADVERSE FETAL DEVELOPMENTAL EFFECTS. XYLENE - HIGH EXPOSURES TO XYLENE IN SOME ANIMAL STUDIES, OFTEN AT LEVELS TOXIC TO THE MOTHER, AFFECTED EMBRYO/FETAL DEVELOPMENT. THE SIGNIFICANCE OF THIS FINDING TO HUMANS IS NOT KNOWN.
 IRRITANCY OF MATERIAL..... SKIN/EYE IRRITANT.
 SENSITIZING CAPABILITY OF MATERIAL..... UNKNOWN.
 CARCINOGENICITY OF MATERIAL..... LEAD IS A CARCINOGEN.
 TERATOGENICITY..... NO INFORMATION IS AVAILABLE AND NO ADVERSE TERATOGENIC EFFECTS ARE ANTICIPATED.
 MUTAGENICITY..... NO INFORMATION IS AVAILABLE AND NO ADVERSE MUTAGENIC EFFECTS ARE ANTICIPATED.

Section 12: ECOLOGICAL CONSIDERATIONS

ENVIRONMENTAL..... NOT AVAILABLE.

Section 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL..... DO NOT PUNCTURE OR INCINERATE CONTAINERS, EVEN WHEN EMPTY. DISPOSE OF IN ACCORDANCE WITH LOCAL, PROVINCIAL AND FEDERAL REGULATIONS.

Section 14: TRANSPORTATION INFORMATION

T.D.G. CLASSIFICATION..... CONSUMER COMMODITY AEROSOLS, UN1950, CLASS 2.1 .
 DOT CLASSIFICATION..... CONSUMER COMMODITY, ORM-D.

Section 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION..... A,B5,D1A,D2B.
 HMIS RATING HEALTH..... 2 MODERATE HAZARD.
 HMIS RATING FLAMMABILITY..... 4 SEVERE HAZARD.
 HMIS RATING REACTIVITY..... 0 MINIMAL HAZARD.
 NFPA CODE 30B..... LEVEL 2.
 CNFC SECTION 3.3.5..... LEVEL 2.

Section 16: OTHER INFORMATION

NOTICE FROM KG PACKAGING INC THE INFORMATION ON THIS MATERIAL SAFETY DATA SHEET IS PROVIDED BY KG PACKAGING INC. FREE OF CHARGE. WHILE BELIEVED TO BE RELIABLE, IT IS INTENDED FOR USE BY SKILLED PERSONS AT THEIR OWN RISK. KG PACKAGING INC. ASSUMES NO RESPONSIBILITY FOR EVENTS RESULTING OR DAMAGES INCURRED FROM ITS USE. THE INFORMATION ON THIS MATERIAL SAFETY DATA SHEET RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED HEREIN AND DOES NOT RELATE TO USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY PROCESS.

PREPARED BY..... Technical Services
 PREPARATION DATE Jan06/05



Mid-Mountain Materials

THE FINAL BARRIER AGAINST ABRASION, HEAT, CHEMICALS AND CORROSION

SILTEX® 18 AMORPHOUS SILICA TEXTILES

SILTEX® is a family of high performance textile fabrics comprised of high purity, high strength amorphous silica fibers that are woven into a strong, flexible fabric designed for use where severe temperature conditions exist.

SILTEX® 18 is manufactured to a finished weight of 18 ounces per square yard. Its unique properties make it well suited for protection of personnel and equipment against moderate welding splatter sparks, grinding of metals, etc. SILTEX® 18 is also excellent for use in engineered thermal insulation systems designed for severe temperatures, such as Turbine Covers, Exhaust Silencer Covers, etc.

The amorphous silica fibers that make up all SILTEX® products are unaffected by most chemicals, except strong alkalis, hydrofluoric acid or sodium. All SILTEX® fabrics are available in standard "C" and pre-shrunk (fired) versions, and are available with several coating/treatment options that enhance certain properties of the product in order to meet required performance characteristics.

AVERAGE PHYSICAL PROPERTIES

> Material	Amorphous Silica 96 - 99%	> Tolerance, % stated	+/- 10 unless otherwise specified
> Construction	Woven fabric, 8 harness satin weave	> Break Strength, lb, nom, warp x fill	>200 x 150 (1"x4")
> Use Limit, intermittent	2300°F • 1260°C	> Width in. standard	36
> Use Limit, continuous	1800°F • 980°C	> Linear Shrinkage, % 30 minutes	<3 @ 1300°F • 700°C
> Melting Point	3100°F • 1700°C		8-12 @ 1800°F • 700°C
> Weight, oz/sy	17.5	> Packaging	50 ly per roll
> Thickness, inches, nom028		300 ly per master roll

AVAILABLE FORMS:

SILTEX® 18C – Standard product caramelized and includes a light coating to aid in handling, abrasion resistance and fabrication.

SILTEX® 18U – Uncoated, available caramelized as well as loom-state white

SILTEX® 18C – Pre-shrunk, available fired to 1800°F • 980°C, white

The technical data presented herein are indicative of representative properties and are intended as a specification guide only. No warranties are expressed or implied as application conditions are beyond our control.

MATERIAL SAFETY DATA SHEET

DATE PREPARED:
REVISED MAY 3, 2001

IDENTITY (AS USED ON LABEL AND LIST): **N-109A H.D. CLEANER / DEGREASER
SAFE-FIREPROOF BIODEGRADABLE**

SECTION I

MANUFACTURER'S NAME: **EMERGENCY TELEPHONE NUMBER:**
NAR ENTERPRISES, INC. (253)478-9401 OR 1-888-474-5699

ADDRESS: 5202 SOUTH PROCTOR STREET, BLDG. A
TACOMA, WASHINGTON 98409

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS CHEMICAL NAME:	OSHA PEL	ACGIH TLV	OTHER LIMITS	PERCENT
ETHYLENE GLYCOL MONOBUTYL ETHER (CAS #111-76-2)	25 PPM (SKIN)	25 PPM (SKIN)	NONE	6%
SODIUM METASILICATE (CAS #8834-92-0)	2MG/M3 CEILING	2MG/M3 CEILING	NONE	7%

NO OTHER INGREDIENTS CONSIDERED HAZARDOUS.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: APPROXIMATELY 212F. SPECIFIC GRAVITY: APPROXIMATELY .98
VAPOR PRESSURE (MM HG): NOT APPLICABLE pH CONCENTRATE: APPROX. 12.5
VAPOR DENSITY (AIR=1): LESS THAN EVAPORATION RATE(BUTYL ACETATE=1):
SLOWER
SOLUBILITY IN WATER: COMPLETELY SOLUBLE
APPEARANCE AND ODOR: CLEAR, PINK LIQUID WITH SLIGHT ODOR.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: NON-COMBUSTIBLE FLAMMABLE LIMITS: N/A LEL: N/A UEL: N/A
EXTINGUISHING MEDIA: THIS PRODUCT IS NOT COMBUSTIBLE. WATER SPRAY, FOAM,
CARBON DIOXIDE, OR DRY CHEMICAL MAY BE USED.
SPECIAL FIRE FIGHTING PROCEDURES: WEAR FULL PROTECTIVE CLOTHING IF NECESSARY.
UNUSUAL FIRE AND EXPLOSION HAZARDS: NOT APPLICABLE

SECTION V - REACTIVITY DATA

STABILITY: STABLE HAZARDOUS POLYMERIZATION: WILL NOT OCCUR
CONDITIONS TO AVOID INSTABILITY: NOT APPLICABLE
MATERIALS AND CONDITIONS TO AVOID INCOMPATIBILITY: CONCENTRATED ACIDS
HAZARDOUS DECOMPOSITION PRODUCTS: BIODEGRADABLE

SECTION VI - HEALTH HAZARD DATA

ROUTE(S) OF ENTRY:	INHALATION?	SKIN?	INGESTION?
	PROLONGED USE	YES	YES

HEALTH HAZARDS (ACUTE AND CHRONIC): INHALATION: MAY BE IRRITATING TO NOSE AND THROAT. SKIN: CAN PRODUCE SEVERE BURNS ON CONTINUED CONTACT. EYES: CAN CAUSE SEVERE BURNS THAT RESULT IN DAMAGE TO THE EYES IF NOT TREATED. INGESTION: CAN CAUSE SEVERE BURNS TO MUCOUS MEMBRANES OF THE MOUTH, THROAT, AND STOMACH.
SKIN ABSORPTION: EXCESSIVE EXPOSURE MAY CAUSE HEMOLYSIS, THEREBY IMPAIRING THE BLOOD'S ABILITY TO TRANSPORT OXYGEN.

CARCINOGENICITY: NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? NO

SIGNS AND SYMPTOMS OF EXPOSURE: INHALATION: MAY CAUSE COUGHING, SNEEZING, OR OTHER SYMPTOMS. EYES: PAIN, REDNESS. SKIN: ITCHING OR BURNING. INGESTION: BURNING OF THROAT, MOUTH, STOMACH, ETC.
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NONE KNOWN
EMERGENCY AND FIRST AID PROCEDURES: INHALATION: REMOVE VICTIM TO FRESH AIR. EYES: FLUSH WITH WATER FOR 15 MINUTES. SKIN: FLUSH THOROUGHLY WITH COOL WATER. INGESTION: DO NOT INDUCE VOMITING. SEEK MEDICAL ATTENTION IMMEDIATELY.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: WEAR ALL PROTECTIVE EQUIPMENT WHEN HANDLING LARGE SPILLS. MOP, PUMP, OR VACUUM INTO SUITABLE CONTAINERS. DRY MOP OR USE ABSORBENT TO REMOVE FINAL TRACES.
WASTE DISPOSAL METHOD: DISPOSE OF ACCORDING TO FEDERAL, STATE, AND LOCAL HEALTH ENVIRONMENTAL REGULATIONS.
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: WEAR PROTECTIVE EQUIPMENT WHEN HANDLING. KEEP CONTAINERS CLOSED WHEN NOT IN USE. DO NOT GET INTO EYES. STORE IN A COOL PLACE AND KEEP FROM FREEZING.
OTHER PRECAUTIONS: KEEP OUT OF REACH OF CHILDREN.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION: WHEN PROTECTION IS REQUIRED FOR CERTAIN OPERATIONS, USE AN APPROVED AIR-PURIFYING RESPIRATOR.
VENTILATION: LOCAL EXHAUST IS REQUIRED WHERE MIST MAY BE GENERATED.
PROTECTIVE GLOVES: RUBBER GLOVES ARE RECOMMENDED.
EYE PROTECTION: CHEMICAL GOGGLES ARE RECOMMENDED.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: IMPERVIOUS PROTECTIVE CLOTHING IS RECOMMENDED. SAFETY SHOWER AND EYEWASH SHOULD BE AVAILABLE.
WORKHYGIENIC PRACTICES: WASH THOROUGHLY AFTER HANDLING. DO NOT GET INTO EYES, ON SKIN, ON CLOTHING. DO NOT TAKE INTERNALLY.

**** END OF M.S.D.S. ****

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME National Engineering Products, Inc.		EMERGENCY TELEPHONE NO. 202-526-6274
ADDRESS (Number, Street, City, State, and ZIP Code) 1950 Capitol Avenue N.E., Washington, D.C. 20002		
CHEMICAL NAME AND SYNONYMS polymeric material	TRADE NAME AND SYNONYMS Copaltite	
CHEMICAL FAMILY	FORMULA	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE		200 ppm	METALLIC COATINGS		
SOLVENTS methanol (MeOH)	15	(skin)	FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES clay	10	-	OTHERS		
OTHERS graphite	10	-			
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.) (MeOH) 64.7 C.	760 mm Hg	SPECIFIC GRAVITY (H ₂ O=1)	1.04
VAPOR PRESSURE (mm Hg.) (MeOH) 97 mm Hg/20		PERCENT VOLATILE BY VOLUME (%)	15
VAPOR DENSITY (AIR=1) (MeOH)	1.11	EVAPORATION RATE (Bu acetate) (MeOH)	6.1
SOLUBILITY IN WATER % by Weight	10	Flash Point 190°F TOC	
APPEARANCE AND ODOR high viscosity dark liquid with sharp odor			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) 85 C. TOC	FLAMMABLE LIMITS (MeOH)	Lel	Uel
		6.7	36
EXTINGUISHING MEDIA Use CO ₂ or dry chemicals for small fires, foam or water fog for la. fires.			
SPECIAL FIRE FIGHTING PROCEDURES Self-contained breathing apparatus & protective clothing should be worn.			
UNUSUAL FIRE AND EXPLOSION HAZARDS none			

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

EFFECTS OF OVEREXPOSURE

No problems expected from vapors. Prolonged or repeated skin contact may cause sensitization & skin rash.*

EMERGENCY AND FIRST AID PROCEDURES

In case of contact, wash skin with soap & water. Flush eyes with plenty of water.

SECTION VI - REACTIVITY DATA

STABILITY

UNSTABLE

STABLE

X

CONDITIONS TO AVOID

temperatures greater than 100 C. during shipping or storage

INCOMPATIBILITY (Materials to avoid)

Alkali metals, conc. nitric & sulfuric acids, acyl halides, aldehydes,

HAZARDOUS DECOMPOSITION PRODUCTS

CO, CO₂ & toxic cresol vapors & halogens.*

HAZARDOUS POLYMERIZATION

MAY OCCUR

WILL NOT OCCUR

X

CONDITIONS TO AVOID
none

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Eliminate all sources of ignition. Wear suitable protective clothing. Collect in a flammable waste container for disposal.

WASTE DISPOSAL METHOD

Incinerate in a furnace where permitted under appropriate Federal, State, & local regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)
none

VENTILATION

LOCAL EXHAUST

may be needed in a confined area

MECHANICAL (General)

SPECIAL

OTHER

PROTECTIVE GLOVES

plastic

EYE PROTECTION

monogoggles

OTHER PROTECTIVE EQUIPMENT

eye bath & safety shower

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

OTHER PRECAUTIONS

*in uncured state

DATE OF LAST CHANGE: 07/07/08

DATE PRINTED.....: 07/07/08

MANUFACTURER'S NAME:

NAZDAR MIDWEST
1087 N. NORTH BRANCH ST.
CHICAGO
IL 60642 4234 USA

EMERGENCY TELEPHONE #: (800)424-9300
(U.S. and Canada)
EMERGENCY TELEPHONE #: (703)527-3887
(Outside U.S. and Canada, collect calls are accepted)
INFORMATION TELEPHONE #: (800)736-7636

SECTION 1 -- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT CODE.: VF180

TRADE NAME...: THINNER

PRODUCT CLASS: THINNER

INK SERIES...:

- H M I S C O D E S -
HEALTH - 2*
FLAMMABILITY - 2
REACTIVITY - 0
PPE - X

SECTION 2 -- COMPOSITION, INFORMATION ON INGREDIENTS

CHEMICAL NAME; COMMON NAME; CAS NUMBER	PERCENT BY WEIGHT	OCCUPATIONAL EXPOSURE LIMITS		VAPOR PRESSURE IN mmHg	NOTES
		-----ACGIH----- TLV	-----OSHA----- PEL		
PETROLEUM DISTILLATE; AROMATIC HYDROCARBON; CAS #: 64742-95-6	30-35	NOT ESTABLISHED	NOT ESTABLISHED	3.0 @ 20C	
DIACETONE ALCOHOL; 4-HYDROXY-4-METHYL-2-PENTANONE; CAS #: 123-42-2	20-25	50 ppm	50 ppm	1.0 @ 20C	
ISOPHORONE; CAS #: 78-59-1	20-25	NOT ESTABLISHED Ceiling: 5 ppm	4 ppm	<1 @ 20C	(1)
- 1,2,4-TRIMETHYLBENZENE; PSEUDOCUMENE; CAS #: 95-63-6	15-20	25 ppm	25 ppm	<1 @ 20C	(2)
* XYLENE; DIMETHYLBENZENE; CAS #: 1330-20-7	< 2	100 ppm STEL: 150 ppm	100 ppm STEL: 150 ppm	6.6 @ 20C	(3)
* ETHYL BENZENE; CAS #: 100-41-4	< .50	100 ppm STEL: 125 ppm	100 ppm STEL: 125 ppm	7.1 @ 20C	(4)

* SUBJECT TO REPORTING REQUIREMENT OF SECTION 313 OF TITLE III OF SARA (40 CFR PART 372).

- 1) This chemical is included on the list of Hazardous Air Pollutants (HAPs) from Title III of the Clean Air Act Amendments of 1990.
- 2) The above ACGIH exposure limit is for Trimethylbenzene isomers CAS# 25551-13-7.
- 3) This chemical is included on the list of Hazardous Air Pollutants (HAPs) from Title III of the Clean Air Act Amendments of 1990.
- 4) This chemical is included on the list of Hazardous Air Pollutants (HAPs) from Title III of the Clean Air Act Amendments of 1990.

The recommended permissible exposure limits (PEL) indicated above reflect the levels adopted by OSHA in 1989. Although, some of the 1989 levels have since been vacated, the Nazdar Company recommends that the lower exposure levels be observed as reasonable worker protection.

SECTION 3 -- HAZARDOUS IDENTIFICATION

GENERAL HEALTH EFFECTS

THE FOLLOWING INFORMATION HAS BEEN DEVELOPED BASED UPON USING THE PRODUCT AS INTENDED BY THE MANUFACTURER. The potential health effects of this product are based on the hazards of its components. The use of this product in combination with other products may produce synergistic (additive) health effects. Cautionary labeling and material safety data sheets of all materials used with this product should be reviewed before use.

EYES

Eye contact with liquid, vapors or mists may cause moderate to severe irritation, including burning, tearing, redness or swelling and reversible eye damage.

SKIN

Skin contact may cause irritation. Repeated or prolonged overexposure may cause skin irritation or dermatitis. Symptoms may include dryness, chapping and redness. Toxic and may be harmful if absorbed through the skin.

INHALATION

Inhalation may cause respiratory tract irritation. Symptoms may include central nervous system disorders such as headaches, dizziness, weakness and fatigue.

INGESTION

Ingestion may cause gastrointestinal tract irritation. Symptoms may include abdominal pain, nausea, vomiting and diarrhea. Symptoms may include nervous system depression including drowsiness or unconsciousness. Ingestion may cause vomiting. Aspiration of material into lungs may cause chemical pneumonitis which can be fatal.

CHRONIC EFFECTS/TARGET ORGANS

Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Ethylbenzene is possibly carcinogenic to humans (IARC Group 2B).

ANIMAL STUDIES

Diacetone alcohol has been found to cause kidney and liver injury and blood disorders in lab animals. Isophorone is a suspect carcinogen in lab animals. Xylene causes harm to the fetus in lab animal studies. The relevance of these findings to humans is uncertain. Repeated and prolonged overexposure to high concentrations of xylene has been suggested to cause the following effects in laboratory animals; hearing loss, mild reversible liver effects, kidney, lung, heart, spleen and nervous system effects. For animal studies, reference TSCA Section 4 Test Rule Results or contact the manufacturer for further details.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Pregnant women and persons with pre-existing health disorders should consult their physician before using this product. Repeated and prolonged overexposure and/or individual sensitivity may increase the potential for and degree of adverse health effects. See Section 3 "Hazards Identification" for effects of certain hazardous ingredients.

ROUTES OF EXPOSURE

Primary exposure routes: Inhalation-Dermal (Contact/Absorption)-Ingestion

SECTION 4 -- FIRST AID MEASURES

EYES

After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If irritation persists have eyes examined and tested by medical personnel.

SKIN

In case of contact, immediately wash skin with a mild soap and plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Cool water is initially suggested to prevent the pores of the skin from opening. This will minimize both the area and time of skin contact. Lukewarm water may then be used to ensure all contaminants are removed. Skin should be monitored for reddening or chemical burns. Mild soap is suggested to help prevent abrading the skin or rubbing the chemicals into pores during cleansing. Get medical attention if irritation persists or significant contact has occurred. Thoroughly wash (or discard) clothing and shoes before reuse.

INHALATION

Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention if breathing difficulty is experienced.

INGESTION

If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

OTHER COMMENTS

No Data Available

SECTION 5 -- FIRE FIGHTING MEASURES

FLASH POINT

115 Degrees Fahrenheit (SETA Flash)

OSHA FLAMMABILITY CLASSIFICATION (NFPA)

Class II Combustible Liquid

LEL - LOWER EXPLOSIVE LIMIT / UEL - UPPER EXPLOSIVE LIMIT

0.8% volume in air / No Data Available

EXTINGUISHING MEDIA

Foam-CO2-Dry Chemical-Water Spray

FLAME AND EXPLOSION HAZARDS

Isolate from heat, electrical equipment, sparks, and open flame. Keep containers tightly closed. Vapors may be heavier than air and can travel to a source of ignition then flash back. Closed containers may explode when exposed to extreme heat.

FIRE FIGHTING EQUIPMENT

Full protective equipment including self-contained breathing apparatus (SCBA) is recommended to protect firefighters.

SPECIAL FIRE FIGHTING PROCEDURES

Water may be ineffective but may be used to cool containers. Fumes released on burning may be toxic and dangerous.

SECTION 6 -- ACCIDENTAL RELEASE MEASURES

RELEASE MANAGEMENT MEASURES

Remove all sources of ignition (flames, hot surfaces and electrical, static or frictional sparks). Avoid contact or breathing vapors. Ventilate area. Contain release and remove with inert absorbent. Use non-sparking tools to place material in appropriate container for disposal. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. The National Response Center (800-424-8802) and local authorities should be contacted for any reportable spill/release.

SECTION 7 -- HANDLING AND STORAGE

HANDLING AND STORAGE METHODS

Use in a well ventilated area. Follow all MSDS/label precautions even after container is emptied; container may retain product residues. Store in closed containers in cool, dry, well ventilated area away from sources of ignition. Keep containers closed when not in use. Smoke in designated areas only. Avoid prolonged or repeated overexposure to this product. Keep out of reach of children. Follow label directions carefully. Do not take internally. Harmful or fatal if swallowed.

SECTION 8 -- EXPOSURE CONTROLS, PERSONAL PROTECTION

RESPIRATORY PROTECTION

If concentrations of hazardous ingredients exceed exposure limits listed in Section 2 an appropriate NIOSH (National Institute for Occupational Safety and Health) approved respirator with an organic vapor cartridge should be used. If material is handled under mist, spray or dust forming conditions, a P100 (99.97% efficiency) filter should be used in addition to the organic vapor cartridge. Protection provided by air-purifying respirators is limited. If no exposure limits are listed in Section 2, follow general safety guidelines in 29 CFR 1910.134 Respiratory Protection or other applicable respiratory standard.

SKIN PROTECTION

Use neoprene, nitrile or other gloves resistant to chemicals listed in Section 2. Contact a reputable safety supply company for appropriate gloves. Solvent resistant aprons are recommended. Prevent prolonged skin contact with contaminated clothing.

EYE PROTECTION

Use ANSI (American National Standards Institute) approved safety glasses, faceshield or splash proof goggles to prevent eye contact. Contact a reputable safety supply company for appropriate eye protection. The availability of an eye wash is highly recommended.

EXPOSURE GUIDELINES

See Section 2 "Composition, Information on Ingredients" for occupational exposure limits.

HYGIENIC PRACTICES

Wash with soap and water before eating, smoking or using toilet facilities. Separately wash or discard clothing and footwear before reuse. NEVER try to remove product from the skin by using solvent or thinner. Such action is likely to increase the possibility of undesirable effects. Remove contaminated clothing to prevent prolonged skin contact.

ENGINEERING CONTROLS

Use applicable engineering controls, work practices and personal protective equipment to ensure all concentrations are kept below the exposure limits listed in Section 2. Adequate controls should be implemented to ensure employee safety from fine mists which may be produced under some printing conditions.

OTHER PROTECTION

No Data Available

SECTION 9 -- PHYSICAL AND CHEMICAL PROPERTIES

**

APPEARANCE:

Thin liquid

ODOR:

Characteristic

PHYSICAL STATE:

Liquid

pH
Not applicable

VAPOR PRESSURE
See Section 2 for individual ingredients.

VAPOR DENSITY
Heavier than air

BOILING POINT
Greater than 300 degrees Fahrenheit

FREEZING POINT
Not available

SOLUBILITY IN WATER
Not tested

EVAPORATION RATE
Slower than ether

PERCENT VOLATILE BY VOLUME: 100.00 %

WEIGHT PER GALLON: 7.51 lbs/gal

VOC: 901.37 g/L
7.51 lb/gal

PHOTOCHEMICALLY REACTIVE
Yes

Percent volatile = Percent VOC

SECTION 10 -- STABILITY AND REACTIVITY

CHEMICAL STABILITY
Stable

CONDITIONS TO AVOID
Avoid excessive heat, ignition sources, sparks and open flame.

INCOMPATIBILITY WITH OTHER MATERIALS
Strong acids/bases, oxidizing/reducing agents and reactive chemicals.

HAZARDOUS DECOMPOSITION PRODUCTS
May produce hazardous fumes when heated to decomposition e.g. carbon monoxide, carbon dioxide and other noxious gases.

HAZARDOUS POLYMERIZATION
Not anticipated during normal printing and storage conditions.

SECTION 11 -- TOXICOLOGICAL INFORMATION

EXPERIMENTAL TOXICITY DATA
Refer to Section 3 Hazards Identification for additional toxicological data. Experimental toxicity data on diacetone alcohol has given the following results: Intraperitoneal LD50 Mouse; 933 mg/kg. Oral LD50 Rat; 4 g/kg; Dermal LD50 Rabbit; 13.6 g/kg. Experimental toxicity data on xylene has given the following results: Oral LD50 Rat; 4300 mg/kg; Inhalation LC50 Rat; 6700 ppm.

SECTION 12 -- ECOLOGICAL INFORMATION

ECOTOXICITY
Because this product may be a mixture of chemicals, some of which may be ecologically toxic, it is strongly suggested that it not be disposed of into the environment, i.e. soil, water courses, lakes, landfills, sewers, etc.

ENVIRONMENTAL FATE
No Data Available

SECTION 13 -- DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

This product is considered hazardous for disposal purposes by the U.S. Environmental Protection Agency Resource Conservation and Recovery Act (RCRA). Contact Nazdar's Regulatory Compliance Department or refer to the regulations located in 40 CFR Part 261 for additional waste disposal information, including appropriate hazardous waste codes. It is the responsibility of the user to determine if local, county, state, or provincial regulations may also apply to the disposal of this product and/or container. Empty containers may retain hazardous properties and should be disposed of in an environmentally safe manner in accordance with applicable regulations.

SECTION 14 -- TRANSPORT INFORMATION

TRANSPORT INFORMATION

DOT Proper Shipping Description: Printing Ink Related Material, 3, UN1210, PG III. In the U.S. and Canada, this material may be reclassified as a combustible liquid and is not regulated, via surface transportation, in containers less than 119 gallons or 450 liters [per 49 CFR 173.150(f)] [per Transportation of Dangerous Goods Regulations/Clear Language Part 1.33]. Questions concerning transportation requirements should be directed to Nazdar's Regulatory Compliance Department 913-422-1735.

SECTION 15 -- REGULATORY INFORMATION

SARA TITLE III 313 INFORMATION

See Section 2 "Composition, Information on Ingredients" for applicable chemicals.

TOXIC SUBSTANCES CONTROL ACT STATUS

All ingredients in Section 2 are listed on the U.S. Environmental Protection Agency's Toxic Substances Control Act (TSCA) Inventory and the Canadian Domestic Substance List.

OTHER REGULATORY INFORMATION

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) - MSDS is compliant with Occupational Safety and Health Administration Hazard Communication Standard - 29 CFR 1910.1200. AMERICAN NATIONAL STANDARDS INSTITUTE - This MSDS follows the ANSI Z400.1-1998 format. WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM (WHMIS) - This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION (CANADA):

B3 Combustible Liquids; D2A Materials causing other toxic effects, very toxic material; D2B Materials causing other toxic effects, toxic material;

SECTION 16 -- OTHER INFORMATION

DISCLOSURE

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind express or implied is made with respect to the information contained herein. The data in this MSDS relates only to the specific material designated herein and does not apply to use in combination with any other material or process.

DEFINITIONS

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

CEILING: (TLV-Ceiling and PEL Ceiling Limit) The ceiling exposure limit or concentration not to be exceeded for even brief times.

DOT: Department of Transportation

HMIS: The Hazardous Materials Identification System (HMIS) developed by the National Paint and Coatings Association (NPCA) to provide information on the acute health hazards, reactivity and flammability of products encountered in the workplace at room temperatures.

HMIS codes assigned for this product are only suggested ratings based on anticipated normal screen printing applications. The employer has the ultimate responsibility for assigning these ratings and should fully evaluate the MSDS, work practices and environmental conditions prior to assigning the appropriate ratings.

HMIS rating involves data interpretations that may vary from company to company.

HMIS Personal Protection Index of "X-Ask your supervisor" is given on this MSDS due to varying work conditions which may dictate different levels of protection. Please review this MSDS before determining appropriate protective equipment and beginning work.

IARC: International Agency for Research on Cancer

NFPA: National Fire Protection Association

NTP: National Toxicology Program

STEL: Short-Term Exposure Limit: ACGIH terminology for the short-term exposure limit or maximum concentration for a continuous exposure period of 15 minutes.

TLV: Threshold Limit Value. A term ACGIH uses to express the airborne concentration of a material to which most workers can be exposed during a normal daily and weekly work schedule without adverse effects.

TWA: Time-Weighted Average

VOC: Volatile Organic Compound

MATERIAL SAFETY DATA SHEET

LEAD ACID BATTERY



I. PRODUCT IDENTIFICATION:

- A. Chemical/Trade Name (per on label): **Lead Acid Battery**
- B. Chemical Family/Classification: Electrical Storage Battery
- C. Manufacturer's Name & Address: NorthStar Battery Co. LLC
4000 Continental Way
Springfield, MO 65803
- D. Contact: U.S. - NSB Safety and Health Department
Phone: (417) 575-8219
Fax: (417) 575-8250
Aust. NorthStar Battery Pty Ltd
Phone: 02 9888 1998
- E. Emergency Information: Chemtrec (US, Canada & Mexico)
Phone: (800) 424-9300
Chemtrec (Outside US, Canada & Mexico)
Phone: +1 (703) 527-3887 (call collect)
- F. Non-Hazardous Classification
Per US DOT, Northstar Battery Company products, submitted and tested by Wyle Labs, have been deemed to meet all requirements as specified in 49CFR§ 173.159 (d) for **exception** as hazardous material classification.

II. HAZARDOUS INGREDIENTS/IDENTITY INFORMATION:

NORTH AMERICAN INFORMATION			Air Exposure Limits (ug/m ³)		
Materials	% by Wt.	CAS Number	OSHA	AGGIH (TLV)	NIOSH
Lead	57	7439-92-1	50	150	100
Lead Oxide	22	1309-60-0	50	150	100
Electrolyte (Sulfuric Acid) 1.400 sg	14	7664-93-9	1	1	1

AUSTRALIAN INFORMATION			
Chemical or Material	Australian Dangerous Goods Classification	Hazardous Substance Classification as per NOHSC Australia	Australian Poison Schedule Classification
Non-Spillable Lead Acid Battery	Exempt under A67 (NATA Identification Guide) and Clause 238 of the Australian Dangerous Goods Code, Appendix 3	R34/R41	Schedule 6 Agricultural, Domestic and Industrial Substances

Note: Product contains toxic chemicals that are subject to the reporting requirements of Section 302 and 313 of the Emergency Planning and Community Right-to-Know Act of 1986.

III. PHYSICAL DATA:

Material is solid at normal temperatures.

- A. Electrolyte:
1. Specific Gravity: 1.250 – 1.350 kg/dm³

MATERIAL SAFETY DATA SHEET

LEAD ACID BATTERY



- | | | |
|----|------------------------|----------------|
| 2. | Boiling Point: | 110°C (230°F) |
| 3. | % Volatiles By Weight: | Not Applicable |
| 4. | Solubility in Water: | 100% |
| 5. | Melting Point Lead: | 327°C (621°F) |
| 6. | Vapor Density | Not Determined |

B. Appearance and Odor

1. Electrolyte is a clear liquid with an acidic odor.

IV. HEALTH HAZARD INFORMATION:

Under normal operating conditions, because the battery is "non-spillable", the internal material will not be hazardous to your health. Only internally exposed material during production or case breakage or extreme heat (fire) may be hazardous to your health.

A. Routes of Entry:

1. Inhalation: Acid mist from formation process may cause respiratory irritation.
2. Skin Contact: Acid may cause irritation, burns and/or ulceration.
3. Skin Absorption Not a significant route of entry.
4. Eye Contact: Acid may cause sever irritation, burns, cornea damage and/or blindness.
5. Ingestion: Acid may cause irritation of mouth, throat, esophagus and stomach.

B. Signs and Symptoms of Over Exposure:

1. Acute Effects: Over exposure to lead may lead to loss of appetite, constipation, sleeplessness and fatigue. Over exposure to acid may lead to skin irritation, corneal damage of the eyes and upper respiratory system.
2. Chronic Effects: Lead and its components may cause damage to kidneys and nervous system. Acid and its components may cause lung damage and pulmonary conditions.
3. Potential to Cause Cancer: The International Agency for Research on Cancer has classified "strong inorganic acid mist containing sulfuric acid" as a Category 1 carcinogen, a substance that is carcinogenic to humans. This classification does not apply to liquid forms of sulfuric acid or sulfuric acid solutions contained within a battery. Inorganic acid mist is not generated under normal use of this product. Misuse of the product, such as overcharging, may however result in the generation of sulfuric acid mist.

C. Emergency and First Aid Procedures:

1. Inhalation: Remove from exposure, move to fresh air, and apply oxygen if breathing is difficult. Consult physician immediately.
2. Skin: Wash with plenty of soap and water for at least 15 minutes. Remove any contaminated clothing. Consult physician if skin irritation appears.
3. Eyes: Flush with plenty of water immediately for at least 15 minutes, lifting lower

MATERIAL SAFETY DATA SHEET

LEAD ACID BATTERY



and upper eyelids occasionally. Consult a physician immediately.

4. Ingestion: Do not induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. Consult a physician immediately.

D. HANDLING AND STORAGE

1. Safe Storage: Store in a cool, dry place in closed containers. Keep away from ignition sources and high temperatures.
 1. Contact NorthStar Battery Company (417-575-8200) for shelf life information.
2. Handling: Avoid skin or eye contact. Avoid breathing vapors. Do not use near sources of ignition

- V. CARCINOGENICITY: See section IV, Part B "Signs and Symptoms of Over Exposure"
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: See section IV, Part B "Signs and Symptoms of Over Exposure"

VI. FIRE AND EXPLOSION HAZARD DATA:

- A. Flash Point: Hydrogen = 259°C
- B. Auto ignition Temperature: Hydrogen = 580°C
- C. Extinguishing Media: Dry chemical, foam, CO₂
- D. Unusual Fire and Explosion Hazards: Hydrogen and oxygen gases are produced in the cells during normal battery operation (hydrogen is flammable and oxygen supports combustion). These gases enter the air through the vent caps. To avoid the chance of a fire or explosion, keep sparks and other sources of ignition away from the battery.
- E. Firefighting PPE: Full protective clothing and
NIOSH-approved self-contained breathing apparatus with full facepiece

VII. REACTIVITY DATA:

- A. Stability: Stable
- B. Conditions to Avoid: Sparks and other sources of ignition.
- C. Incompatibility: (materials to avoid)
 1. Lead/lead compounds: Potassium, carbides, sulfides, peroxides, phosphorus, sulfur.
 2. Battery electrolyte (acid): Combustible materials, strong reducing agents, most metals, carbides, organic materials, chlorates, nitrates, picrates, and fulminates.
- D. Hazardous Decomposition Products:
 1. Lead/lead compounds: Oxides of lead and sulfur.

MATERIAL SAFETY DATA SHEET

LEAD ACID BATTERY



2. Battery electrolyte (acid): Hydrogen, sulfur dioxide, and sulfur trioxide.

E. Conditions to Avoid:

High temperature. Battery electrolyte (acid) will react with water to produce heat. Can react with oxidizing or reducing agents.

VIII. CONTROL MEASURES:

A. Engineering Controls:

Store lead/acid batteries with adequate ventilation. Room ventilation is required for batteries utilized for standby power generation. Never recharge batteries in an unventilated, enclosed space.

B. Work Practices:

Do not remove vent covers. Follow shipping and handling instructions which are applicable to the battery type. To avoid damage to terminals and seals, do not double-stack industrial batteries.

C. Personal Protective Equipment:

1. Respiratory Protection: None required under normal handling conditions. During battery formation (high-rate charge condition), acid mist can be generated which may cause respiratory irritation. Also, if acid spillage occurs in a confined space, exposure may occur. If irritation occurs, wear a respirator suitable for protection against acid mist.
2. Eyes and Face: Chemical splash goggles are preferred. Also acceptable are "visor-gogs" or a chemical face shield worn over safety glasses.
3. Hands, Arms, Body: Vinyl coated, VC, gauntlet type gloves with rough finish are preferred.
4. Other Special Clothing and Equipment: Safety shoes are recommended when handling batteries. All footwear must meet requirements of ANSI Z41.1 -Rev. 1972.

IX. ACCIDENTAL RELEASE MEASURES:

- A. Not applicable under normal conditions.
- B. In case of damage resulting in breakage of the battery container, see VIII, Sec. C Personal Protective Equipment.

X. PRECAUTIONS FOR SAFE HANDLING AND USE:

- A. Hygiene Practices: Following contact with internal battery components, wash hands thoroughly before eating, drinking, or smoking.
- B. Respiratory Protection: Wear safety glasses. Do not permit flames or sparks in the vicinity of battery(s). If battery electrolyte (acid) comes in contact with clothing, discard clothing.

MATERIAL SAFETY DATA SHEET

LEAD ACID BATTERY



C. Protective Measures:

1. Remove combustible materials and all sources of ignition. Cover spills with soda ash (sodium carbonate) or quicklime (calcium oxide). Mix well. Make certain mixture is neutral, then collect residue and place in a drum or other suitable container. Dispose of as hazardous waste.
2. Wear acid-resistant boots, chemical face shield, chemical splash goggles, and acid-resistant gloves. Do not release unneutralized acid.

D. Waste Disposal Method (*):

1. Battery electrolyte (acid): Neutralize as above for a spill, collect residue, and place in a drum or suitable container. Dispose of as hazardous waste.
2. Do not flush lead contaminated acid to sewer.
3. In case of accidental spill, utilize personal protective equipment, i.e., face shield, rubber apron, rubber safety shoes.
4. Batteries: Send to lead smelter for reclamation following applicable Federal, State and local regulations. Product can be recycled along with automotive (SLI) lead acid batteries.
5. Battery may be returned, shipping pre-paid, to the manufacturer or any distributor for recycling. See 1.C for manufacturer's address or visit our web site @ www.northstarbattery.com.

*In accordance to Local, State and Federal regulations and laws.

E. Other Handling and Storage Precautions: None Required.

XI. ECOLOGICAL INFORMATION:

Lead and its compounds can pose a threat if released to the environment. See Waste Disposal Method in Section X, Part D.

XII. NFPA HAZARD RATING: SULFURIC ACID:

Flammability (Red)	=	0
Health (Blue)	=	3
Reactivity (Yellow)	=	1

MATERIAL SAFETY DATA SHEET

LEAD ACID BATTERY



XIII. DEPARTMENT OF TRANSPORTATION AND INTERNATIONAL SHIPPING REGULATIONS:

Proper Shipping Name	UN2800 - Battery, wet, non-spillable (electric storage)
IATA	Batteries must be packed to protect against short circuits and firmly secured to skids or pallets. Packaging instruction 806 Not restricted per special provision A67.
US DOT	Northstar Battery Company products, submitted and tested by Wyle Labs, have been deemed to meet all requirements as specified in 49CFR§ 173.159 (d) for exception as hazardous material classification.
IMDG	Northstar Battery Company products, submitted and tested by Wyle Labs, have been deemed to meet all requirements as specified in special provision 238 for determination of "Non-Spillable" and are not subject to the provision of this Code.

XIV. SPECIAL REQUIREMENTS:

TLV

- Sulfuric Acid - Occupation Exposure Limit - AUSTRALIA TWA 1mg/m³, JAN1993
- Lead - Occupation Exposure Limit - AUSTRALIA TWA 0.15 mg/m³, 2002

OATEY #11 LIQUID FLUX

Latest Revision Date...06/06/00

Section 1 IDENTITY OF MATERIAL

TRADE NAME	OATEY #11 LIQUID FLUX
PRODUCT NUMBERS	30106
FORMULA	N/A
SYNONYMS	Flux for Copper Pipe

SECTION 2 HAZARDOUS INGREDIENTS

<u>INGREDIENTS</u>	<u>%</u>	<u>CAS NUMBER</u>	<u>SEC 313</u>
Zinc Chloride	30-35%	7646-85-7	Yes
Ammonium Chloride	4-8%	12125-02-9	No
Water (non-hazardous)	45-55%	7732-18-5	No
Muratic Acid	12-15%	7647-01-0	Yes
Tergitol	<1	N/A	No

SECTION 3 KNOWN HAZARDS UNDER 29 CFR 1910.1200

<u>HAZARDS</u>	<u>YES</u>	<u>NO</u>	<u>HAZARDS</u>	<u>YES</u>	<u>NO</u>
Combustible Liquid		X	Skin Hazard	X	
Flammable Liquid		X	Eye Hazard	X	
Pyrophoric Material		X	Toxic Agent		X
Explosive Material		X	Highly Toxic Agent		X
Unstable Material		X	Sensitizer		X
Water Reactive Material		X	Kidney Toxin		X
Oxidizer		X	Reproductive Toxin		X
Organic Peroxide		X	Blood Toxin		X
Corrosive Material	X		Nervous System Toxin		X
Compressed Gas		X	Lung Toxin		X
Irritant	X		Liver Toxin		X
Carcinogen NTP/IARC/OSHA (see SECTION 6)		X			

SECTION 4 REGULATION

<u>CHEMICAL</u>	<u>TLV (TWA)</u>	<u>PEL</u>	<u>STEL</u>	<u>Hazard Action Level</u>
Zinc Chloride	1.0 mg/cu m	1.0 mg/cu m	2.0 mg/cu m	N/A
Ammonium Chloride	10.0 mg/cu m	N/A	20.0 mg/cu m	N/A
Hydrochloric Acid	(CEILING) 5 ppm 7 mg	5 ppm 7 mg/cu m	N/A	N/A

SECTION 5 REGULATED IDENTIFICATION

DOT PROPER SHIPPING NAME	N/A
DOT HAZARD CLASS	N/A
SHIPPING ID NUMBER	N/A
EPA HAZARDOUS WASTE ID NUMBER	D-002
EPA HAZARD WASTE CLASS	Corrosive

SECTION 6 EFFECTS OF EXPOSURE

ENTRY ROUTE	INHALE - YES INGEST - YES SKIN - YES EYE - YES
GENERAL	Zinc Chloride is corrosive to all body tissues and can cause severe burns.
INHALATION	If heated, fumes may produce respiratory irritation, fever, chills, muscular pain, vomiting and sweating.

SKIN	Contact may cause irritation, burns or dermatitis.
EYE	May cause irritation, burns or corneal damage.
INGESTION	May cause burns of mouth and throat, vomiting, diarrhea, strictures, kidney disease, shock or death.
TARGET ORGANS	Eye, Skin, Kidney, Lung, Liver, Central Nervous System

SECTION 7 EMERGENCY AND FIRST AID PROCEDURES - 303/623-5716 COLLECT

SKIN	If irritation arises, wash thoroughly with soap and water. Seek medical attention if irritation persists.
EYES	If fumes cause irritation, move to fresh air and irrigate eyes with water for 15 minutes. If irritation persists, seek medical attention.
INHALATION	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Keep victim quiet and warm. Call a poison control center or physician immediately.
INGESTION	Drink water. DO NOT INDUCE VOMITING and call a poison control center or physician immediately. Avoid alcoholic beverages. Never give anything by mouth to an unconscious person.

SECTION 8 PHYSICAL AND CHEMICAL PROPERTIES

NFPA HAZARD SIGNAL	HEALTH 1	STABILITY 1	FLAMMABILITY 0	SPECIAL NONE
BOILING POINT	208 Degrees F	97 Degrees C		
MELTING POINT	N/A			
VAPOR PRESSURE	N/A			
VAPOR DENSITY (AIR = 1)	N/A			
VOLATILE COMPONENTS	60-65%			
SOLUBILITY IN WATER	Very Soluble			
PH	2-3			
SPECIFIC GRAVITY	1.14			
EVAPORATION RATE	N/A			
APPEARANCE	Yellowish Liquid			
ODOR	Very little odor			
WILL DISSOLVE IN MATERIAL IS	Water			
	Liquid			

SECTION 9 FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY	LEL = N/A	UEL = N/A
FLASHPOINT AND METHOD USED	N/A	
STABILITY	Stable. CONDITIONS TO AVOID: None. HAZARDOUS DECOMP. PRODUCTS: Hydrocarbons, HCl, CO, CO(2), Smoke	
HAZARDOUS POLYMERIZATION	Will Not Occur.	
INCOMPATIBILITY/ MAT. TO AVOID	Strong oxidizing agents, Potassium	
SPECIAL FIRE FIGHTING PROCEDURE	FOR SMALL FIRES: Use dry chemical, CO(2), water or foam extinguisher. FOR LARGE FIRES: Evacuate area and call Fire Department immediately.	

SECTION 10 SPILL AND DISPOSAL INFORMATION

SPILL OR LEAK PROCEDURES	Ventilate, stop leak if it can be done without risk. Take up with sand or other absorbing material. Put in clean, dry, leak-proof container.
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RAIN-R-SHINE PVC CEMENT

SECTION 1

IDENTITY OF MATERIAL

Trade Name: OATEY RAIN-R-SHINE PVC CEMENT
Product Numbers: 30890, 30891, 30893, 30894, 30895, 30896
Formula: PVC Resin in Solvent Solution
Synonyms: PVC Plastic Pipe Cement
Firm Name & Mailing Address: OATEY CO. 4700 West 160th Street P.O. Box 35906 Cleveland, Ohio 44135, U.S.A. <http://www.oatey.com>
Oatey Phone Number: (216) 267-7100
Emergency Phone Numbers: For Emergency First Aid call 1-303-623-5716 COLLECT. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300

SECTION 2

COMPOSITION

INGREDIENTS:	%:	CAS NUMBER:	ACGIH TLV TWA:	OSHA PEL TWA:	OTHER:
Cyclohexanone	7 - 12%	108-94-1	25 ppm(skin)	50 ppm	
Tetrahydrofuran	40 - 55%	109-99-9	200 ppm 750 ppm STEL	200 ppm	25 ppm (Mfg)
Methyl Ethyl Ketone	24 - 31%	78-93-3	200 ppm	200 ppm	
Blue Colorant (Non-hazardous)	1 - 3%	N/A	None Established	None Established	
PVC Resin (Non-hazardous)	14 - 18%	9002-86-2	10 mg/m3	15 mg/m3	
Amorphous Fumed Silica (Non-hazardous)	1 - 3%	112945-52-5	10 mg/m3	None Established	

SECTION 3

EMERGENCY OVERVIEW

Blue liquid with an ether-like odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.
NFPA Hazard Signal: Health: 2 Stability: 1 Flammability: 3 Special: None
HMIS Hazard Signal: Health: 3 Stability: 1 Flammability: 3 Special: None
OSHA Hazard Classification: Flammable, irritant, organ effects
Canadian WHIMS Classification: Class B, Division 1; Class D, Division 2, Subdivision B

SECTION 4

EMERGENCY AND FIRST AID PROCEDURES - CALL 1-303-623-5716 COLLECT

Skin: Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with Oatey Plumber's Hand Cleaner or baby oil.
Eyes: If material gets into eyes or if fumes cause irritation, immediately flush eyes with water for 15 minutes. If irritation persists, seek medical attention.
Inhalation: If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.
Ingestion: **DO NOT INDUCE VOMITING.** Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

RAIN-R-SHINE PVC CEMENT

SECTION 5 FIRE FIGHTING MEASURES

Flashpoint / Method: 0 - 5 Degrees F. / PMCC
Flammability: LEL = 1.8 % Volume, UEL = 11.8 % Volume
Extinguishing Media: Use dry chemical, CO2, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.
Special Fire Fighting Procedure: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored
Unusual Fire and Explosion: Extremely flammable liquid. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.
Hazardous Decomposition Products: Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Remove all sources of ignition and ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with an inert absorbent such as sand, earth or other non-combusting material. Put absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 12 for disposal information.

SECTION 7 HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.
Storage: Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.
Other: "Empty" containers retain product residue and can be hazardous. Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

SECTION 8 ECOLOGICAL INFORMATION

This product is not expected to be toxic to aquatic organisms.
Cyclohexanone: 96 hour LC50 values for fish is over 100 mg/l.
Tetrahydrofuran: 96 hour LC50 fathead minnow: 2160 mg/L.
Methyl Ethyl Ketone: 96 hour LC50 for fish is greater than 100 mg/L.
VOC Information: This product emits VOC's (volatile organic compounds) in its use. Make sure that use of this product complies with local VOC emission regulations, where they exist.
VOC Level: 600 g/l per SCAQMD Test Method 316A.

RAIN-R-SHINE PVC CEMENT

SECTION 9

EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.

Respiratory Protection: For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

Skin Protection: Rubber gloves are suitable for normal use of the product. For long exposures product chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.

Eye Protection: Safety glasses with sideshields or safety goggles.

Other: Eye wash and safety shower should be available.

SECTION 10

PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 151 Degrees F / 66 C
Melting Point: N/A
Vapor Pressure: 145 mmHg @ 20 Degrees C
Vapor Density: (Air = 1) 2.5
Volatile Components: 82-86%
Solubility In Water: Negligible
pH: N/A
Specific Gravity: 0.94 +/- 0.02
Evaporation Rate: (BUAC = 1) = 5.5 - 8.0
Appearance: Blue Liquid
Odor: Ether-Like
Will Dissolve In: Tetrahydrofuran
Material Is: Liquid

SECTION 11

STABILITY AND REACTIVITY

Stability: Stable.
Conditions To Avoid: Avoid heat, sparks, flames and other sources of ignition.
Hazardous Decomposition: Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.
Products: Oxidizing agents, alkalies, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.
Materials To Avoid: Will not occur.
Hazardous Polymerization: Will not occur.

SECTION 12

DISPOSAL INFORMATION

Waste Disposal: Dispose in accordance with current local, state and federal regulations.

RAIN-R-SHINE PVC CEMENT

SECTION 13

TOXICOLOGICAL INFORMATION

Inhalation: Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Skin: May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.

Eye: Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.

Ingestion: Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

Chronic Toxicity: Prolonged or repeated overexposure cause dermatitis and damage to the kidney, liver, lungs and central nervous system.

Toxicity Data: Cyclohexanone: Oral rat LD50: 1,620 mg/kg
Inhalation rat LC50: 8,000 ppm/4 hours
Skin rabbit LD50: 1 mL/kg
Tetrahydrofuran: Oral rat LD50: 1,650 mg/kg
Inhalation rat LC50: 21,000 ppm/3 hours
Methyl Ethyl Ketone: Oral rat LD50: 2,737 mg/kg
Inhalation rat LC50: 23,500 mg/m³/8 hours
Skin rabbit LD50: 6,480 mg/kg

Sensitization: None of the components are known to cause sensitization.

Carcinogenicity: None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. The National Toxicology Program has reported that exposure of mice and rats to Tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetime caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health are unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF.

Mutagenicity: Cyclohexanone has been positive in bacterial and mammalian assays. Tetrahydrofuran was positive in a bacterial assay. Methyl ethyl ketone is not considered genotoxic based on laboratory studies.

Reproductive Toxicity: Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Tetrahydrofuran has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Medical Conditions Aggravated By Exposure: Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.

RAIN-R-SHINE PVC CEMENT

SECTION 14 TRANSPORTATION INFORMATION

DOT Less than 1 Liter (0.3 gal) Greater than 1 Liter (0.3 gal)

Proper Shipping Name: Consumer Commodity Adhesives
Hazard Class/Packing Group: ORM-D 3, PGII
UN/NA Number: None UN1133
Hazard Labels: None Flammable Liquid

IMDG

Proper Shipping Name: Adhesives Adhesives
Hazard Class/Packing Group: 3, II 3, II
UN Number: UN1133 UN1133
Label: None (Limited Quantities Class 3 (Flammable
are excepted Liquid)
from labeling)

RCRA Hazardous Waste Number: U057, U159, U213

EPA Hazardous Waste ID Number: D001, D035, F003, F005

EPA Hazard Waste Class: Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content)

2000 North American Emergency Response Guidebook Number: 127 or 128

SECTION 15

REGULATIONS

Hazard Category for Section 311/312: Acute Health, Chronic Health, Flammable

Section 302 Extremely Hazardous Substances (TPQ): This product does not contain chemicals regulated under SARA Section 302.

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements:

<u>Chemical</u>	<u>CAS #</u>	<u>%</u>
Methyl Ethyl Ketone	78-93-3	24-31%

CERCLA 103 Reportable Quantity: Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Tetrahydrofuran (55% maximum) of 1,000 lbs, is 1,818 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

California Proposition 65: This product contains trace amounts of chemicals known to the State of California to cause cancer. Under normal use conditions, exposures to these chemicals at levels above the State of California "No Significant Risk Level" (NSRL) are unlikely. Oatey strongly encourages the use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 9 to minimize exposure to these chemicals.

TSCA Inventory: All of the components of this product are listed on the TSCA inventory.

SECTION 16 DISCLAIMER

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, Oatey cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.



Initial Preparation Date: 2/4/03
Last Revision Date: 6/04/03

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTITY: PEAK® CF-EXL EXTENDED LIFE ANTIFREEZE & COOLANT

1. CHEMICAL PRODUCT & COMPANY INFORMATION

OLD WORLD INDUSTRIES, INC.
4065 COMMERCIAL AVENUE
NORTHBROOK, ILLINOIS 60062
PHONE: 847-559-2000
EMERGENCY PHONE: 1-800-424-9300 (CHEMTREC)

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Material</u>	<u>CAS#</u>	<u>% by Wt</u>	<u>PEL (OSHA)</u>	<u>TLV (ACGIH)</u>
Ethylene Glycol	107-21-1	88 - 97	50 ppm	50 ppm
Diethylene Glycol	111-46-6	< 5	None	None
Corrosion Inhibitor		< 8	None	None
Water	7732-18-5	< 5	None	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Slight odor.

May be fatal if swallowed.

Vapors can cause eye irritation.

Lowest Known LD50 (Oral)
Lowest Known LD50 (Skin)

107-21-1
107-21-1

5840 mg/kg (Rats)
9530 mg/kg (Rabbits)

HAZARD RATING SYSTEM

NFPA: HEALTH: 1

FLAMMABILITY: 1

REACTIVITY: 0

HMIS: HEALTH: 2

FLAMMABILITY: 1

REACTIVITY: 0

(For Ethylene Glycol)

KEY: 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

POTENTIAL HEALTH EFFECTS

Routes of Exposure: Inhalation, Ingestion, Skin Contact/Absorption, Eye Contact

Eye: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely. Vapors or mists may cause eye irritation.

Skin: Prolonged or repeated exposure not likely to cause significant skin irritation. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. Repeated skin exposure may result in absorption of harmful amounts. Massive contact with damaged skin or of material sufficiently hot to burn skin may result in absorption of potential lethal amounts.

Ingestion: Single dose oral toxicity is considered to be moderate. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), and kidney failure. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing amounts larger than that may cause serious injury, even death.

Inhalation: At room temperature, exposures to vapors are minimal due to physical properties; higher temperatures may generate vapor levels sufficient to cause adverse effects.

Systemic (Other Target Organ) Effects: Repeated excessive exposures may cause severe kidney and also liver and gastrointestinal effects. Signs and symptoms of excessive exposure may be central nervous system effects. Signs and symptoms of excessive exposure may be nausea and/or vomiting. Signs and symptoms of excessive exposure may be anesthetic or narcotic effects. Observations in animals include formation of bladder stones after repeated oral doses of ethylene glycol. Reports of kidney failure and death in burn patients suggest the ethylene glycol may have been a factor. The use of topical applications containing this material may not be appropriate in severely burned patients or individuals with impaired renal function.

Cancer Information: Based on data from long-term animal studies, ethylene glycol is not believed to pose a carcinogenic risk to man.

Teratology (Birth Defects): Exposure to ethylene glycol has caused birth defects in laboratory animals only at doses toxic to the mother.

Reproductive Effects: Ethylene glycol has not interfered with reproduction in animal studies except at very high doses.

CHRONIC, PROLONGED OR REPEATED OVEREXPOSURE

Effects of Repeated Overexposure: Repeated inhalation of ethylene glycol mist may produce signs of central nervous system involvement, particularly dizziness and nystagmus.

Other Effects of Overexposure: repeated skin contact with ethylene glycol may, in a very small proportion of cases, cause sensitization with the development of allergic contact dermatitis. The incidence is significantly less than 1% with the undiluted material.

4. **FIRST AID MEASURES**

Ensure physician has access to this MSDS.

TREATMENT

Eyes: Immediately flush eyes with large amounts of water for 15 minutes, lifting lower and upper lids. Get medical attention as soon as possible. Contact lenses should never be worn when working with this chemical.

Skin: Flush area of skin contact immediately with large amounts of water for at least 15 minutes while removing contaminated clothing. If irritation persists after flushing, get medical attention promptly. Wash clothing before re-use.

Inhalation: If inhaled, immediately remove victim to fresh air and call *emergency medical care*. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: Obtain medical attention immediately. If patient is fully conscious, give two glasses of water. Do not induce vomiting. If medical advice is delayed, and if the person has swallowed a moderate volume of material (a few ounces), then give three to four ounces of hard liquor, such as whisky. For children, give proportionally less liquor, according to weight.

Notes to Physician:

It is estimated that the lethal oral dose to adults is of the order of 1.0 ml/kg. Ethylene glycol is metabolized by alcohol dehydrogenase to various metabolites including glycerinaldehydes, glycolic acid and oxalic acid which cause an elevated anion-gap metabolic acidosis and renal tubular injury. The signs and symptoms in ethylene glycol poisoning are those of metabolic acidosis, CNS depression, and kidney injury. Urinalysis may show albuminuria, hematuria and oxaluria. Clinical chemistry may reveal anion-gap metabolic acidosis and uremia. The currently recommended medical management of ethylene glycol poisoning includes elimination of ethylene glycol and metabolites, correction of metabolic acidosis and prevention of kidney injury. It is essential to have immediate and follow up urinalysis and clinical chemistry. There should be particular emphasis on acid-base balance and renal function tests. A continuous infusion of 5% sodium bicarbonate with frequent monitoring of electrolytes and fluid balance is used to achieve correction of metabolic acidosis and forced diuresis. As a competitive substrate for alcohol dehydrogenase, ethanol is antidotal. Given in the early stages of intoxication, it blocks the formulation of nephrotoxic metabolites. A therapeutically effective blood concentration of ethanol is in the range 100-150 mg/dl, and should be achieved by a rapid loading dose and maintained by intravenous infusion. For severe and/or deteriorating cases, hemodialysis may be required. Dialysis should be considered for patients who are symptomatic, have severe metabolic acidosis, a blood ethylene glycol concentration greater than 25 md/dl, or compromise of renal functions.

A more effective intravenous antidote for physician use is 4-methylpyrazole, a potent inhibitor of alcohol dehydrogenases, which effectively blocks the formation of toxic metabolites of ethylene glycol. It has been used to decrease the metabolic consequences of ethylene glycol poisoning before metabolic acidosis coma, seizures, and renal failure have occurred. A generally recommended protocol is a loading dose of 15 mg/kg followed by 10 mg/kg every 12 hours for 4 doses and then 15 mg/kg every 12 hours until ethylene glycol concentrations are below 20 mg/100 ml. Slow intravenous infusion is required. Since 4-methylpyrazole is dialyzable, increased dosage may be necessary during hemodialysis. Additional therapeutic measures may include the administration of cofactors

involved in the metabolism of ethylene glycol. Thiamine (100 mg) and pyridoxine (50 mg) should be given every six hours.

Pulmonary edema with hypoxemia has been described in a number of patients following poisoning with ethylene glycol. The mechanism of production has not been elucidated, but it appears to be non-cardiogenic in origin in several cases. Respiratory support with mechanical ventilation and positive end expiratory pressure may be required. There may be cranial nerve involvement in the late stages of toxicity from swallowed ethylene glycol. In particular, effects have been reported involving the seventh, eighth and ninth cranial nerves, presenting with bilateral facial paralysis, diminished hearing and dysphasia.

5. ***FIRE FIGHTING MEASURES***

Flammable Properties

Flash Point: 259°F

Autoignition Temperature: Autoignition temperature for ethylene glycol is 398°C (748°F).

Flammability Limits - % of vapor concentration at which product can ignite in presence of spark.

Lower Flammability Limit: 3.2%

Upper Flammability Limit: 15.3%

Hazardous Combustion Products: Hazardous combustion products may include and are not limited to carbon monoxide, carbon dioxide and trace amounts of aldehydes and organic acids. When available oxygen is limited, as in a fire or when heated to very high temperatures by a hot wire or plate, carbon monoxide and other hazardous compounds such as aldehydes might be generated.

Extinguishing Media: Water fog or fine spray. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively. Carbon dioxide. Dry chemical. Do not use direct water stream. May spread fire.

Fire Fighting Instructions: No fire and explosion hazards expected under normal storage and handling conditions (i.e. ambient temperatures). However, ethylene glycol or solutions of ethylene glycol and water can form flammable vapors with air if heated sufficiently. Keep people away. Isolate fire area and deny unnecessary entry.

Protective Equipment for Fire Fighters: Wear positive-pressure, self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire-fighting helmet, coat, pants, boots and gloves).

6. ***ACCIDENTAL RELEASE MEASURES***

Protect People: Material is moderately toxic when ingested. Take adequate precautions to keep people, especially children away from spill site. PVC-coated rubber gloves and monogoggles or face shield can be used during cleanup of spill site. Product on surfaces can cause slippery conditions. Practice reasonable care and cleanliness. Avoid breathing spray mists if generated. Keep out of reach of children. Product may become a solid at temperatures below -18°C (0°F). Do not store near food, foodstuffs, drugs or potable water supplies.

Protect the Environment: Do not dump used product or diluted material into sewers, on the ground, or into any body of water.

Cleanup: Small spills: Soak up with absorbent material. Large spills: Dike and pump into suitable containers for disposal. Ensure compliance with all applicable statutes that require notification of appropriate government officials.

7. HANDLING AND STORAGE

Steps to be Taken in Case Material is Released or Spilled: Eliminate all sources of ignition in vicinity of the spilled or released fluid.

Other Precautions: Use normal precautions in handling any combustible liquid. Keep container closed when not in use. Store away from heat or open flame. Product on surfaces can cause slippery conditions. Practice reasonable care and cleanliness. Avoid breathing spray mists if generated. Keep out of reach of children. Product may become a solid at temperatures below -18°C (0°F). Do not store near food, foodstuffs, drugs or potable water supplies.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: Respiratory protection is required if airborne concentration exceeds TLV. At any detectable concentration any self-contained breathing apparatus with a full face piece and operated in a pressure-demand or other positive pressure mode or any supplied-air respirator with a full face piece and operated in a pressure-demand or other positive pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive pressure mode.

Escape: Any air-purifying full face piece respirator (gas mask) with a chin-style or front- or back-mounted organic vapor canister or any appropriate escape-type self-contained breathing apparatus.

Skin Protection: Protective gloves recommended when prolonged skin contact cannot be avoided. Polyethylene; Neoprene; Nitrile; Polyvinyl alcohol; Natural Rubber, Butyl Rubber. Safety shower should be available.

Eye Protection: Safety goggles and face shield. Emergency eyewash should be available. Contact lenses should not be worn when working with this chemical.

Engineering Controls: Use general or local exhaust ventilation to meet TLV requirements.

EXPOSURE LIMITS

<u>Component</u>	<u>Exposure Limits</u>	<u>Skin Form</u>
Ethylene glycol	100 mg/m ³ CEILING ACGIH	Aerosol
Ethylene glycol	125 mg/m ³ CEILING OSHA-vacated	
	50 ppm CEILING OSHA – vacated	
	100 mg/m ³ CEILING UCC	Aerosol and Vapor
Diethylene glycol	50 ppm TWA8 AIHA WHEEL	Aerosol and Vapor
Diethylene glycol	10 mg/m ³ TWA8 AIHA WHEEL	Aerosol

In the Exposure Limits Chart above, if there is no specific qualifier (i.e., Aerosol) listed in the Form Column for a particular limit, the listed limit includes all airborne forms of the substance that can be inhaled.

A “blank” in the Skin column indicates that exposure by the cutaneous (skin) route is not a potential significant contributor to overall exposure.

9. PHYSICAL / CHEMICAL PROPERTIES

Boiling Point:	>300°F
Freeze Point:	< 5°F
Specific Gravity (Water =1):	1.13
Vapor Pressure (mm of Hg) @ 20C:	0.05 Estimated
Vapor Density (air=1):	Not established
Water Solubility:	Complete
Evaporation Rate (BuAc = 1):	Nil
% Volatile By Volume:	88-97
Appearance:	Yellow
Odor:	Mild
pH (50% Water Solution):	8.4

10. STABILITY & REACTIVITY DATA

Stability:	Stable
Conditions to Avoid:	Keep away from flame
Incompatibility (Materials to Avoid):	Strong acid or oxidizing agents
Hazardous Decomposition Products:	Incomplete combustion may produce CO gas
Hazardous Polymerization:	Will not occur

11. TOXICOLOGICAL INFORMATION

Skin: The dermal LD50 has not been determined.

Ingestion: The lethal dose in humans is estimated to be 100 ml (3 ozs.). The oral LD50 for rats is in the 6000-13,000-mg/kg range.

Hydrated Inorganic Acid Sodium Salt: The lowest dose of a similar compound reported to produce death in humans was estimated to be 709 mg/kg body weight for a person weighing 150 pounds, this would be equivalent to swallowing about one-tenth (.1) of a pound of the dry material in a short period of time.

Acute oral LD50s for a similar compound = 2,650 mg/kg (rats) 2,000 mg/kg (mice)

Mutagenicity (The Effects on Genetic Material): In vitro mutagenicity studies were negative. Animal mutagenicity studies were negative.

Significant Data with Possible Relevance to Humans: Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses. The no-effect doses for developmental toxicity for ethylene glycol given by gavage over the period of organogenesis has been shown to be 150 mg/kg/day for the mouse and 500 mg/kg/day for the rat. Also, in a preliminary study to assess the effects of exposure of pregnant rats and made to aerosol at concentrations of 150, 1000 and 25000 mg/m³ for 6 hours a day throughout the period of organogenesis, teratogenic effects were produced at the highest concentration, but only in mice. The conditions of these latter experiments did not allow a conclusion as to whether the developmental toxicity was mediated by inhalation of aerosol percutaneous absorption of ethylene glycol from contaminated skin, or swallowing ethylene glycol as a result of grooming the wetted coat. In a further study, comparing effects from high aerosol concentration by whole-body or nose-only exposure, it was shown that nose-only exposure resulted in maternal toxicity (1000 and 25000 mg/m³) and developmental toxicity with minimal

evidence of teratogenicity (2500 mg/m³). The no-effects concentration (based on maternal toxicity) was 500 mg/m³. In a further study in mice, no teratogenic effects could be produced when ethylene glycol was applied to skin of pregnant mice over the period of organogenesis. The above observations suggest that ethylene glycol is to be regarded as an animal teratogen. There is currently no available information to suggest that ethylene glycol has caused birth defects in humans. Cutaneous application of ethylene glycol is ineffective in producing developmental toxicity. Exposure to high aerosol concentrations is only minimally effective in producing developmental toxicity. The major route for producing developmental toxicity is perorally. Two chronic feeding studies, using rats and mice, have not produced any evidence that ethylene glycol causes dose-related increases in tumor incidence or a different pattern of tumors compared with untreated controls. The absence of carcinogenic potential for ethylene glycol has been supported by numerous in vitro genotoxicity studies showing that it does not produce mutagenic or clastogenic effects.

A chronic dietary feeding study of diethylene glycol with rats showed mild kidney injury at 1%, while concentrations of 2% and 4% caused more marked kidney injury. In addition, at 2% and 4% of diethylene glycol in the diet, some rats developed benign papillary tumors in the urinary bladder. These have been attributed to the presence of urinary bladder calcium oxalate stones. No evidence for carcinogenicity was found with a chronic skin-painting study with diethylene glycol in mice. The absence of a direct chemical carcinogenic effect addords with the results in vitro genotoxicity studies that show that it does not produce mutagenic or clastogenic effects. A feeding study employing up to 5.0% diethylene glycol in the diet failed to produce any teratogenic effects. In a mouse continuous breeding study with large doses of diethylene glycol in drinking water, there was evidence for reproductive toxicity at 3.5% (equivalent to 6.1 g/kg/day) as reduced number of litter, live pups per litter and live pup weight. No such effects were seen at 1.75% (approximately 3.05 g/kg/day). The relevance of these very high dosages to human health is uncertain. Pregnant rats receiving undiluted diethylene glycol by gavage over the period of organogenesis had toxic effects at 4.0 and 8.0 ml/kg/day as mortality, decreased body weight, decreased food consumption increased water consumption and increased liver and kidney weights. Fetotoxicity was seen only at these maternally toxic dosages. Decreased fetal body weight occurred at 8.0 ml/kg/day, and increased skeletal variants at 4.0 and 8.0 ml/kg/day. No embryotoxic or teratogenic effects were seen. Neither maternal toxicity nor fetotoxicity occurred at 1.0 ml/kg/day. In a study with mice also receiving undiluted diethylene glycol over the period of organogenesis, maternal toxicity occurred at 2.5 and 10.0 ml/kg/day, but not at 0.5 ml/kg/day. Definitive developmental toxicity was not seen in this species.

ACUTE TOXICITY

Peroral: The lethal dose in humans is estimated to be 3 oz. or 100 ml.

Rat: LD₅₀ (6000 – 13000) mg/kg

Percutaneous:

Rabbit: LD₅₀ =>22270 mg/kg; 24 h occluded

Inhalation:

Rat: 8-hour exposure, substantially saturated vapor studies, dynamic generation method

Mortality: 0/6

Inhalation: Mist/vapor study, rat, at 170°C, 8-hour exposure = 2.2 mg/l

Mortality: 0/6

Inhalation:

Rat: 8-hour exposure, fog = 10000 ppm; 65° - 70°C

Mortality: 0/6

IRRITATION

Skin:

Rabbit: 24-hour occluded contact, 0.5 ml
Results: Minor erythema and edema

Skin:

Human: Primary irritation patch test, 48-hour occluded, 0.2 ml
Results: Evidence of irritation

Eye:

Rabbit: 0.1 ml
Results: Minor transient iritis, conjunctival irritation with discharge

REPEATED EXPOSURE

In a 7-day dietary study with rats, a significant increase in kidney weights in females was observed at 5.0 gm/kg. The NOEL was 2.5 gm/kg.

In a 24-month dietary study with rats, increased mortality in males was observed at the highest dose, 1.0 gm/kg/day. There were multiple signs: mineralization of several organs, including the cardiac vessels, cardiac muscle, vas deferens, stomach and pulmonary vessels; cellular hyperplasia of the parathyroids, hemosiderosis of the spleen, myocardial fibrosis, portal fibrosis of the liver, bile duct hyperplasia and hydronephrosis and oxalate nephrosis of the kidneys. Ethylene glycol was not oncogenic.

In a 90-day dietary study with dogs, repeated exposures to 2.5 gm/kg resulted in acute renal failure and deaths. The NOAEL was 1.0 gm/kg.

SENSITIZATION (ANIMAL AND HUMAN STUDIES)

Repeated skin contact with ethylene glycol may, in a very small proportion of cases, cause sensitization with the development of allergic contact dermatitis. The incidence is significantly less than 1% with the undiluted material.

REPRODUCTIVE TOXICITY

A three-generation study indicated that ethylene glycol did not affect reproductive parameters at dietary concentrations up to 1.0 gm/kg/day in any generation.

CHRONIC TOXICITY AND CARCINOGENICITY

Two chronic feeding studies, using rats and mice, have not produced any evidence that ethylene glycol causes dose-related increases in tumor incidence or a different pattern of tumors compared with untreated controls. The absence of a carcinogenic potential for ethylene glycol has been supported by numerous in vitro genotoxicity studies showing that it does not produce mutagenic or clastogenic effects.

GENETIC TOXICOLOGY

In Vitro: Ethylene glycol was devoid of genotoxic activity in an Ames test, forward gene mutation and sister chromatid exchange (SCE) studies in Chinese Hamster Ovary (CHO) cells and an in vitro cytogenetics study.

In Vivo: Ethylene glycol by three different routes (intravenous, peroral and percutaneous) demonstrates apparent first-order pharmacokinetic behavior for the disposition in and the elimination from the plasma. Dose-dependent changes occur for the elimination of metabolites in the urine and as $^{14}\text{CO}_2$ after single doses for the intravenous and

peroral, but not the percutaneous route. The hypothesis from literature sources exists that developmental toxicity is caused by a metabolite of ethylene glycol, called glycolic acid, and not parent ethylene glycol. Under most conditions of ethylene glycol exposure, the glycolic acid metabolite is present in the blood in very low levels. However, it can become the major metabolite following large doses of ethylene glycol due to saturation of glycolic acid oxidation and/or elimination. When levels of this acidic metabolite exceed the capacity of maternal blood buffers to neutralize it, a maternal metabolic acidosis ensues, which has been hypothesized to be the true agent responsible for ethylene glycol induced developmental toxicity. Research suggests that ethylene glycol developmental toxicity is due to a dose-rate dependent toxicokinetic shift leading to glycolate accumulation and metabolic acidosis.

ADDITIONAL STUDIES

Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses. The no-effect doses for developmental toxicity for ethylene glycol given by gavage over the period of organogenesis has been shown to be 150 mg/kg/day for the mouse and 500 mg/kg/day for the rat. Also, in a preliminary study to assess the effects of exposure of pregnant rats and mice to aerosols at concentrations of 150, 1000 and 2500 mg/m³ for 6 hours a day throughout the period of organogenesis, teratogenic effects were produced at the highest concentration, but only in mice. The conditions of these latter experiments did not allow a conclusion as to whether the developmental toxicity was mediated by inhalation of aerosol, percutaneous absorption of ethylene glycol from contaminated skin, or swallowing of ethylene glycol as a result of grooming the wetted coat. In a further study, comparing effects from high aerosol concentration by whole-body or nose-only exposure, it was shown that nose-only exposure resulted in maternal toxicity (1000 and 2500 mg/m³) and developmental toxicity with minimal evidence of teratogenicity (2500 mg/m³). The no-effects concentration (based on maternal toxicity) was 500 mg/m³. In a further study in mice, no teratogenic effects could be produced when ethylene glycol was applied to the skin of pregnant mice over the period of organogenesis. The above observations suggest that ethylene glycol is to be regarded as an animal teratogen. There is currently no available information to suggest that ethylene glycol has caused birth defects in humans. Cutaneous application of ethylene glycol is ineffective in producing developmental toxicity. Exposure to high aerosol concentrations is only minimally effective in producing developmental toxicity.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE

Movement & Partitioning: Bioconcentration potential is low (BCF less than 100 or Log Kow less than 3). Log octanol/water partition coefficient (log Kow) is -1.36. Henry's Law Constant (H) is 6.0E-08 atm-m³/mol. Bioconcentration factor (BCF) is 10 in golden orfe.

Degradation & Transformation: Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD greater than 40%). 5-Day biochemical oxygen demand (BOD5) is 0.78 p/p. 10-Day biochemical oxygen demand (BOD10) is 1.06 p/p. 20-Day biochemical oxygen demand (BOD20) is 1.15 p/p. Theoretical oxygen demand (THOD) is calculated to be 1.29 p/p. Biodegradation may occur under both aerobic and anaerobic conditions (in either the presence or absence of oxygen). Inhibitory concentration (IC50) in OECD "Activated Sludge, Respiration Inhibition Test" (Guideline # 209) is < 1000 mg/L. Degradation is expected in the atmospheric environment within days to weeks.

Ecotoxicology: Material is practically non-toxic to aquatic organisms on an acute basis (LC50 greater than 100 mg/L in most sensitive species). Acute LC50 for fathead minnow (*Pimephales promelas*) is 51000 mg/L. Acute LC50 for bluegill (*Lepomis macrochirus*) is 27549 mg/L. Acute LC50 for rainbow trout (*Oncorhynchus mykiss*) is about 18000-46000 mg/L. Acute LC50 for guppy (*Poecilia reticulata*) is 49300 mg/L. Acute LC50 for water flea (*Daphnia magna*) is 46300-51100 mg/L. Acute LC50 for the cladoceran *Ceriodaphnia dubia* is 10000-25800 mg/L.

Acute LC50 for crayfish is 91430 mg/L. Acute LC50 for brine shrimp (*Artemia salina*) is 20000 mg/L. Acute LC50 for golden orfe (*Leuciscus idus*) is greater than 10000 mg/L. Acute LC50 for goldfish (*Carassius auratus*) is greater than 5000 mg/L. Growth inhibition EC50 for green alga *Selenastrum capricornutum* is 9500-13000 mg/L.

BOD (% Oxygen Consumption):

Day 5	Day 10	Day 15	Day 20	Day 30
51%	80%		97%	

ECOTOXICITY

Toxicity to Micro-organisms:

Bacterial / NA: 16 h; IC50
Result Value: >10000 mg/l

Toxicity to Aquatic Invertebrates:

Daphnia: 48 h; LC50
Result Value: >100000 mg/l

Toxicity to Fish

Fathead Minnow: 94 h; LC50
Result Value: 70000 mg/l

FURTHER INFORMATION

Chemical Oxygen Demand (COD) – Measured: 1.29 mg/mg
Theoretical Oxygen Demand (THOD) – Calculated: 1.30 mg/mg

Octanol/Water Partition Coefficient – Measured: -1.36

13. DISPOSAL CONSIDERATIONS

DO NOT discharge to sewer. Wear appropriate personal protection. Take up with sand, vermiculite, or similar inert material. Dispose in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

Non-Bulk

Not regulated by the US D.O.T. (in quantities under 5,000 lbs in any one inner package)

Bulk

Proper Shipping Name: Environmentally Hazardous Substance, LIQUID N.O.S. (ETHYLENE GLYCOL)
Technical Name: ETHYLENE GLYCOL
ID Number: UN 3082
Hazard Class: 9
Packing Group: PG III
Reportable Quantity: 5,000 lb.

IATA
Non-Bulk
Not Regulated by IATA

IMDG
Non-Bulk
Not regulated by IMDG (in quantities under 5,000 lbs in any one inner package)

15. REGULATORY INFORMATION

THIS PRODUCT CONTAINS COMPONENT(S) CITED ON THE FOLLOWING REGULATIONS.

<u>Chemical Name</u>	<u>Cas Number</u>
Ethylene Glycol	107-21-1

United States - TSCA
Inventory:

Listed

Water Standards:

No data available

Atmospheric Standards:

Clean Air Act (1990) - List of Hazardous Air Contaminants: listed

CERCLA:

Reportable Quantity (RQ): 5,000 pounds (532 gallons)

OSHA Hazard Communication
Standard:

This product is a "hazardous chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SARA Title III:

Section 311/312 - Categories: Acute hazard; chronic hazard

Section 312 - Inventory Reporting: Ethylene glycol is subject to Tier I and/or Tier II annual inventory reporting.

Section 313 - Emission Reporting: Ethylene glycol is subject to Form R reporting requirements.

Section 302 - Extremely Hazardous Substances: Ethylene glycol is not listed.

State Right-To-Know:

California - Exposure Limits - Ceilings:	vapor-50 ppm ceiling; 125 mg/m3 ceiling
Director's List of Hazardous Substances:	listed
Florida - Hazardous Substances List:	listed
Massachusetts - Right-to-Know List:	listed
Minnesota - Haz. Subs. List:	listed (particulate and vapor)
New Jersey - Right-to-Know List (Total):	Present greater than 1.0%
Pennsylvania Right-to-Know List:	environmental hazard

Canadian Regulations: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required.

Peak CF-EXL Extended Life Antifreeze

WHMIS Information: D2A - material has potential toxic effects. Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): This product contains the following chemical(s) known to the State of California to cause cancer:

<u>Component</u>	<u>CAS #</u>	<u>Amount</u>
1,4 - Dioxane	123-91-1	<=0.0086%
Acetaldehyde	75-07-0	<=0.1000PPM

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): This product contains the following chemical(s) known to the State of California to cause birth defects and/or other reproductive harm.

<u>Component</u>	<u>CAS #</u>	<u>Amount</u>
Ethylene glycol monomethyl ether	109-86-4	<=0.0009%

California SCAQMD Rule 443.1 (South Coast Air Quality Management District Rule 443.1, Labeling of Materials Containing Organic Solvents):

VOC: Vapor pressure 0.06 mmHg at 20°C
1113.38 g/l

16. OTHER INFORMATION

Contact: Thomas Cholke

Phone: (847) 559-2225

Old World Industries, Inc. makes no warranty, representation or guarantee as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of his own use, handling and disposal of this product. Since actual use by others is beyond our control, no warranty, expressed or implied, is made by Old World Industries, Inc. as to the effects of such use, the results to be obtained or the safety and toxicity of this product, nor does Old World Industries, Inc. assume liability arising out of the use by others of this product referred to herein. The data in this MSDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Initial Preparation Date: 6/30/97
Last Revision Date: 4/16/2002
Effective Date: 8/1/2005

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTITY: **SIERRA® ANTIFREEZE/COOLANT**

1. SUPPLIER

OLD WORLD INDUSTRIES, INC.
4065 COMMERCIAL AVENUE
NORTHBROOK, ILLINOIS 60062
PHONE: 847-559-2000
EMERGENCY PHONE: 1-800-424-9300 (CHEMTREC)

2. INGREDIENTS

<u>Material</u>	<u>CAS#</u>	<u>% By Wt.</u>	<u>PEL Mist</u>	<u>PEL Vapor</u>
Propylene Glycol	57-55-6	94-96	None Established	None Established
Water	7732-18-5	3		
Proprietary Additives		1-3		

(Does not contain IARC, NTP, OSHA and ACGIH listed carcinogens greater than 0.1%)

3. HAZARDS IDENTIFICATION

NPFA: HEALTH: 0 FLAMMABILITY: 1 REACTIVITY: 0
HMIS: HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0

KEY: 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

Emergency Overview: This material is NOT HAZARDOUS by OSHA Hazard Communication definition.

POTENTIAL HEALTH EFFECTS

Routes of Exposure: Eye Contact, Skin Contact, Inhalation, Ingestion, Signs and Symptoms of Overdose

Eye: May cause minor eye irritation.

Skin: No significant signs or symptoms indicative of any adverse health hazard are expected to occur as a result of skin exposure. Not a skin absorption hazard.

Inhalation: No significant signs or symptoms indicative of any health hazard are expected to occur as a result of inhalation exposure.

Ingestion: Not a likely route of exposure. No significant signs or symptoms indicative of any health hazard are expected to occur as a result of ingestion. However, lactic acidosis, stupor and seizures have been reported following chronic ingestion and in individuals with kidney disease.

Signs and Symptoms of Overexposure: Same as above.

Medical Conditions Generally Aggravated by Exposure: Material and/or its emissions may aggravate preexisting eye disease.

Chronic Health Effects (Propylene Glycol): No chronic health hazards are expected to occur from anticipated conditions of normal use of this material.

Other Health Information: None.

4. FIRST AID MEASURES

Eyes: Immediately rinse eyes with clean water for 20-30 minutes. Retract eyelids often. Obtain medical attention if pain, blinking, tears or redness persist.

Skin: Not expected to present a significant skin hazard under anticipated conditions of normal use. If skin contact occurs, remove contaminated clothing and wash skin thoroughly.

Inhalation: Not expected to present a significant inhalation hazard under anticipated conditions of normal use. If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain medical attention if breathing difficulty persists.

Ingestion: Ingestion unlikely. If large quantity swallowed, give lukewarm water (pint / ½ liter) if victim completely conscious / alert. Obtain medical attention.

Notes to Physician: Following acute ingestion, signs of toxicity are unlikely. Ethanol treatment, as in ethylene glycol poisoning, is inappropriate. There is no specific antidote. Treatment should be directed at the control of symptoms and the clinical condition. Monitor for acidosis and central nervous system effects.

5. FIRE FIGHTING MEASURES

Flammable Properties:

Flammability Classification: OSHA/NFPA Class IIIB combustible liquid

Flash Point / Method: 109°C (228°F) (PMCC) (Aqueous solution)

Auto-Ignition Temperature: 371°C (700°F)

Extinguishing Media:

Suitable: SMALL FIRE: Use dry chemicals, CO₂, water spray or alcohol-resistant foam.

LARGE FIRE: Use water spray, water fog or alcohol-resistant foam.

Unsuitable: Do not use solid water stream.

Special Fire Fighting Procedures: Wear positive pressure, self-contained breathing apparatus and other protective apparatus as warranted. Fight fire from distance or protected location - heat may build up pressure and rupture closed containers. Liquid may form slippery film. Use water spray or fog for cooling, solid stream may spread fire as burning liquid will float on water. Avoid frothing/steam explosion. Notify authorities if liquid enters sewers/public waters.

Unusual Fire and Explosion Hazards: Heat from fire can generate flammable vapor. When mixed with air and exposed to ignition source, vapors can burn in open or explode if confined. Vapors may be heavier than air and travel long distances along ground before igniting and flashing back. Fine sprays and mists may be combustible at temperatures below normal flash point.

6. ACCIDENTAL RELEASE MEASURES

Steps to be Taken in Case Material Is Released or Spilled: Prevent flow to sewers and public waters as it may contaminate said water. Restrict water usage to prevent slip/fall hazard. Soak up small spills with inert solids. Dike and recover large land spills. Notify appropriate authorities if product enters any waterway.

7. HANDLING AND STORAGE

Handling: Hygroscopic. Handle with care. After handling, always wash hands thoroughly with soap and water. Always drain and flush systems containing propylene glycol with water before welding or other maintenance. Wear recommended personal protective equipment. Observe precautions pertaining to confined space entry.

Storage:

Bulk Drums / Larger: Stainless steel containers. Lined steel. Mild steel. Reinforced plastic. Keep drums tightly closed to prevent contamination. Store at 65° to 90°F. Use dry nitrogen or low dew point air for tank padding.

1-Gallon Containers: Store at ambient temperature.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: No special respiratory protection equipment is recommended under normal conditions of anticipated use with adequate ventilation.

Ventilation: Adequate general ventilation is required, local exhaust is recommended if possible.

Protective Gloves: None normally needed; however, wearing chemical resistant gloves is recommended if prolonged contact is expected. Avoid contact with skin. Where use can result in skin contact, practice good personal hygiene.

Eye Protection: Chemical splash goggles or full face shield must be worn when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapor. Contact lenses should not be worn.

Other Protective Equipment: None

Work Practices/Engineering Controls: Keep containers closed when not in use.

Personal Hygiene: If product-handling results in skin contact, wash hands and other exposed areas with mild soap and water before eating, drinking, smoking, or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before reuse.

Other Hygienic Practices: Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use and the hazards and/or potential hazards that may be encountered during use. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

As of 2001, no occupational exposure limits have been established for propylene glycol by either ACGIH or OSHA.

9. PHYSICAL PROPERTIES (Propylene Glycol)

Boiling Point (deg F):	365
Specific Gravity (Water =1):	1.04
Vapor Pressure (mm of Hg):	<0.1
Vapor Density (air=1):	2.6
Burst Point:	Product will not freeze solid or burst.
Water Solubility:	Complete
Evaporation Rate (n-butyl acetate=1):	Slight
Freeze Point / Melting Point (deg F):	-76
Freeze Point 50% Concentration (deg F):	-26
Appearance:	Green
Odor:	Slightly viscous, almost odorless liquid

10. STABILITY and REACTIVITY

Stability:	Stable
Conditions to Avoid:	Heat, sparks, open flame
Materials to Avoid:	Strong alkalis, strong oxidizing agents
Hazardous Decomposition or Byproducts:	Carbon monoxide and other toxic vapors
Hazardous Polymerization:	Not expected to occur

11. TOXICOLOGICAL INFORMATION

Skin: The LD50 for skin absorption in rabbits is >20,800 mg/kg.

Ingestion: The oral LD50 for rats is 20,000 mg/kg, and for mice is 22,000 mg/kg.

Mutagenicity: In vitro mutagenicity studies were negative. Animal mutagenicity studies were negative.

12. ECOLOGICAL INFORMATION

Ecotoxicity: This material is expected to be non-hazardous to aquatic species.

	Test Type	Species	Value / Units
Fish / Amphibians	LC50 / 96 hours	Sheepshead Minnow	23,800 mg/l
Aquatic Invertebrates	EC50 / 48 hours	Daphnia	> 43,500 mg/l
Aquatic Plants	EC50 / 72 hours	Green algae	> 19,000 mg/l

Environmental Fate: Propylene glycol is expected to degrade rapidly in the vapor phase by reaction with photochemically produced hydroxyl radicals. It has an estimated half-life of 32 hours in an average ambient atmosphere. Propylene glycol is expected to degrade relatively rapidly via biodegradation in water. It is not expected to be susceptible to hydrolysis, oxidation, volatilization, bioconcentration and adsorption to sediments. Propylene glycol is expected to degrade relatively rapidly via biodegradation in soil. Degradation in soil does not appear to be inhibited by high glycol concentrations or by subfreezing temperatures. Due to its high mobility and low adsorptivity, propylene glycol is susceptible to leaching. However, concurrent biodegradation may be rapid enough to diminish the significance of leaching. Evaporation from dry (but not moist) soil surfaces is likely to occur.

Bioaccumulation: Based on the octanol/water partition coefficient, the bioconcentration factor is estimated to be < 1.

Biodegradation: This material is expected to be readily biodegradable.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Landfill solids at permitted sites using registered transporters. Burn concentrated liquids, avoiding flameouts, and assuring emissions comply with applicable regulations. Diluted aqueous waste may biodegrade, but avoid overloading plant biomass and assure effluent complies with applicable regulations.

14. TRANSPORT INFORMATION

This product is not regulated by DOT.

15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization of 1988 (SARA), Title III

Section 302/304

Requires emergency planning based on "Threshold Planning Quantities" (TPQs) and release reporting based on Reportable Quantities (RQs) of "Extremely Hazardous Substances" (EHS) listed in Appendix A of 40 CFR 355. There are no components of this material with known CAS numbers that are on the EHS list.

Section 311 and 312

Based upon available information, this material and/or components are not classified as any of the specific health and/or physical hazards defined by Section 311 & 312.

Section 313

The material does not contain any chemical components with known CAS numbers that exceeded the De Minimis reporting levels established by SARA Title III, Section 313 and 40 CFR 372.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA.

OSHA Regulations

"Chemical-specific" U.S. Occupational Safety and Health Administration (OSHA) regulations (1910.1002 to 1910.1050) presented under 29 U.S. Code of Federal Regulations (CFR) 1910 do not apply to this material or its components.

Department of Transportation (DOT)

Other than the normal shipping instructions and information given in this MSDS, there are no other specific U.S. Department of Transportation (DOT) regulations governing the shipment of this material.

State Regulations:

California Safe Drinking Water and Toxic Enforcement Act of 1988 – Proposition 65

This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins under California Proposition 65 at levels that would be subject to the proposition.

California South Coast Air Quality Management District (SCAWMD) Rule 443.1 (VOCs)

A Volatile Organic Compound (VOC) is any volatile compound of carbon excluding methane, carbon monoxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, 1, 1, 1-trichloroethane, methylene chloride (FC-23), (CFC-113), (CFC-12), (CFC-11), (CFC-22), (CFC-114) and (CFC-115). By this definition, this is a VOC material.

Massachusetts Right to Know Substance List (MSL) (105 CMR Section 670.000)

Extraordinarily Hazardous Substances (MSL-EHS) must be identified when present in materials at levels greater than state specified criterion. The criterion is $\geq 0.0001\%$. Hazardous Substances (MSL-HS) on the MSL must be identified when present in materials at greater than the state specified criterion. The criterion is $\geq 1\%$. Components with CAS numbers present in this material, at levels specified in Section 9 -- Components do not require reporting under the statute.

New Jersey Registration

The New Jersey Registry 3. Registration law does not apply to this material, as none of its components are trade secrets.

Pennsylvania Right to Know Hazardous Substance List

Hazardous Substances (PA-HS) must be identified when present in material at levels greater than the state specified criterion. The criterion is $\geq 1\%$. Components with CAS numbers in this material at a level which could require reporting under the statute are:

<u>Chemical</u>	<u>CAS #</u>
Propylene Glycol	57-5506

Special Hazardous Substances (PA-SHS) must be identified when present in materials at levels greater than the state specified criterion. The criterion is $\geq 0.01\%$. Components with CAS numbers in this material, at levels specified in Section 9 Components do not require reporting under the statute.

UNITED STATES - TSCA - Inventory: Listed

WHMIS classification for product: n/a

This product has been classified in accordance with the hazard criteria of the CFR and the MSDS contains all the information required by the CFR.

16. OTHER INFORMATION

Contact: Thomas Cholke

Phone: (847) 559-2225

Old World Industries, Inc. makes no warranty, representation or guarantee as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of his own use, handling and disposal of this product. Since actual use by others is beyond our control, no warranty, expressed or implied, is made by Old World Industries, Inc. as to the effects of such use, the results to be obtained or the safety and toxicity of this product, nor does Old World Industries, Inc. assume liability arising out of the use by others of this product referred to herein. The data in this MSDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.



Material Safety Data Sheet

Number: OBI-0001 B
 Issue Date: 02/20/90
 Revision Date: 12/05/97

THE ULTIMATE POWER SOURCE™

Section 1 - Material Identification

Product Name: Sealed Lead Acid Battery
 Common Synonym: Automotive Battery
 UN Number: UN2800 (See Section 16 for additional information)

Engine Starting Batteries

Battery Model No.	National Stock Number (NSN)
800U	6140-01-374-2243
800S	6140-01-378-8232
1000M	6140-01-441-4280
850/6	Not Available

Deep Cycle Batteries

Battery Model No.	National Stock Number (NSN)
D750U	6140-01-441-4272
D750S	Not Available
D900M	Not Available

Company Information

Optima Batteries, Incorporated
 17500 E 22nd Avenue
 Aurora, Colorado 80011
 (303) 340-7400
 Cage Code OUI55

Emergency Phone Number

Chemtrec
 United States: 800-424-9300
 International: 703-527-3887
 (collect)

The OPTIMA sealed lead acid battery is considered an article as defined by 29 CFR 1910.1200(c) OSHA Hazard Communication. The information on this sheet is supplied at the customer's request for information only.

Emergency Overview:

Exposure not expected for product under normal conditions of use. In its manufactured and supplied state, the product is considered non-hazardous. Keep away from flames during and immediately after charge. No significant health effects are associated with the product.

Section 2 - Composition (Hazardous Components)

Material	% by weight or volume	CAS Number
Lead Compounds	63 - 81	7439-92-1
Sulfuric Acid Electrolyte	17 - 25	7664-93-9
Case Matl Polypropylene	2 - 6	9003-07-0
Separator/Paster Paper Fibrous Glass	1 - 4	65997-17-3

Section 3 - Hazards Rating

The Hazards rating for the Sealed Lead Acid Battery are:

<u>Hazards Rating (HMIS System)</u>	
Health	0
Flammability	0
Reactivity	0

Section 4 - Hazards Identification

Potential Health Effects

None expected for finished product under normal conditions of use.

Fire and Explosion

The sealed lead acid battery is not considered flammable, but it will burn if involved in a fire. Short circuit can also result in fire. Evacuate area. Self-contained breathing apparatus must be worn to prevent possible inhalation of acid mists, smoke and decomposition products in a fire. Remove all ignition sources. Cool battery(s) to prevent rupture.

Section 5 - First-Aid

Inhalation - Not expected for product under normal conditions of use. However, if acid vapor is released due to overcharging or abuse of the battery, remove exposed person to fresh air. If breathing is difficult, oxygen may be administered. If breathing has stopped, artificial respiration should be started immediately. Seek medical attention.

Eyes - Exposure not expected for product under normal conditions of use. However, if acid from broken battery case enters eyes, flush with water for at least 15 minutes. If irritation develops, seek prompt medical attention.

Skin - Exposure not expected for product under normal conditions of use. However, if acid contacts skin, flush with water and mild soap. If irritation develops, seek medical attention.

Ingestion - Not expected due to physical form of finished product. However, if any materials are ingested, seek prompt medical attention.

Section 6 - Fire-fighting Measures

Extinguishing media - Multipurpose dry chemical or multipurpose CO₂.

Fire fighting procedures - Evacuate area. Self-contained breathing apparatus must be worn to prevent possible inhalation of acid mists, smoke and decomposition products in a fire. Remove all ignition sources. Cool battery(s) to prevent rupture.

Unusual fire and explosion hazards - Hydrogen gas may be produced and may explode if ignited. Remove all ignition sources. Ventilate area.

Section 7 - Accidental Release Measures

Spill or leak cleanup procedures: Avoid contact with acid materials. Use soda ash, baking soda or lime to neutralize acid if released.

Waste disposal: Dispose of in accordance with all local, state, and federal regulations.

Section 8 - Handling and Storage

Handling - Do not carry battery by terminals. Do not drop battery, puncture or attempt to open battery case. Keep away from flames during and immediately after charge. Avoid prolonged overcharges in confined areas.

Storage - Store at ambient room temperature. Do not subject product to open flame or fire. Avoid conditions which could cause arcing between battery terminals.

Hygiene - Wash hands thoroughly before eating or smoking after handling batteries.

Section 9 - Exposure Control

<u>Material</u>	<u>Exposure Limits</u>
Lead compounds	0.05 mg/m ³
Sulfuric Acid Electrolyte	1.00 mg/m ³ OSHA

Section 10 - Personal Protection:

Eye: Not necessary under normal conditions of use for finished product.
Skin: Not necessary under normal conditions of use for finished product.
Respiratory: Not necessary under normal conditions of use for finished product.
Ventilation: Not necessary under normal conditions of use for finished product.
Work Practices: Not necessary under normal conditions of use for finished product.

Section 11 - Physical and Chemical Properties

Boiling Point:	N/A	Appearance/Odor:	N/A
Vapor Pressure:	N/A	Specific Gravity (H ₂ O=1):	N/A
Vapor Density (air=1):	N/A	Melting Point:	N/A
Solubility in water:	N/A	Evaporation Rate:	N/A
		(Butyl Acetate = 1)	

Section 12 - Stability and Reactivity

Stability:	Stable
Conditions to avoid:	Avoid shorting, use only approved charging methods. Do not puncture battery case
Hazardous reactions:	N/A
Decomposition Products:	N/A
Hazardous Polymerization:	Will not occur

Section 13 - Toxicological Information

Threshold limit value: Not applicable for finished product.
Route of entry: Not applicable for finished product under normal conditions of use.
Signs of symptoms of acute exposure: None expected for finished product under normal conditions of use.
Chronic Exposure: None expected for finished product under normal conditions of use.
Medical Conditions aggravated by exposure: None expected for finished product under normal conditions of use.
Effects of overexposure, conditions to avoid: No exposure expected for finished product. However, do not puncture or open battery case. Acid electrolyte may be released. Use only standard charging methods. If overcharged, battery may release gases (Hydrogen and oxygen).
Carcinogen listing: NTS: no IARC: no OSHA regulated: NA for finished product under normal conditions of use.

Section 14 - Disposal Considerations

Send to a lead recycling facility which follows applicable Federal, State and Local regulations for routine disposition of spent or damaged batteries. The distributor / user is responsible to know that "spent" and/or "damaged" batteries (scrap batteries) are disposed of in an environmentally sound way in accordance with all applicable Federal, State, and Local Environmental Regulations. OPTIMA batteries are 100% recyclable by any licensed reclamation operation.

Section 15 - Regulatory Information

According to the OSHA Hazard Communication Standard, Sealed Lead Acid Battery in its manufactured and supplied state is considered non-hazardous.
Transportation:
Sealed Lead Acid Battery is not a DOT Hazardous Material.

Section 16 - Supplemental Information

Under the Dangerous Goods Regulations, 34th Edition, Effective 1 January 1993, produced by International Air Transport Association (IATA): OPTIMA batteries are classified as non-regulated by special provisions A-48 and A-67 for UN Number of UN2800: Batteries, wet, non-spillable, electric storage:

A-48: Packaging tests are not considered necessary.

A-67: Non-spillable batteries are considered to be non-dangerous if, at a temperature of 55°C (130°F), the electrolyte will not flow from a ruptured or cracked case and there is no free liquid to flow and if, when packaged for transport, the terminals are protected from short circuit.

The manufacturer of this finished article cannot foresee every possible use or misuse of the product. However, the following information is supplied:

In its manufactured and supplied state, the product is considered non-hazardous. Excessive overcharging or abuse to the terminals can result in the release of gases (hydrogen and oxygen). As a general practice, batteries should not be used in enclosed, non-ventilated spaces. Avoid immersion in water as it may lead to hydrogen generation. If the battery is crushed in a collision or similar accident, the absorbent separator may be squeezed causing the release of a small amount of acid electrolyte. Neutralize the acid electrolyte with baking soda and flush with plenty of water.

Under the Code of Federal Regulations #49, October 1, 1994 Edition, OPTIMA batteries are classified as an exception from all other requirements or conditions as stated in the following areas: Batteries, wet, 173.159 (d)(3)(i) and (d)(3)(i)(i).

- (d)(3)(i): vibration test
- (d)(3)(i)(i): pressure differential test

These conditions have been tested and certified by the following: Energy Research Laboratory (ERL A/S), Batteritest Laboratory, Munkebjergvaenget 13, DK-5230, Odense M, Denmark. Information is on file at main company location.

The information and recommendations contained herein have been compiled from sources believed to be reliable and to represent current knowledge on the subject. No warranty, guarantee, or representation contained herein and OPTIMA Batteries, Inc., its subsidiaries or affiliates assume no responsibility in connection therewith, nor can it be assumed that all acceptable safety measures are contained herein, or that other or additional measures may not be required under particular or exceptional conditions or circumstances.

Powers Fasteners, Inc., • 2 Powers Lane, Brewster • NY, U.S.A. 10509 • Phone (914) 235-6300

MATERIAL SAFETY DATA SHEET

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

Product identifier: POWERFOAM™/TRIGGERFOAM™

Product use: Polyurethane filler foam, insulating foam, backing foam, spray foam, acoustical sealant, penetration sealant.

Chemical Family: Mixture of polyurethane, polymeric isocyanate and hydrocarbon propellants.

Supplier's name and address:

Powers Fasteners, Inc.

2 Powers Lane
Brewster, NY, U.S.A.
10509

Phone: 914-235-6300 (8 AM to 8 PM EST, Monday to Thursday; 8 AM to 7 PM EST, Friday)

Emergency Tel.: CHEMTREC – 800-424-9300

Manufacturer's name and address:

Refer to supplier.

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>CAS #</u>	<u>% (weight)</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
			<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Polymethylene polyphenyl isocyanate	9016-87-9	30 - 60	0.005 ppm (as 'MDI')	N/Av	0.02 ppm (Ceiling) (as 'MDI')	N/Av
Dimethyl ether	115-10-6	7 - 13	*1000 ppm	N/Av	N/Av	N/Av
Propane	74-98-6	1 - 5	*1000 ppm	N/Av	1000 ppm	N/Av
Isobutane	75-28-5	1 - 5	*1000 ppm	N/Av	N/Av	N/Av

*Note: The ACGIH TLV listed above for Dimethyl ether, is an AIHA WEEL. The ACGIH TLV's listed above for Propane and Isobutane, are 'As Aliphatic hydrocarbon gases'.

This material is classified as hazardous under OSHA regulations (29CFR 1910.1200).

SECTION 3 — HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Aerosolized yellowish liquid / foam. Mild amine odor, characteristic of polyurethane.

Danger! Flammable aerosol. Contents under pressure. Container will explode if heated. Reacts slowly with water. May polymerize if heated to high temperatures or if exposed to incompatible materials. Poison. Harmful or fatal if inhaled. Can cause lung injury. Inhalation could cause headache, nausea, dizziness or other central nervous system. May cause respiratory tract irritation. May cause skin and eye irritation. May cause severe allergic skin and respiratory sensitization.

POTENTIAL HEALTH EFFECTS

Target organs: Eyes, skin, respiratory system, digestive system, central nervous system.

Routes of exposure: Skin contact, skin absorption, eye contact, inhalation, ingestion.

Signs and symptoms of short-term (acute) exposure:

Inhalation: Inhalation may cause irritation to the upper respiratory tract, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Symptoms may also include sore throat, shortness of breath, wheezing, coughing and chest pain. These symptoms may be delayed. Inhalation of higher concentrations may cause inflammation of lung tissue, bronchitis, wheezing, pulmonary edema and eventually death. In confined or poorly ventilated areas where the vapor concentration is very high, product may act as an asphyxiant and cause increased breathing and pulse rates, fatigue, nausea and vomiting.

Skin: Direct skin contact may cause mild irritation, skin discoloration (staining) and skin hardening. Symptoms of frostbite may be experienced including numbness, prickling and itching.

Eyes: Direct eye contact may cause mild irritation, tearing and discomfort. If sprayed directly onto eye, product may freeze the eye and cause eye damage.

Ingestion: Ingestion may cause may cause severe irritation and corrosion to the mouth, throat and stomach.

SECTION 3 — HAZARDS IDENTIFICATION Continued

Chronic effects: Prolonged or repeated inhalation may cause severe, permanent respiratory impairment and lung injury.

Repeated or prolonged skin exposure may result in drying, cracking and defatting of the skin (dermatitis).

Conditions aggravated by exposure: Pre-existing skin, eye and respiratory disorders. Persons with asthma-type conditions or other chronic respiratory diseases should be excluded from working with this material.

Carcinogenic status: See TOXICOLOGICAL INFORMATION, Section 11.

Additional health hazards: **Potential severe sensitizer.** For further information, see TOXICOLOGICAL INFORMATION, Section 11.

Potential environmental effects: See ECOLOGICAL INFORMATION (Section 12).

SECTION 4 — FIRST AID MEASURES

Inhalation: Immediately remove person to fresh air. If breathing is difficult, oxygen may be administered by qualified personnel. Obtain medical attention immediately.

Skin contact: Flush skin thoroughly with running water for at least 20 minutes, while removing contaminated clothing. Obtain medical attention immediately. Launder clothing before reuse.

Eye contact: Immediately flush eyes with running water for a minimum of 20 minutes. Obtain medical attention immediately.

Ingestion: If swallowed, do NOT induce vomiting. Have victim drink one glass of water, to dilute material in stomach. Obtain medical attention immediately. Never give anything by mouth to an unconscious or convulsing person.

Note to Physicians: Asthmatic-like symptoms, if manifested, may develop immediately, or be delayed for up to several hours. Following severe exposure, medical follow-up should be monitored for at least 48 hours.

SECTION 5 — FIRE FIGHTING MEASURES

Fire hazards/conditions of flammability: Flammable aerosol. Product slowly reacts with water to produce Carbon dioxide. Closed containers are contained under pressure and will explode if exposed to excess heat or flame. Vapors are heavier than air and will collect in low-lying areas. The vapors may travel to a distant source of ignition and flashback.

Flammability classification (OSHA 29 CFR 1910.1200): Flammable aerosol.

Flash point (Method): <17.8°C / 0°F (propellant)

Auto-ignition temperature: N/Av

Lower flammable limit (% by vol.): N/Av

Upper flammable limit (% by vol.): N/Av

Explosion data: *Sensitivity to mechanical impact / static discharge:* May be sensitive to static discharge.

Oxidizing properties: None known.

Suitable extinguishing media: Use foam, carbon dioxide or dry chemical. Use water with caution, as this material may react with water.

Special fire-fighting procedures/equipment: Do not enter fire area without proper protection. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece. Shield personnel to protect from venting, rupturing or bursting cans. Move containers from fire area if it can be done without risk. Water spray may be useful in cooling equipment exposed to heat and flame.

Hazardous combustion products: Nitrogen oxides, hydrogen cyanide, hydrogen chloride, carbon oxides and other irritating fumes and smoke.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Personal precautions: Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with clean-up should wear the appropriate chemically protective equipment. Keep all other personnel upwind and away from the spill/release. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

Environmental precautions: Ensure any spilled liquid or foam portion of the product does not enter drains, sewers, waterways or confined spaces.

Spill response/Cleanup: Eliminate all sources of heat, sparks and flame. Ventilate area of release. Stop leak if you can do so without risk. Cover any spilled liquid or foam material with non-combustible absorbent material, such as vermiculite or sand, then shovel into a container for later disposal (see Section 13). If in solid state, collect and place in an appropriate container for later disposal. Spill area may be cleaned with a suitable solvent, such as Acetone. Follow the appropriate precautions for the solvent being used. Contaminated absorbent material may pose the same hazards as the spilled product. Notify the appropriate authorities as required.

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SECTION 6 — ACCIDENTAL RELEASE MEASURES Continued

Prohibited materials: None known.

Special spill response procedures: In case of a transportation accident, contact CHEMTREC at 1-800-424-9300 or International at 1-703-527-3887. If a spill/release in excess of EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002).

DOT/CERCLA Reportable quantity (RQ): None reported

SECTION 7 — HANDLING AND STORAGE

Safe handling procedures: This material is a toxic, flammable aerosol. Medical supervision of employees who come into contact with respiratory sensitizers is recommended. Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent skin eczema or sensitization should be excluded from working with this product. Once a person is sensitized, no further exposure to the material that caused the sensitization should be permitted. Wear protective equipment during handling. Use in a well-ventilated area. Do not inhale vapors or mists. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks, flame and direct sunlight. Keep away from acids and incompatibles. Avoid moist conditions. Do not puncture or incinerate containers. Stand upwind of all opening and spraying operations. Keep container closed when not in use. Assume empty containers contain residues, which are hazardous. Wash hands before eating, drinking, smoking or use of toilet facilities. Launder contaminated clothing before reuse.

Storage requirements: Store in a cool, dry, well-ventilated area away from sources of heat, ignition and sunlight. Ideal storage temperature is 10 – 21.1°C / 50 – 70°F. Keep away from incompatibles. Shelf life of 2 years, provided recommended storage requirements are met. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.

Special packaging materials: Always keep in containers made of the same materials as the supply container.

SECTION 8 — EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ventilation and engineering controls: Use adequate ventilation to maintain air contaminants below exposure limits. Local and/or general exhaust may be required

Respiratory protection: Respiratory protection is required if the airborne concentration exceeds exposure limits. When concentrations exceed the exposure limits specified, use NIOSH/MSHA-approved air-purifying respirators. In poorly ventilated or confined spaces, use a NIOSH/MSHA-approved self-contained breathing apparatus. Advice should be sought from respiratory protection specialists.

Skin protection and other protective equipment: Protective gloves impervious to the material must be worn during use. Confirmation of what type of material is most suitable for the intended application, should be obtained from glove suppliers. Additional impervious protective clothing, is recommended to prevent skin contact. An eyewash station and safety shower should be made available in the immediate working area.

Eye / face protection: Use chemical splash goggles. Contact lenses should not be worn.

General hygiene considerations: Do not inhale vapors and mists. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke when working. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

Permissible exposure levels: For individual ingredient exposure levels, see Section 2.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Physical state, odor and appearance: Aerosolized yellowish liquid / foam. Mild amine odor, characteristic of polyurethane.

Odor threshold: N/Av.

Specific gravity: 1.1

Vapor pressure: N/Av.

Boiling point: N/Av.

Evaporation rate (n-Butyl acetate = 1): N/Av.

Coefficient of water/oil distribution: N/Av

Solubility in water: Insoluble.

Vapor density (Air = 1): >1

Freezing point: N/Av.

pH: N/Av

Volatiles (% by weight): 20.

SECTION 10 — REACTIVITY AND STABILITY DATA

Stability and reactivity: Stable under the recommended storage and handling conditions. Product reacts with water to produce Carbon dioxide. Reaction is slow at temperatures less than 49°C (120°F).

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SECTION 10 — REACTIVITY AND STABILITY DATA Continued

Hazardous polymerization: Uncontrolled exothermic polymerization may occur on contact with incompatible materials or at elevated temperatures (175 – 204°C / 347 – 399°F).

Conditions to avoid: Avoid heat (>43°C / 110°F), moisture and contact with incompatible materials.

Materials to avoid (incompatibles): Strong oxidizers (e.g. Chlorine, Peroxides, etc.), moisture, strong acids, alcohols, strong bases, metal compounds and amines.

Hazardous decomposition products: May form 4,4'-Methylene dianiline during reaction with water. Refer also to 'Hazardous Combustion products', Section 5.

SECTION 11 — TOXICOLOGICAL INFORMATION

Toxicological data: There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

Ingredients	LC ₅₀ (4hr) inh, rat	LD ₅₀ (mg/kg)	
		oral, rat	dermal, rabbit
Polymethylene polyphenyl isocyanate	490 mg/m ³	>10,000	>6200
Dimethyl ether	Not available	Not available	Not available
Propane	Not available	Not available	Not available
Isobutane	658 mg/L (As 'Butane')	Not available	Not available

Carcinogenic status: None of the ingredients listed are classified as carcinogenic by IARC, ACGIH, NTP or OSHA.

Reproductive effects, Teratogenicity, Mutagenicity: None known.

Sensitization to material: May cause severe respiratory sensitization with asthmatic symptoms such as wheezing and chest tightness. May cause severe skin sensitization with allergic contact dermatitis symptoms such as swelling, rash and eczema.

Other important hazards: CNS depression may result from exposure.

Synergistic materials: Not available.

SECTION 12 — ECOLOGICAL INFORMATION

Chemical fate information: The ecological characteristics of this product have not been fully investigated. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. Do not discharge product unmonitored into the environment. Insoluble in water, and will react with water to produce carbon dioxide, and inert, non-biodegradable solids.

Ecotoxicological information: There is no data available on the product itself.

SECTION 13 — DISPOSAL CONSIDERATIONS

Handling for disposal: Empty containers may contain product residue or vapors. Handle according to recommendations listed in Section 7.

Methods of disposal: Dispose in accordance with all applicable federal, state, provincial and/or local regulations. Contact your local, state, provincial and/or federal environmental agency for specific rules.

RCRA: If this product, as supplied, becomes a waste, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. Under the RCRA, it is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14 — TRANSPORTATION INFORMATION

US 49 CFR information:

Proper Shipping Name:	Aerosols	Label Codes:	2.1
Hazard Class - Primary:	2.1	RQ LBS:	None reported.
Identification No.:	UN1950	RQ Components:	Not applicable.
Packing Group:	Not applicable	Marine Pollutant:	None.

Special Transportation Notes: For shipments by ground within the United States, the Limited Quantity or Consumer commodity exceptions may apply. Under the US 49 CFR, refer to Sections 173.306 and 173.307 for additional exception information, if shipping under one of these exceptions.

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SECTION 14 — TRANSPORTATION INFORMATION Continued

Canadian Transportation of Dangerous Goods Regulations (TDGR) information:

Proper Shipping Name: AEROSOLS UN No.: UN1950
Primary Class(es): 2.1 Subsidiary Class(es): None
Packing Group: Not applicable

Other Shipping Information: This product may be shipped by ground within Canada, as a 'Consumer commodity' or a 'Limited Quantity'. Refer to Section 1.17 for Limited Quantity and Consumer Commodity Information, if shipping under this exemption.

International IATA / ICAO information:

Proper Shipping Name: Aerosols, flammable Packing Instruction(s), passenger aircraft: Y203 or 203
UN No.: UN1950 Packing Instruction(s), cargo aircraft only: 203
Primary Class(es): 2.1
Subsidiary Class(es): None
Packing Group: Not applicable

Other Shipping Information: This product may be shipped internationally by air, as a 'Limited Quantity'. Combination packagings must be used and the maximum gross weight of the package must not exceed 30 kg (66 lbs). Refer to Packing Instruction Y203, including all State and operator variations, for additional Limited Quantity information.

International IMO/IMDG information:

Proper shipping name: AEROSOLS UN number: UN1950
Class: 2.1 Packing Group: Not applicable
EmS: F-D, S-U
Marine Pollutant (Yes/No): No

Other Shipping Information: This product may be shipped internationally by sea, as a 'Limited Quantity'. Combination packagings must be used and the maximum gross weight of the package must not exceed 30 kg. Refer to the IMDG Code Chapter 3.4 for additional Limited Quantity requirements, if shipping under this exemption.

SECTION 15 — REGULATORY INFORMATION

US Federal Information:

TSCA information: All ingredients are listed on the TSCA inventory.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): None reported.

SARA TITLE III:

- Sec. 302, Extremely Hazardous Substances, 40 CFR 355:* No Extremely Hazardous Substances are present.
Sec. 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes: Immediate (Acute); Delayed (Chronic); Fire Hazard; Pressure Hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.
Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This material may be subject to SARA notification requirements, since it contains Polymethylene polyphenyl isocyanate, a Toxic Chemical constituent above its *de minimus* concentration.

US State Right to Know Laws:

California Proposition 65: To the best of our knowledge, this product does not contain any chemicals known to the State of California to cause cancer or reproductive harm.

New Jersey Labeling Requirements: This product contains the following substances that may be required to be disclosed on product labeling:

Chemical Name	CAS #	% (weight)	New Jersey Hazardous Substance
Polymethylene polyphenyl isocyanate	9016-87-9	30 - 60	Yes
Dimethyl ether	115-10-6	7 - 13	Yes
Propane	74-98-6	1 - 5	Yes
Isobutane	75-28-5	1 - 5	Yes

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SECTION 15 — REGULATORY INFORMATION Continued**International Information:**

Canadian WHMIS Classification: Class A (*Compressed gas*); Class B5 (*Flammable aerosols*); Class D1A (*Materials Causing Immediate and Serious Toxic Effects, Very Toxic Material*), Class D2A (*Materials Causing Other Toxic Effects, Very Toxic Material*), Class D2B (*Materials Causing Other Toxic Effects, Toxic Material*).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this MSDS contains all the information required by the CPR.

Canadian CEPA information: All ingredients are present on the DSL.

SECTION 16 — OTHER INFORMATION**NFPA Rating:**

0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

Health: 2 Flammability: 3 Instability: 0 Special Hazard: None

HMIS Rating:

* - Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

Health: *3 Flammability: 3 Reactivity: 1

Prepared by: Powers Fasteners, Inc.

Telephone No.: 914-235-6300

Preparation date: April 12, 2006

Revision date: April 13, 2007

Revision information: - IMO/IMDG information added to Section 14.

- References:**
1. ACGIH, Threshold Limit Values and Biological Exposure Indices for 2005.
 2. International Agency for Research on Cancer Monographs, searched 2006.
 3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2006 (Chempendium and RTECs).
 4. Material Safety Data Sheet from manufacturer.
 5. US EPA Title III List of Lists – January 27, 2005 version.
 6. California Proposition 65 List – February 3, 2006 version.

Legend: ACGIH: American Conference of Governmental Industrial Hygienists
 CERCLA: US Comprehensive Environmental Response, Compensation, and Liability Act of 1980
 NIOSH: National Institute of Occupational Safety and Health
 SARA: US Superfund Amendments & Reauthorization Act
 WHMIS: Canadian Workplace Hazardous Materials Identification System
 AIHA: American Industrial Hygiene Association CAS: Chemical Abstract Services
 CFR: US Code of Federal Regulations DOT: US Department of Transportation
 DSL: Canadian Domestic Substances List EPA: US Environmental Protection Agency
 HMIS: Hazardous Materials Identification System IATA: International Air Transport Association
 IARC: International Agency for Research on Cancer ICAO: International Civil Aviation Organization
 IMDG: International Maritime Dangerous Goods IMO: International Maritime Organization
 NFPA: National Fire Protection Association N/Ap: not applicable
 NTP: National Toxicology Program N/Av: not available
 OSHA: Occupational Safety and Health Administration PEL: Permissible Exposure Limit
 RCRA: US Resource Conservation and Recovery Act STEL: Short Term Exposure Limit
 TLV: Threshold Limit Values TWA: Time Weighted Average
 WEEL: Workplace Environmental Exposure Level TSCA: Toxic Substance Control Act

DISCLAIMER OF LIABILITY

The information in this MSDS was obtained from sources, which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. This MSDS was prepared, and is to be used, for this product only. If the product is used as a component in another product, this information may not be applicable. This document is generated for the purpose of distributing occupational health, safety and environmental data.

END OF DOCUMENT

MATERIAL SAFETY DATA SHEET

POLYFOAM PRODUCTS, INC.
P.O. BOX 1132
SPRING, TX 77383-1132

FOR CHEMICAL EMERGENCY: SPILL, LEAK, FIRE, EXPOSURE, ACCIDENT, CALL CHEMTREC - DAY OR NIGHT (800) 424-9300

* SECTION I - PRODUCT INFORMATION *

Manufacturer's name: Polyfoam Products, Inc. Phone No.: (281) 350-8888
Product code number: POLYPRO® FROTH Chemical formula: Complex mixture - polyurethane system resin
C.A.S. Number: N/A E.P.A. Number: N/A
Date Prepared: October 17, 1989 Date Revised: May 14, 1997

* SECTION II - INGREDIENTS *

Table with 4 columns: COMPONENT, CAS NO., %, PEL/TLV - SOURCE. Rows include POLYPRO® "B", Component, Proprietary Mixture, Polyol Blend, Polysiloxane (mixture), Catalyst, Water, and Halogenated Hydrocarbon.

* SECTION III - PHYSICAL/ CHEMICAL CHARACTERISTICS *

Appearance: Liquid and gases under pressure
Color: Light Yellow Clear
Odor: Sl. Aromatic
Solubility: Slight - Boiling Point: 0°F - Melt Point: N/A
Specific Gravity: 1.1 Vapor Density: >1 % Volatile: < 25
Vapor Pressure: <2500 mm Hg

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MATERIAL SAFETY DATA SHEET

Polypro® Froth "B" Component

* SECTION IV - FIRE AND EXPLOSION HAZARD DATA *

FLASH POINT (METHOD): 425°F (PMCC) **Flammable Limits (LFL/UFL) N.D.**
EXTINGUISHING MEDIA: Water, CO₂, Chemical Foam
SPECIAL FIRE FIGHTING PROCEDURES: Wear self contained breathing apparatus to avoid inhalation of toxic thermal decomposition products. Keep container cool.
UNUSUAL FIRE AND EXPLOSIVE HAZARDS: Decomposition under conditions of high temperatures results in the generation of hazardous gases.

* SECTION V - REACTIVITY DATA *

STABILITY: Stable
INCOMPATIBILITY (MATERIALS TO AVOID): Isocyanates, Strong Oxidizers, Strong Acids, and Alkali or alkaline earth metals. (Aluminum, zinc, beryllium, copper, brass.)
HAZARDOUS POLYMERIZATION: Will not occur
HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition products include carbon monoxide, carbon dioxide, nitrous oxides, and other compounds.

* SECTION VI - HEALTH HAZARD DATA *

ROUTES OF ENTRY: **Inhalation** - The components are irritating to the upper respiratory tract and nasal passages. **Eyes** - Causes irritation upon contact and possible corneal damage. Symptoms include burning, tearing and blurring of vision.
Skin - Contact with the skin may lead to rash and swelling on the affected area.
Ingestion - none reported
MATERIAL IN COMPOSITION IS AN: Acute Chronic health hazard.
CARCINOGENCY: None of the components of this product are known to be carcinogenic in nature.

EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT: Flush with running water for at least 15 minutes. Contact a physician if irritation persists.
SKIN CONTACT: Wash thoroughly with soap and water. Remove and wash contaminated clothing before reuse.
INHALATION: Remove to fresh air. If breathing is difficult, contact a physician.
INGESTION: If ingested, induce vomiting and call a physician at once.

EMPLOYEE PROTECTION RECOMMENDATIONS

EYE PROTECTION: Chemical safety goggles or full face shield.
GLOVES: Chemical safety gloves
RESPIRATORY PROTECTION: The Polyurethane Division of the SPI recommends the use of air supplied breathing apparatus or its equivalent.
VENTILATION: Provide general and/or local exhaust ventilation to remove vapors to a level below the TLV.

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MATERIAL SAFETY DATA SHEET

Polypro® Froth "B" Component

*** SECTION VII - SPILL OR LEAK PROCEDURES ***

STEPS TO TAKE IN THE EVENT OF SPILL: Avoid breathing of vapors present, wear air supplied breathing apparatus. Contain spill and absorb with material such as sand, sweeping material, or diatomaceous earth. Place material in suitable container for disposal in a licensed facility. Wash affected area with water after removal of absorbent.

WASTE DISPOSAL METHOD: Incinerate or bury in an approved landfill in compliance with all applicable federal, state and local environmental control regulations.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) TITLE III:

Section 302 - Extremely hazardous substances: NONE

Section 313 - Toxic Chemicals: NONE

*** SECTION VIII - SPECIAL PRECAUTIONS AND STORAGE DATA ***

STORAGE TEMPERATURE: MINIMUM: 7°C (45°F) MAXIMUM: 32°C (90°F)

AVERAGE SHELF LIFE: 6 Months

PRECAUTIONS IN HANDLING AND STORAGE: Contents under pressure. Material is hygroscopic, keep containers tightly closed to avoid contamination. Avoid breathing vapors if present. Avoid eye and skin contact. Employee education and training in the safe handling of this product is required under OSHA guidelines.

*** SECTION XI - SHIPPING DATA ***

D.O.T. Shipping name.....	COMPRESSED GAS N.O.S. (CHLORODIFLOUROMETHANE MIXTURE)
D.O.T. Hazard Class.....	2.2
D.O.T. Labels Required.....	NON FLAMMABLE GAS
D.O.T. Placards Required.....	NON FLAMMABLE GAS
Bill of Lading Description.....	COMPRESSED GAS N.O.S. (CHLORODIFLOUROMETHANE MIXTURE) 2.2 UN1956

Prepared By : Pat L. Murray

Date: May 14, 1997

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SECTION IV - FIRE AND EXPLOSION HAZARD DATA

SPECIAL FIREFIGHTING PROCEDURES: WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTOIGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. WEAR A FULL FACE POSITIVE PRESSURE SELF CONTAINED BREATHING APPARATUS WHEN FIGHTING FIRES.

SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVER EXPOSURE: INHALATION: SHORTNESS OF BREATH, DIZZINESS, AND LIGHTEADEDNESS. EYE: CAN CAUSE EYE IRRITATION. SKIN: SLIGHT SKIN IRRITATION. CAN CAUSE DERMATITIS. INGESTION: MAY CAUSE CHEMICAL PNEUMONIA IF ASPIRATED INTO LUNG

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: NONE RECOGNIZED.

EMERGENCY AND FIRST AID PROCEDURES: CALL PHYSICIAN IMMEDIATELY!!: IF IN EYES: FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY, GET MEDICAL ATTENTION. IF SWALLOWED: DO NOT INDUCE VOMITING. IMMEDIATELY DRINK TWO GLASSES OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. CALL PHYSICIAN IMMEDIATELY. IF BREATHED: IF AFFECTED. REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT GIVE OXYGEN. IF BREATHING HAS STOPPED GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET, GET MEDICAL ATTENTION. IF ON SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDRY CONTAMINATED CLOTHING BEFORE RE-USE.

EFFECTS OF CHRONIC OVEREXPOSURE: OVEREXPOSURE TO THIS MATERIAL (OR ITS COMPONENTS) HAS BEEN SUGGESTED AS A CAUSE OF THE FOLLOWING EFFECTS IN HUMANS: CENTRAL NERVOUS SYSTEM EFFECTS. OVEREXPOSURE TO THIS MATERIAL (OR ITS COMPONENTS) HAS BEEN SUGGESTED AS A CAUSE OF THE FOLLOWING EFFECTS IN HUMANS: CARDIAC ABNORMALITY. INHALATION OF HIGH CONCENTRATIONS OF VAPOR IS HARMFUL AND MAY CAUSE HEART IRREGULARITIES, UNCONSCIOUSNESS OR DEATH. VAPOR REDUCES OXYGEN AVAILABLE FOR BREATHING AND IS HEAVIER THAN AIR. PROLONGED EXPOSURE ABOVE THE OSHA PERMISSIBLE EXPOSURE LIMITS MAY RESULT IN KIDNEY AND LIVER DAMAGE.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT INHALATION INGESTION EYE CONTACT

SECTION VI - REACTIVITY DATA

HAZARDOUS DECOMPOSITION PRODUCTS: BURNING CAN PRODUCE CARBON MONOXIDE AND/OR CARBON DIOXIDE AND TRACE PHOSGENE GAS.

CONDITIONS TO AVOID: OPEN FLAMES OR ELECTRICAL ARCS. MIXING WITH CONCENTRATED OXIDIZING OR REDUCING AGENTS.

INCOMPATIBILITY: AVOID CONTACT WITH STRONG OXIDIZING AGENTS, STRONG ALKALIES, AND STRONG MINERAL ACIDS. AVOID CONTACT WITH CHLORINATED SOLVENTS. AVOID CONTACT WITH PEROXIDES, BROMINE, CHLORINE, AND FLUORINE.

(Continued on Page 3)

SECTION VI - REACTIVITY DATA

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.
STABILITY: This product is stable under normal storage conditions.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: VENTILATE AREA. REMOVE ALL SOURCES OF IGNITION. CLEAN UP WITH INERT MATERIALS AND DISPOSE OF IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.

WASTE DISPOSAL METHOD: AEROSOL CONTAINER: DO NOT PUNCTURE OR INCINERATE. EMPTY CONTAINERS MAY BE DISPOSED OF THROUGH NORMAL CHANNELS. FULL OR PARTIALLY FILLED CONTAINERS ARE CONSIDERED HAZARDOUS WASTE.

SECTION VIII - SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION: NIOSH/OSHA APPROVED RESPIRATOR TYPES SUITABLE FOR MATERIALS IN SECTION II RECOMMENDED. APPROVED CHEMICAL/MECHANICAL FILTERS RECOMMENDED WHEN VENTILATION IS RESTRICTED. APPROVED AIRLINE TYPE RESPIRATORS OR HOODS RECOMMENDED IN CONFINED AREAS.

VENTILATION: SUFFICIENT VENTILATION, IN VOLUME AND PATTERN, SHOULD BE PROVIDED TO KEEP AIR CONTAMINATION BELOW CURRENT APPLICABLE OSHA PERMISSIBLE EXPOSURE LIMIT OR ACGHI'S TLV LIMIT.

PROTECTIVE GLOVES: RECOMMENDED FOR PROLONGED OR REPEATED CONTACT. WEAR RESISTANT GLOVES SUCH AS POLYVINYL ALCOHOL, POLYETHYLENE.

EYE PROTECTION: CHEMICAL GOGGLES WITH SIDE SHIELDS OR FACE SHIELD RECOMMENDED.

OTHER PROTECTIVE EQUIPMENT: PROTECTIVE CLOTHING AND EQUIPMENT: SEE 29 CFR 1910.133 AND 132.

HYGENIC PRACTICES: WASH HANDS BEFORE EATING OR SMOKING.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: DO NOT STORE IN DIRECT SUNLIGHT, NEAR OPEN FLAMES, OR AT TEMPERATURES EXCEEDING 120 F. DO NOT SMOKE WHILE SPRAYING. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING VAPORS AND INHALING CONTENTS CAN BE HARMFUL OR FATAL.

OTHER PRECAUTIONS: No Information.

(Continued on Page 4)

SECTION X - HMIS RATINGS

771159

HMIS RATINGS - HEALTH: 1 FLAMMABILITY: 3 REACTIVITY: 1

SECTION XI - TRANSPORTATION AND STORAGE

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	WT/WT % IS LESS THAN
PROPRIETARY MIXTURE	N/A	50.0 %

PREVIOUS MSDS REVISION DATE: 01/18/01

LEGEND: N.A. - Not Applicable. N.F. - Not Established.
N.O. - Not Determined

TRANSPORTATION AND STORAGE: DOT CLASSIFICATION: CONSUMER COMMODITY ORM-D.

NFPA CODES: No Information.

SECTION XII - OTHER REGULATORY INFORMATION

OTHER REGULATORY INFORMATION: DISCLAIMER: THE FOREGOING INFORMATION HAS BEEN COMPILED FROM SOURCES BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT DATA IS CORRECT. STANDARDS CHANGE WITHOUT NOTICE. IT IS THE RESPONSIBILITY OF THE RECIPIENT TO ASSURE THAT THEIR PERSONNEL HAVE BEEN NOTIFIED OF ANY CHANGES WHICH MAY AFFECT THEM. THE DATA PROVIDED ON THIS MSDS ARE NOT MEANT TO BE USED AS SPECIFICATIONS, ONLY AS GUIDLINE INFORMATION AS TO THE SAFE USE OF THE PRODUCT. USER SHOULD REFER TO APPLICABLE LAWS BEFORE USE. THIS MSDS COMPLIES WITH GUIDELINES SET BY 29 CFR 1910.1200.

PROPOSITION 65 STATEMENT: No Information.

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

<END OF MSDS>

MATERIAL SAFETY DATA SHEET**POLYFOAM PRODUCTS, INC.****P.O. BOX. 1539****TOMBALL, TX 77375-1539**FOR CHEMICAL EMERGENCY * SPILL * LEAK * FIRE * EXPOSURE * ACCIDENT *
CALL CHEMTREC DAY OR NIGHT 800-424-9300*** SECTION I - PRODUCT INFORMATION ***

Manufacturer's name	Polyfoam Products, Inc.	Phone number:	(281) 350-8888
Product Name:	POLYPRO® Froth A	Chemical Family:	Diisocyanate
Synonyms:	Froth A Component	Chemical name:	Not Applicable (mixture)
C.A.S. Number:	9016-87-9	Date Revised:	January 31, 2003
Date Prepared:	October 17, 1989		

*** SECTION II - INGREDIENTS ***

COMPONENTS	% w/w	CAS#	OSHA- PEL
Polymeric Diphenylmethane Diisocyanate (polymeric MDI) Contains: 4,4'-Diphenylmethane Diisocyanate (4,4'-MDI) (approx. 45%)	>80	9016-87-9	not listed
MDI isomers/oligomers		101-68-8	0.02 ppb ceiling
		9016-87-9	not listed
HCFC-22	<20	75-45-6	not listed

*** SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS ***

Appearance:	Liquid and gas under pressure
Color:	Brown
Odor:	Slight musty odor
Molecular Weight	not applicable (mixture)
Melt Point/Freeze Point:	Below 32°F (0°C)
Boiling Point:	less than 0°F
Vapor Pressure:	151 psig @ 25°C
Vapor Density:	3.03 @ 25°C (Air = 1)
Viscosity:	130 cps @ 77° F (25°C)
Specific Gravity:	1.23 @ 77°F (25°C)
% Volatile by Volume:	less than 20%
Solubility In Water:	Not Soluble. Reacts slowly with water to liberate CO ₂ gas.

*** MATERIAL SAFETY DATA SHEET ***
POLYPRO® Froth "A"

*** SECTION IV - FIRE AND EXPLOSION HAZARD DATA ***

FLASH POINT (METHOD) °F (°C): 425.0°F (218°C)
EXTINGUISHING MEDIA: Dry chemical; carbon dioxide, appropriate chemical foam, water spray for large fires. If water is used, very large quantities are required. Reaction with water may be vigorous. Contain runoff water with temporary barriers.
SPECIAL FIRE FIGHTING PROCEDURES/UNUSUAL FIRE OR EXPLOSION HAZARDS: Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. Containers are equipped with a pressure relief valve intended to vent any excessive build up of pressure exerted by gases generated by heat, thermal decomposition or combustion. (See Section VIII). Therefore, use cold water to cool fire-exposed containers.

*** SECTION V - HUMAN HEALTH DATA ***

Hazardous Ingredients:

4.4= Diphenylmethane Diisocyanate
HCFC-22

OSHA PEL CEILING

0.02 PPM
not listed

ROUTES OF ENTRY: **Skin Contact** - From liquid and aerosols (spray application). **Inhalation** - An inhalation hazard can exist from aerosols or vapors formed during heating, foaming, or spraying. Vapor reduces oxygen available for breathing and is heavier than air.

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:

ACUTE INHALATION: **Acute Inhalation**- 4-4= MDI vapors or mists at concentrations above the TLV can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath, and reduced lung function (breathing obstruction). Persons with a pre-existing, nonspecific bronchial hyperreactivity can respond to concentrations below the 4-4= MDI TLV with similar symptoms as well as asthma attack. Exposure well above the 4-4= MDI TLV may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). These affects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms (e.g. fever and chills) has also been reported. These symptoms can be delayed up to several hours after exposure. HCFC-22 vapor reduces oxygen available, and can cause dizziness or loss of consciousness. **Chronic Inhalation** - As a result of previous repeated over-exposures to 4-4= MDI or a single large dose, certain individuals develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to Isocyanate at levels well below the TLV. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath, or asthma attack, could be immediate or delayed (up to several hours after exposure). Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Overexposure to Isocyanates has also been reported to cause lung damage (including decrease in lung function), which may be permanent. Sensitization can either be temporary or permanent.

ACUTE SKIN CONTACT:- Isocyanates react with skin protein and moisture and can cause irritation which may include the following symptoms: reddening, swelling, rash, scaling, or blistering. Cured material is difficult to remove. **Chronic Skin Contact** - Prolonged contact can cause reddening, swelling, rash, scaling, blistering, and in some cases skin sensitization. Individuals who have developed a skin sensitization can develop these symptoms from contact with liquid or vapors. Animal tests have indicated that respiratory sensitization can result from skin contact with MDI. This data reinforces the need to prevent direct skin contact with MDI.
(See Toxicological Information, SENSITIZATION.)

ACUTE EYE CONTACT: Liquid, aerosols or vapors are irritating and can cause tearing, reddening, and swelling. If left untreated, corneal damage can occur and injury is slow to heal. However, damage is usually reversible. See section VI for treatment.

CHRONIC EYE CONTACT: None Found

*** MATERIAL SAFETY DATA SHEET ***
POLYPRO® Froth "A"

*** SECTION V - HUMAN HEALTH DATA * (Cont.)**

ACUTE INGESTION: Can result in irritation and corrosive damage in the mouth, stomach tissue and the digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting, and diarrhea.

CHRONIC INGESTION: None Found

MEDICAL CONDITIONS:

Aggravated By Exposure - Asthma, other respiratory disorders (bronchitis, emphysema, bronchial hyperactivity), skin allergies, eczema.

CARCINOGENICITY - None of the ingredients are listed by NTP, IARC, or regulated by OSHA as carcinogens.

*** SECTION VI - EMERGENCY AND FIRST AID PROCEDURES ***

EYE CONTACT: Flush with copious amount of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Refer individual for physician or ophthalmologist for immediate follow-up.

SKIN CONTACT: Remove contaminated clothing. Wash affected skin thoroughly with soap and water. Wash contaminated clothing thoroughly before reuse. For severe exposures, get under safety shower after removing clothing, then get medical attention. For lesser exposures, seek medical attention if irritation develops or persists after the area is washed.

INHALATION: Move to area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Consult physician should this occur.

INGESTION: **DO NOT INDUCE VOMITING.** Give 1 to 2 cups of milk or water to drink. **DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.** Consult physician.

NOTE TO PHYSICIAN: **Eyes** - Stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Workplace vapors have produced reversible corneal epithelial edema impairing vision. **Skin** - This compound is a known skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burns. If burned, treat as thermal burn. **Ingestion** - Treat symptomatically. There is no specific antidote. Inducing vomiting is contradicted because of the irritating nature of this compound. **Respiratory** - This compound is a known pulmonary sensitizer. Treatment is essentially symptomatic. An individual having a skin or pulmonary sensitization to this material should be removed from exposure to any isocyanate.

*** SECTION VII - EMPLOYEE PROTECTION RECOMMENDATIONS ***

EYE PROTECTION - Liquid chemical goggles or full-face shield. Vapor resistant goggles should be worn when contact lenses are in use. In a splash hazard environment chemical goggles should be used in combination with a full face - shield.

SKIN PROTECTION - Permeation resistant gloves (butyl rubber, nitrile rubber, polyvinyl alcohol). However, please note that PVA degrades in water. Cover as much of the exposed skin area as possible with appropriate clothing. If skin creams are used, keep the area covered by the cream to a minimum.

RESPIRATORY PROTECTION: Concentrations greater than the 4,4= MDI TLV can occur during spraying, heating, or use in a poorly ventilated area. In such cases, or whenever concentrations of 4,4= MDI exceed the TLV, respiratory protection must be worn. A supplied-air respirator or a self-contained breathing apparatus is recommended. In situations where material is not sprayed or heated and a supplied air or self-contained apparatus is unavailable or its use impractical, at least an air-purifying respirator equipped with an organic cartridge and a particulate filter must be worn. **HOWEVER, THIS SHOULD BE PERMITTED ONLY FOR SHORT PERIODS OF TIME (LESS THAN ONE HOUR) AT RELATIVELY LOW CONCENTRATIONS (AT OR NEAR THE TLV).** However, due to the poor warning properties of 4,4= MDI, proper fit and timely replacement of filter elements must be ensured. Observe OSHA regulations for respirator use (29 CFR 1910.134).

*** MATERIAL SAFETY DATA SHEET ***
POLYPRO® Froth "A"

*** SECTION VII - EMPLOYEE PROTECTION RECOMMENDATIONS * (Cont.)**

VENTILATION: Local exhaust should be used to maintain levels below the 4,4= MDI TLV whenever Polypro® Froth A is processed, heated or spray applied. For spray applications, an air-supplied respirator must be worn. Standard reference sources regarding industrial ventilation (i.e., ACGIH Industrial Ventilation) should be consulted for guidance about adequate ventilation.

MONITORING: 4,4= MDI exposure levels should be monitored by accepted monitoring techniques to ensure that the TLV is not exceeded.

MEDICAL SURVEILLANCE: Medical supervision of all employees who handle or come in contact with 4,4= MDI is recommended. These should include pre-employment and periodic medical examinations with respiratory function tests (FEV, FVC as a minimum). Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory type diseases or recurrent skin eczema or sensitization should be excluded from working with Polypro® Froth A. Once a person is diagnosed as sensitized by 4,4= MDI, no further exposure can be permitted.

OTHER: Safety showers and eye wash stations should be available. Educate and train employees in safe use of product. Follow all label instructions.

*** SECTION VIII - REACTIVITY DATA ***

STABILITY: This is a stable material

POLYMERIZATION: May occur if in contact with moisture or other materials which react with isocyanates. May occur at temperatures over 400°F (204°C), may cause polymerization.

INCOMPATIBILITY: (Materials to Avoid) - Water, amines, strong bases, alcohols. Will cause some corrosion to copper alloys and aluminum.

HAZARDOUS DECOMPOSITION PRODUCTS: By high heat and fire - carbon monoxide, oxides of nitrogen, traces of HCN, MDI vapors or aerosols, HCFC-22 vapor.

*** SECTION IX - SPILL OR LEAK PROCEDURES ***

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment, including respiratory equipment during cleanup. (See Section VII).

MAJOR SPILL: Call Polyfoam Products, Inc. at 1-(281)-350-8888. If transportation spill, call Chemtrec 1-(800) 434-9300. If temporary control of isocyanates vapor is required, a blanket of protein foam (available at most fire departments) may be placed over the spill. Large quantities may be pumped into closed, but not sealed, containers of disposal.

MINOR SPILL: Absorb Polypro® Froth A with sawdust or other absorbent, shovel into suitable unsealed containers, transport to well-ventilated area (outside) and treat with neutralizing solution: mixture of water (80%) with non-ionic surfactant Tergitol TMN-10 (20%), or; water (90%), concentrated ammonia (3-8%) and detergent (2%). Add about 10 parts of neutralizer per part of Polypro® Froth A with mixing. Allow to stand uncovered for 48 hours to let CO₂ escape.

CLEAN-UP: Decontaminate floor with decontamination solution letting stand for at least 15 minutes.

CERCLA (SUPERFUND) REPORTABLE QUANTITY: None reported.

WASTE DISPOSAL METHOD: Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Incineration is the preferred method. Empty containers must be handled with care due to product residue. Decontaminate containers prior to disposal. Empty decontaminated containers should be crushed to prevent reuse. **DO NOT HEAT OR CUT EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH.** (See Sections IV and VIII)
Vapors and gases may be highly toxic.

*** MATERIAL SAFETY DATA SHEET ***
POLYPRO® Froth "A"

*** SECTION X - SPECIAL PRECAUTIONS AND STORAGE DATA ***

STORAGE TEMPERATURE (MIN./MAX.): 64°F (18°C) / 86°F (30°C)
AVERAGE SHELF LIFE: 6 months

SPECIAL SENSITIVITY

(HEAT, LIGHT, MOISTURE): If container is exposed to high heat, 400°F (204°C) or higher, or contaminated with water, pressure can be generated. Containers are equipped with a pressure relief valve intended to vent any excessive build up of pressure exerted by gases generated by heat or moisture contamination.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Avoid contact with skin and eyes. Do not breathe aerosols or vapors. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent chronic overexposure from inhalation. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Exposure to vapors or heated Polypro® Froth A can be extremely dangerous. Employee education and training in the safe use and handling of this compound are required under the OSHA Hazard Communication Standard.

*** SECTION XI - SHIPPING DATA ***

TECHNICAL SHIPPING NAME: Compressed Gas N.O.S.
FREIGHT CLASS BULK: Chemicals, NOI (Isocyanate)
FREIGHT CLASS PACKAGE: Chemicals, NOI (Isocyanate), NMFC 50000
PRODUCT LABEL: Product Label Established

DOT

PROPER SHIPPING NAME: Compressed Gas N.O.S. (Chlorodifluoromethane Mixture)
HAZARD CLASS OR DIVISION: 2.2
UN/NA NUMBER: UN1956
DOT PRODUCT RQ LBS (KGS): None
HAZARD LABEL(s): Non Flammable Gas
HAZARD PLACARD(s): Non Flammable Gas

Transportation Emergency Telephone Number: 1-800-424-9300 (CHEMTREC)

*** SECTION XII - ANIMAL TOXICITY DATA ***

ACUTE TOXICITY

ORAL, LD50: Greater than 15,800 mg/kg (Rats) for 4-4=MDI

DERMAL, LD50: Greater than 5010 but less than 7,940 mg/kg (Rabbits) for 4-4=MDI

INHALATION, LC50: The 4-hour LC50 for polymeric MDI in rats ranges from 370 to 490 mg/m³. The LC50 for monomeric MDI was estimated to be between 172 and 187 mg/m³. The 4 hour LC50 for HCFC-22 is 220,000 ppm in rats.

EYE EFFECTS: Slightly irritating. A maximum primary eye irritation score for polymeric MDI of 12.0/110 (24 hr) was obtained. This score is fairly typical for a number of MDI products.

SKIN EFFECTS: Slight to moderate irritant. Primary dermal irritations scores are typically below 3.4/8.0 (Draize).

SENSITIZATION: Has been known to produce dermal sensitization in guinea pigs, rabbits, and dogs. Although not well defined in experimental animals models, Polypro® Froth A can induce pulmonary and dermal sensitization in humans. In addition, there is some evidence to suggest that cross-sensitization between different types of diisocyanates may occur.

*** MATERIAL SAFETY DATA SHEET ***
POLYPRO® Froth "A"

*** SECTION XII - ANIMAL TOXICITY DATA * (Cont.)**

CHRONIC TOXICITY: In a chronic inhalation exposure study, rats were exposed to an aerosol of polymeric MDI for 6 hours per day, 5 days per week for a period of two years. The exposure concentrations were 0, 0.2, 1.0, and 6.0 mg/m³. Microscopic examination of tissues revealed the effects of irritation to the nasal cavity and lungs in animals exposed to 1.0 and 6.0 mg/m³. The No Observable Effect Level (NOEL) was 0.2 mg/m³.

CARCINOGENICITY: In the same two year inhalation study described above (See Chronic Toxicity), the occurrence of pulmonary adenomas (benign tumors) and a single pulmonary adenocarcinoma (malignant tumor) was considered to be related to the exposure. These tumors were observed only in rats exposed to the high concentration of 6.0 mg/m³.

MUTAGENICITY: Monomeric MDI is positive in the Ames assay (with hepatic microsomal activation). However, it was negative in an in vivo-in vitro micronucleus assay.

AQUATIC TOXICITY: LC₅₀ - 24HR (static): Greater than 500mg/liter for *Daphnia magna*, *Limnea stagnalis*, and zebra fish (*Brachydanio rerio*) for both polymeric and monomeric MDI.

DEVELOPMENTAL TOXICITY: Rats were exposed to polymeric MDI at air concentrations of 0, 1, 4 and 12 mg/m³ during days 6-15 of gestation. Maternal Toxicity (including mortality) was observed at the highest concentration of 12 mg/m³ accompanied by embryo and fetal toxicity. However, no teratogenic effects even at this lethal concentration. HCFC-22 is not considered a unique hazard to the conceptus.

*** SECTION XIII - REGULATORY INFORMATION ***

OSHA STATUS: This product is hazardous under the criteria of the federal OSHA Hazard Communication Standard 29CFR 1910.1200.

TSCA STATUS: On TSCA inventory.

CERCLA REPORTABLE QUANTITY: 5000 lb for 4,4'-Diphenylmethane Diisocyanate, CAS# 101-68-8

SARA TITLE III:

SECTION 302 EXTREMELY

HAZARDOUS SUBSTANCES: None

SECTION 311/312

HAZARD CATEGORIES: Immediate Health Hazard; Delayed Health Hazard; Reactive Hazard

SECTION 313

TOXIC CHEMICALS: Polymeric Diphenylmethane Diisocyanate, CAS# 9016-87-9, 100%
4,4'-Diphenylmethane Diisocyanate, CAS# 101-68-8; Upper Bound 45%

RCRA STATUS: MDI is not listed as a hazardous waste. To the best of our knowledge, MDI does not meet the criteria of a hazardous waste if discarded in its purchased form. However, under RCRA, it is the responsibility of the user of the products to determine, at the time of disposal whether a product meets any of the criteria for a hazardous waste. This is because product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics under the new Toxicity Characteristics Leaching Procedure (TCLP) 40 Code of Federal Regulations 261.20-24.

*** MATERIAL SAFETY DATA SHEET *
POLYPRO® Froth "A"**

*** SECTION XIV - OTHER REGULATORY INFORMATION ***

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

<u>COMPONENT NAME / CAS NUMBER</u>	<u>CONCENTRATION</u>	<u>STATE CODE</u>
4,4 -DIPHENYLMETHANE-DIISOCYANATE (MDI) 101-68-8	UPPER BOUND 45%	PA1, MA, NJ1, NJ4, CN2
DIPHENYLMETHANE-DIISOCYANATE (2, 2; 2, 4) 26447-40-5	UPPER BOUND 10%	PA3, NJ4
HIGHER OLIGOMERS OF MDI 9016-87-9	UPPER BOUND 55%	PA3, NJ4
PHENYL ISOCYANATE 103-71-9	TRACE	MA

- MA = MASSACHUSETTS HAZARDOUS SUBSTANCE LIST
- NJ1 = NEW JERSEY HAZARDOUS SUBSTANCE LIST
- NJ4 = NEW JERSEY OTHER - INCLUDED IN 5 PREDOMINANT INGREDIENTS > 1%
- PA1 = PENNSYLVANIA HAZARDOUS SUBSTANCE LIST
- PA3 = PENNSYLVANIA NON-HAZARDOUS PRESENT AT 3% OR GREATER.
- CN2 = CANADA WHMIS INGREDIENT DISCLOSURE LIST OVER 0.1%

NFPA 704M RATINGS:	Health	Flammability	Reactivity	Other
	3	1	1	
	0=Minimal	1=Slight	2=Moderate	3=Serious
			3=Serious	4=Severe

Polyfoam Products, Inc. method of hazard communication is comprised of Product Labels and Material Safety Data Sheets. NFPA ratings are provided by Polyfoam Products, Inc. as a customer service.

Prepared By: Steve Schultz Date: January 31, 2003

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Polyfoam Products, Inc. The data on these sheets relates only the specific material designated herein. Polyfoam Products, Inc. assumes no legal responsibility for use or reliance upon this data.

Supplier:
 Pennatex, Inc.
 10 Columbus Blvd.
 Hartford, CT 06106
 Telephone: 1-877-Pennatex
 (877) 376-2839

Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: **785-2569 BALKAMP ANTI-SEIZE LUBRICANT 40Z**
 Item No: **39772**
 Product Type: **Lubricant**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Percent	ACGIH 8 Hr. TWA:	OSHA 8 Hr. TWA:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC 64742-52-5	40-50	5 mg/m3 mist	5 mg/m3 mist
COPPER 7440-50-8	15-25	1.0 mg/m3 (dust and mist); 0.2 mg/m3 (fumes)	1.0 mg/m3 (dust and mist); 0.1 mg/m3 (fumes)
CALCIUM OXIDE 1305-78-8	10-20	2 mg/m3	5 mg/m3
GRAPHITE 7782-42-5	1-10	2 mg/m3 TWA respir.	5 mg/m3 TWA respir.; 15mg/m3 total
MINERAL OIL 34741-44-2	1-10	5 mg/m3 TWA	10 mg/m3 TWA
SILICA, QUARTZ 14808-60-7	0.1-0.5	0.05 mg/m3 TWA respirable	0.1 mg/m3 TWA respirable

3. HAZARDS IDENTIFICATION

Toxicity:

Harmful if swallowed. At elevated temperatures may cause irritation of the eyes and respiratory tract. Repeated and prolonged inhalation of graphite dust may cause pulmonary fibrosis, emphysema and pneumoconiosis. This product contains encapsulated silicon dioxide (quartz silica). No exposure to free respirable silica is anticipated during normal use of this product. Silica may be released by grinding or machining of coated material. Use NIOSH-approved dust/mist respirator when grinding or machining. This product contains encapsulated metal powder which contains copper and zinc. No exposure to free metal is anticipated during normal use. If grinding or machining coated surfaces, use appropriate protective measures. Repeated or prolonged exposure to metal dust may cause metal-fume fever, metallic taste and discoloration of the skin and hair.
 Eye and skin contact, ingestion, inhalation.

Primary Routes of Entry:

Signs and Symptoms of Exposure:

Slightly irritating to eyes, but does not injure eye tissue. May cause skin irritation. Inhalation of dust at levels above recommended exposure limit may cause metallic or sweet taste, irritation of pharynx and possible ulceration with perforation of the nasal septum. Moderately toxic if swallowed. Irritating to mouth, throat and stomach with nausea.

Ingredients	Percent	NTP:	ACGIH Carcinogens	IARC:
SILICA, QUARTZ 14808-60-7	0.1-0.5	Known Carcinogen		Group 1; Vol. 68; 1997

Medical Conditions Recognized as Being Aggravated by Exposure: Preexisting pulmonary and dermatological disorders

4. FIRST AID MEASURES

Ingestion:

If swallowed, DO NOT induce vomiting. Drink water or milk. Seek medical attention immediately. Never give fluids or induce vomiting if the victim is unconscious or having convulsions.

Inhalation:

No specific treatment is necessary since this material is not likely to be hazardous during normal use.

Product Name: 765-2569 BALKAMP ANTI-SEIZE LUBRICANT 40Z
Item No: 39772

Skin Contact: If exposed to excessive levels of dust or fumes, remove to fresh air and get medical attention if cough or other symptoms develop. Remove contaminated clothing. Wash area with soap and water. If irritation persists, seek medical attention.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point (°F/C): 225 degrees F. Method: Pensky-Martens CC

Recommended Extinguishing Media: Water fog, carbon dioxide, foam, dry chemical.

Special Fire-Fighting Procedures: Wear approved positive-pressure self-contained breathing apparatus and protective clothing. Use water to cool exposed containers. Water stream directed into fire may cause frothing with subsequent spread of flame.

Hazardous Products Formed by Fire or Thermal Decomposition: Irritating vapors. Oxides of sulfur, Oxides of carbon.

Unusual Fire/Explosion Hazards: Finely divided dust in air may present explosion hazard. Prevent dust build up. Closed containers may rupture or explode when exposed to extreme heat.

Lower Explosive Limit: Not determined.

Upper Explosive Limit: Not determined.

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Reclaim clean material. Contaminated material should be swept or shoveled into appropriate waste container for proper disposal.

7. HANDLING AND STORAGE

Storage: Store away from heat.

Handling: Avoid contact with skin and eyes. Avoid contact with vapors from heated material. Keep container closed when not in use. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Do not take internally.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses or goggles.

Skin: Clean clothing to cover skin. Cloth or synthetic gloves.

Ventilation: General ventilation is usually adequate.

Respiratory Protection: None normally required under general ventilation. If exposure levels are unknown or exceed TLV, use NIOSH-approved respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Copper colored

Odor: Petroleum Odor

Boiling Point (°F): 550 - 4215 degrees F.

pH: Does not apply

Solubility in Water: Insoluble

Specific Gravity: Not determined

VOC Content(Wt.%): None

Vapor Pressure: Not Determined

Vapor Density (Air=1): Heavier than air

Evaporation Rate: <1 (butyl acetate = 1)

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal conditions

Hazardous Polymerization: WILL NOT OCCUR

Incompatibilities: Strong mineral acids, strong bases or oxidants, nitrates, nitrites, chlorinated hydrocarbons, chlorides, palladium, selenium, manganese, magnesium, potassium chlorate, sodium carbonate, sulfates, diborane

Conditions to Avoid: Excessive heat.

Hazardous Products Formed by Fire or Thermal Decomposition: Irritating vapors. Oxides of sulfur, Oxides of carbon.

Product Name: 765-2569 BALKAMP ANTI-SEIZE LUBRICANT 4OZ
Item No: 39772

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations.
US EPA Waste Number: NH - Not a RCRA Hazardous Waste Material

14. TRANSPORT INFORMATION

DOT (49CFR 172)

Domestic Ground Transport

DOT Shipping Name: Unrestricted
Hazard Class: NONE
UN/ID Number: None
Marine Pollutant: Copper (P)

IATA

Proper Shipping Name: Unrestricted
Class or Division: None
UN/NA Number: NONE

IMDG

Proper Shipping: Unrestricted
Hazard Class: None
UN Number: None

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.
COPPER COMPOUND

CALIFORNIA PROP 65:

No California Prop 65 chemicals are known to be present.

TSCA Inventory Status:

All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 1, FLAMMABILITY 1, REACTIVITY 0
Estimated HMIS Classification: HEALTH 1, FLAMMABILITY 1, PHYSICAL HAZARD 0

NFPA is a registered trademark of the National Fire Protection Assn.

HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared By: Denise Boyd Health and Safety Manager
Company: Permatex, Inc. 10 Columbus Blvd. Hartford, CT 06106
Telephone Number: 1-87-Permatex (877) 376-2839
Revision Date: 09/26/2001
Revision Number: 0



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 http://www.parker.com

MATERIAL SAFETY DATA SHEET

PRODUCT: Diesel Conditioner Plus+
 Revision Date: 5/19/2003
PART NUMBER(S):
 ADT 1116 (16 oz.)
 ADT 1201 (1 gal.)
 ADT 1325 (2.5 gal.)
 ADT 1555 (55 gal.)

International: (352) 323-3500

SECTION 1: PRODUCT IDENTIFICATION

TRADE NAME: RACOR DIESEL CONDITIONER PLUS+

DESCRIPTION: A hydrocarbon solution of an amine substituted resin and an octyl nitrate

NFPA 704M/HMIS RATING: 2/3 HEALTH 2/2 FLAMMABILITY 1/1 REACTIVITY 0 OTHER

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

SECTION 2: COMPOSITION / INGREDIENT INFORMATION

Our hazard evaluation has identified the following chemical ingredient(s) as hazardous. One or more is being claimed as a trade secret under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult Section 15 for the nature of the hazard(s).

<u>Chemical Name</u>	<u>CAS #</u>	<u>% by volume</u>	<u>TLV</u>
Amine substituted resin	Trade secret	14%	N/A
Heavy aromatic naphtha	64742-94-5	67%	100 ppm
2-Ethylhexyl nitrate	27247-96-7	19%	5 ppm

SECTION 3: HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:

WARNING! Combustible. May cause irritation to skin and eyes. Avoid prolonged or repeated inhalation of vapor. Do not get in eyes, on skin or on clothing. Wear goggles and face shield when handling. Avoid prolonged or repeated breathing of vapor. Use with adequate ventilation. Do not take internally. Keep away from heat and open flame. Keep container closed when not in use.

Empty containers may contain residual product. Do not reuse container.

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin, Inhalation

EYE CONTACT: Can cause moderate irritation

SKIN CONTACT: Can cause severe irritation.

INGESTION: Can be harmful. Can cause liver, kidney damage.

INHALATION: Inhalation of vapor may be harmful

SYMPTOMS OF EXPOSURE: A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS: A review of available data does not identify any worsening of existing conditions.



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SECTION 4: FIRST AID INFORMATION

EYE: Immediately flush for at least 15 minutes while holding eyelids open. Call physician at once.

SKIN: Wash thoroughly with soap and rinse with water. If irritation persists, call a physician.

INGESTION: Do not induce vomiting. Give water. Call a physician at once.

INHALATION: Remove to fresh air. Treat symptoms. Call a physician at once.

NOTE TO PHYSICIAN: Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.

SECTION 5: FIRE FIGHTING

FLASH POINT: 151 Degrees F (TCC) ASTM D-56

EXTINGUISHING MEDIA: Based on the NFPA guide, use dry chemical, foam, carbon dioxide or other extinguishing agent suitable for Class B fires. Use water to cool containers exposed to fire. For large fires, use water spray or fog, thoroughly drenching the burning material.

UNUSUAL FIRE AND EXPLOSION HAZARD: Containers exposed in a fire should be cooled with water to prevent vapor pressure buildup leading to a rupture.

SECTION 6: ACCIDENTAL RELEASE MEASURES

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER: (800) 535-5053 (INFOTRAC)

SPILL CONTROL AND RECOVERY:

Small liquid spills: Contain with absorbent material. Shovel reclaimed liquid and absorbent into recovery or salvage drums for disposal. Refer to CERCLA in Section 15.

Large liquid spills: Dike to prevent further movement and reclaim into recovery or salvage drums or tank truck for disposal. Refer to CERCLA in Section 15.

SECTION 7: HANDLING AND STORAGE

Storage: Keep container closed when not in use.



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MATERIAL SAFETY DATA SHEET

PRODUCT: Diesel Conditioner Plus+
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SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION: If it is possible to generate significant levels of vapors or mists, a NIOSH approved or equivalent respirator is recommended.

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a positive pressure, self-contained breathing apparatus is recommended.

VENTILATION: General ventilation is recommended. Additionally, local exhaust ventilation is recommended where vapors or mists may be released.

PROTECTIVE EQUIPMENT: Wear impermeable gloves, boots, apron and a face shield with chemical splash goggles. Examples of impermeable gloves available on the market are neoprene, nitrile, PVC, natural rubber, viton and butyl (compatibility studies have not been performed). A full slicker suit is recommended if gross exposure is possible.

The availability of an eye wash fountain and safety shower is recommended .
 If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

HUMAN EXPOSURE CHARACTERIZATION: Based on Racor's recommended product application and our recommended personal protective equipment, the potential human exposure is: MODERATE.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

COLOR:	Clear amber	Form: Liquid
DENSITY:	7.6 lbs./gal. @ 60 Degrees F	
SOLUBILITY IN WATER:	Insoluble	
SPECIFIC GRAVITY:	0.92 @ 60 Degrees F	
FLASH POINT:	151 Degrees F (TCC)	ASTM D-56
VAPOR PRESSURE:	103 mm/Hg @ 131 Degrees F	ASTM D-323

NOTE: These physical properties are typical values for this product.

SECTION 10: STABILITY AND REACTIVITY



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INCOMPATIBILITY: Avoid contact with strong oxidizers (eg., Chlorine, peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, permanganates) which can generate heat, fires, explosions and the release of toxic fumes.

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion CO, CO₂, NO_x may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICITY STUDIES: Toxicity studies have not been conducted on this product, but studies have been conducted on the 2-Ethylhexyl nitrate in the product. The results are shown below:

ACUTE ORAL TOXICITY (ALBINO RATS): LD50 = 9.6 gm/kg

ACUTE DERMAL TOXICITY (ALBINO RABBITS): LD50 = 4.8 gm/kg

ACUTE INHALATION TOXICITY (ALBINO RATS): LC50 = 4.6 gm/L (one hour)

PRIMARY SKIN IRRITATION TEST (ALBINO RABBITS):

COMMENTS: Non-irritating with D.O.T. Primary Irritation Assay

PRIMARY EYE IRRITATION TEST (ALBINO RABBITS):

EYE IRRITATION INDEX DRAIZE RATING: 0.0/110.0

COMMENTS: Non-irritating

SECTION 12: ECOLOGICAL INFORMATION

If released into the environment, see CERCLA in Section 15.

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL: If this product becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous liquid waste, it should be solidified with stabilizing agents (such as sand, fly ash, or cement) so that no free liquid remains before disposal to an industrial waste landfill. A non-hazardous liquid waste can also be incinerated in accordance with local, state, and federal regulations.

SECTION 14: TRANSPORTATION INFORMATION

PROPER SHIPPING NAME/HAZARD CLASS MAY VARY BY PACKAGING, PROPERTIES, AND MODE OF TRANSPORTATION. THIS PRODUCT IS REGULATED IN THE U.S. ONLY WHEN SHIPPED IN



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CONTAINERS EXCEEDING 119 GALLONS OR 882 POUNDS CAPACITY OR WHEN THE PACKAGE EXCEEDS THE REPORTABLE QUANTITY. TYPICAL PROPER SHIPPING NAMES FOR THIS PRODUCT ARE:

ALL TRANSPORTATION MODES: (UNLESS SPECIFIED BELOW)	COMBUSTIBLE LIQUID, n.o.s.
AIR TRANSPORTATION: (IATA/ICAO)	PETROLEUM DISTILLATES, n.o.s.
UN/ID NO:	UN 1268
HAZARD CLASS – PRIMARY:	3 - COMBUSTIBLE LIQUID
PACKING GROUP:	III
IATA PACKING INSTRUCTION:	309
IATA CARGO AIRCRAFT LIMIT:	> 60 LITERS (MAX NET QUANTITY PER PACKAGE)
FLASH POINT:	151° F 66.1° C
TECHNICAL NAME(S):	AROMATIC HYDROCARBONS
RQ LBS (PER PACKAGE):	NONE
RQ COMPONENT(S):	NONE

SECTION 15: REGULATORY INFORMATION

The following regulations apply to this product.

FEDERAL REGULATIONS:

OSHA's HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:

Based on our hazard evaluation, the following ingredients in this product are hazardous and the reasons are shown below.

- 2-Ethylhexyl nitrate - Combustible
- Heavy aromatic naphtha - Irritant, combustible

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):

This product contains the following ingredient(s), (with CAS # and % range) which appear(s) on the List of Toxic Chemicals:

- 2-Ethylhexyl nitrate = TWA 5 ppm ACGIH/TLV
- 2-Ethylhexyl nitrate = TWA 5 ppm OSHA/PEL



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MATERIAL SAFETY DATA SHEET

PRODUCT: Diesel Conditioner Plus+

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SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313:

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):

This product does not contain ingredients listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312-MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370):

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following EPA hazard categories:

- XX Immediate (acute) health hazard
- XX Delayed (chronic) health hazard
- XX Fire hazard
- Sudden release of pressure hazard
- Reactive hazard

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA):

The chemical ingredients in this product are on the 8 (b) Inventory List (40 CFR 710).

REGISTERED WITH THE U.S. EPA OFFICE OF FUEL AND FUEL ADDITIVE REGISTRATION, as a fuel additive.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D :

Consult Section 13 for RCRA classification.

CLEAN AIR ACT, Sec. 111 (40 CFR 60), Sec. 112 (40 CFR 61, 1990 Amendments), Sec 611 (40 CFR 82, CLASS I and II Ozone depleting substances):

This product does not contain ingredients covered by the Clean Air Act.

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65: This product does not contain any chemicals which require warning under California Proposition 65.



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MICHIGAN CRITICAL MATERIALS:

This product does not contain ingredients listed on the Michigan Critical Materials Register.

STATE RIGHT TO KNOW LAWS:

The following ingredient(s) are disclosed for compliance with State Right to Know Laws:

2-Ethylhexyl nitrate 27247-96-7

INTERNATIONAL REGULATIONS:

This is a WHMIS controlled product under The House of Commons of Canada Bill C-70 (Class B3 and Class D2B). The product contains the following substance(s), from the Ingredient Disclosure List or has been evaluated based on its toxicological properties, to contain the following hazardous ingredient(s):

<u>Chemical Name</u>	<u>CAS #</u>	<u>% Concentration Range</u>
Heavy aromatic naphtha	64742-94-5	50-70
2-Ethylhexyl nitrate	27247-96-7	15-25

SECTION 16: OTHER INFORMATION

RACOR PART NUMBERS:

16 oz. ADT 1116
 1 gal. ADT 1201
 2 ½ gal. ADT 1325
 55 gal. ADT 1555

SECTION 17: RISK CHARACTERIZATION

Due to our commitment to Product Stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterized the product's general risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

- The human risk is: **MODERATE.**
- The environmental risk is: **LOW.**



Filtration

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MATERIAL SAFETY DATA SHEET

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Any use inconsistent with Racor's recommendations may affect our risk characterization. Our sales representative will assist you to determine if your product application is consistent with our recommendations. Together we can implement an appropriate risk management process.

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

MATERIAL SAFETY DATA SHEET

(Approved by U.S. Department of Labor "Essentially Similar" to Form LSB-OOS-4)

PARKS

Section I

MANUFACTURER'S NAME PARKS CORPORATION STREET ADDRESS One West Street CITY, STATE, AND ZIP CODE Fall River, MA 02720 EMERGENCY TELEPHONE NO. (508)679-5938	CHEMICAL NAME & SYNONYMS DIMETHYL KETONE: 2-PROPANONE: DI METHYL KETAL Chemical Family: KETONES TRADE NAME ACETONE FORMULAS CH₃ CO CH₃
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Section II — HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS						PPM
PIGMENTS	%	TLV (Units)	SOLVENTS	CAS NO.	%	TLV (Units)
N.A.			*Acetone (Dimethyl Ketone)	67-64-1	100	750
CATALYST			* SARA listed chemical			
N.A.						
VEHICLE			ADDITIVES & OTHERS	N.A.		
N.A.						
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES						TLV (Units)
N.A.						

Section III — PHYSICAL DATA

BOILING POINT (°F)	133°F	SPECIFIC GRAVITY (H ₂ O = 1)	0.7905 @ 20/20°C
VAPOR PRESSURE (mm Hg.) @ 20°C	186 mm Hg	PERCENT VOLATILE BY VOLUME (%)	100
VAPOR DENSITY (AIR = 1)	Heavier	EVAPORATION RATE (ETHER = 1)	Less than 1
SOLUBILITY IN WATER	Complete		
APPEARANCE AND ODOR	Highly Flammable		
Liquid: Sharp penetrating and Non-Residual Odor			

Section IV — FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED)	0°F, TAG C.C.	FLAMMABLE LIMITS % by Volume	Lel	Uel
			2.6	13.0
EXTINGUISHING MEDIA Use Carbon Dioxide or Dry Chemical for small fires. Use "Alcohol" type foam for large fires. Water spray will reduce intensity of flames.				
SPECIAL FIRE FIGHTING PROCEDURES Self-contained breathing apparatus for fire fighters equipped with positive pressure mode.				
UNUSUAL FIRE AND EXPLOSION HAZARDS Keep work area free of hot metal surfaces and other sources of ignition.				

Section V — HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	See Section II
EFFECTS OF OVEREXPOSURE EYES: Can cause severe irritation, redness, tearing, blurred vision. SKIN: Prolonged or repeated contact can cause moderate irritation, defatting dermatitis. INHALATION: Excess inhalation of vapors or mists may cause irritation of the nose and throat, nausea, vomiting, and signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination, and fatigue), respiratory symptoms associated with pre-existing lung disorders (e.g., Asthma-like conditions) may be aggravated by exposure to this material. INGESTION: (swallowing) While this material has a low degree of toxicity, ingestion of excessive quantities may cause irritation of the digestive tract and signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination, and fatigue). COMMENTS: This material has not been identified as a carcinogen by NTP, IARC, or OSHA. Reports have associated repeated and prolonged occupational over exposure to Solvents with Permanent Brain and Nervous System Damage (some times referred to as Solvent or Painters' Syndrome). Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal.	

EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Moderate hazard to the eyes, but liquid contact should be treated with flushing of eyes with water for fifteen minutes.

SKIN CONTACT: Skin contact is only a slight hazard. However, skin should be flushed with water.

INHALATION: Remove to fresh air. Apply artificial respiration and call a physician.

INGESTION: Induce vomiting if the patient is conscious. Call a physician immediately.

Section VI — REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	Heat, sparks and open flame
INCOMPATIBILITY (Materials to Avoid) Avoid catalyst such as Ba(OH) ₂ , NaOH and other Alkalies, H ₂ SO ₄ .			
HAZARDOUS DECOMPOSITION PRODUCTS Burning can produce CO and/or CO ₂ .			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID Avoid low temperature when in the presence of catalysts. Condensation will occur. If the temperature rises, reaction stops and material will cool down.
	WILL NOT OCCUR	X	

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
 Keep public away. Shut off source if possible. To do so without hazard, eliminate source of ignition. Use suitable protective equipment. Flush spilled material into suitable retaining areas or containers with large quantities of water. Small amounts of spilled material may be absorbed into an appropriate absorbent. Collect in a flammable waste container for disposal.

WASTE DISPOSAL METHOD
 Incinerate in a furnace where permitted under appropriate federal, state and local regulations.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specific Type) Air supplied mask			
VENTILATION	LOCAL EXHAUST	Suggested	SPECIAL Positively NO SMOKING
	MECHANICAL (General)	Explosion-Proof	OTHER Adequate Ventilation
PROTECTIVE GLOVES	Rubber Gloves - Impermeable	FACE PROTECTION	Safety Glasses
OTHER PROTECTIVE EQUIPMENT Eye bath and safety shower. Impermeable aprons.			

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Keep product container cool, dry and away from sources of ignition. Use and store this product with adequate ventilation.

OTHER PRECAUTIONS
 Avoid inhalation of vapors. Remove saturated clothing and flush affected areas with water. Personal contact should be avoided.

Supplier:
Permatex, Inc.
 10 Columbus Blvd.
 Hartford, CT 06106
 Telephone: 1-87-Permatex
 (877) 376-2839

Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: 133K ANTI-SEIZE LUBRICANT 8OZ
Item No: 80078
Product Type: Lubricant

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Percent	ACGIH 8 Hr. TWA:	OSHA 8 Hr. TWA:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC 64742-52-5	50-60	5 mg/m3 mist	5 mg/m3 mist
CALCIUM OXIDE 1305-78-8	15-25	2 mg/m3	5 mg/m3
ALUMINIUM POWDER (PYROPHORIC) 7429-90-5	5-15	metal dust, as Al: 10 mg/m3 TWA	total dust, as Al: 15 mg/m3 TWA; respirable fraction, as Al: 5 mg/m3 TWA
GRAPHITE 7782-42-5	1-10	2 mg/m3 TWA respir.	5 mg/m3 TWA respir.; 15mg/m3 total
MINERAL OIL 64741-44-2	1-10	5 mg/m3 TWA	10 mg/m3 TWA
LITHIUM SOAP 7620-77-1	1-10		
SILICA, QUARTZ 14808-60-7	0.1-1.0	0.05 mg/m3 TWA respirable	0.1 mg/m3 TWA respirable

3. HAZARDS IDENTIFICATION

Toxicity: May cause eye and skin irritation. May cause nose, throat and respiratory irritation. May cause gastrointestinal irritation. May cause central nervous system (CNS) depression.
Primary Routes of Entry: Eye and skin contact, ingestion, inhalation.
Signs and Symptoms of Exposure: Overexposure may cause eye and skin redness, difficulty breathing and vomiting. Excessive accidental exposure may cause headache, dizziness, nausea and mild respiratory irritation. Inhalation of dust at levels above recommended exposure limit may cause metallic or sweet taste, irritation of pharynx and possible ulceration with perforation of the nasal septum. Repeated skin contact may cause allergic skin reactions.

Ingredients	Percent	NTP:	ACGIH Carcinogens	IARC:
SILICA, QUARTZ 14808-60-7	0.1-1.0	Known Carcinogen		Group 1; Vol. 68; 1997

Medical Conditions Recognized as Being Aggravated by Exposure: Persons with respiratory problems such as emphysema and asthma should avoid inhalation.

4. FIRST AID MEASURES

Ingestion: If swallowed, DO NOT induce vomiting. Keep individual calm. Obtain medical attention.
Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.
Skin Contact: Remove contaminated clothing. Wash area with soap and water. If irritation persists, seek medical attention.
Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention.

Product Name: 133K ANTI-SEIZE LUBRICANT 8OZ
Item No: 80078

attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point (°F/C): Greater than 200 degrees F. Method: Tag Closed Cup
Recommended Extinguishing Media: Carbon Dioxide, Dry Chemicals, Foam.
Special Fire-Fighting Procedures: Firefighters should wear self-contained breathing apparatus. Water spray may be ineffective on flames but should be used to keep fire-exposed containers cool.
Hazardous Products Formed by Fire or Thermal Decomposition: Metal oxide fumes, Oxides of carbon. Nitrogen compounds, Barium oxide. Sulfur dioxide. Hydrogen sulfide, Zinc.
Unusual Fire/Explosion Hazards: May ignite when sufficient heat is applied.
Lower Explosive Limit: 30% aluminum metal; 1% oil
Upper Explosive Limit: 7% oil

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Eliminate all sources of ignition. Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal.

7. HANDLING AND STORAGE

Storage: Store away from heat, sparks or open flame. Do not store at temperatures above 120 degrees F.
Handling: Avoid prolonged skin contact. Keep away from eyes. Do not inhale vapors. Do not use near heat, sparks or open flame. Wash hands and face after handling this compound.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses or goggles.
Skin: Neoprene or nitrile gloves recommended.
Ventilation: Provide adequate local ventilation to maintain vapor concentration below TLV if misting of oil occurs.
Respiratory Protection: Use an approved NIOSH organic vapor respirator below the TLV. If TLV is exceeded or overexposure is likely, use positive pressure or self contained breathing apparatus.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Silver paste
Odor: PETROLEUM
Boiling Point (°F): Not determined.
pH: Does not apply
Solubility in Water: Nil
Specific Gravity: 1.17
VOC Content(Wt.%): Not determined
Vapor Pressure: Less than 5 mm Hg
Vapor Density (Air=1): Not Determined
Evaporation Rate: Not Determined

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal conditions
Hazardous Polymerization: WILL NOT OCCUR
Incompatibilities: Strong oxidizers, alkalis, mineral acids, selected amines.
Conditions to Avoid: Do not expose to heat or store at temperatures above 120 F.
Hazardous Products Formed by Fire or Thermal Decomposition: Metal oxide fumes, Oxides of carbon. Nitrogen compounds, Barium oxide. Sulfur dioxide. Hydrogen sulfide, Zinc.

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations.

Product Name: 133K ANTI-SEIZE LUBRICANT 8OZ
Item No: 80078

US EPA Waste Number: D001

14. TRANSPORT INFORMATION

DOT (49CFR 172)

Domestic Ground Transport

DOT Shipping Name: Unrestricted
Hazard Class: NONE
UN/ID Number: None
Marine Pollutant: None

IATA

Proper Shipping Name: Unrestricted
Class or Division: None
UN/NA Number: NONE

IMDG

Proper Shipping: Unrestricted
Hazard Class: None
UN Number: None

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.
NONE

CALIFORNIA PROP 65:

No California Prop 65 chemicals are known to be present.

TSCA Inventory Status:

All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 1, FLAMMABILITY 1, REACTIVITY 1
Estimated HMIS Classification: HEALTH 1, FLAMMABILITY 1, PHYSICAL HAZARD 0

NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared By: Denise Boyd Health and Safety Manager
Company: Permatex, Inc. 10 Columbus Blvd. Hartford, CT 06106
Telephone Number: 1-87-Permatex (877) 376-2839
Revision Date: 08/08/2001
Revision Number: 1

MATERIAL SAFETY DATA SHEET

COATINGS AND RESINS GROUP

PPG Industries, Inc.

DDL MSDS #1

SECTION 1 CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: DDL
REVISION DATE: 11/27/96 (T) 0808
CUSTOMER PART #/NAME: Not applicable
PRODUCT TRADE NAME: DURACRYL ACRYLIC LACQUER
CHEMICAL FAMILY: Acrylic
EMERGENCY MEDICAL/SPILL INFO: (304) 843-1300 (U.S.)
 91-800-00-214 (MEXICO)
TECHNICAL INFORMATION: (216) 572-2800
PRODUCT SAFETY/MSDS INFORMATION: 4325 ROSANNA DRIVE, P.O. BOX 9
 ALLISON PARK, PA 15101
 (412) 492-5555
DATE OF MSDS PREPARATION: 12/08/96

PRIMARY HAZARD WARNING

Flammable. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone. Harmful if swallowed. May cause moderate skin irritation. Causes severe eye irritation. Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200), THE SUPPLIER NOTIFICATION REQUIREMENTS OF SARA TITLE III, SECTION 313, AND OTHER APPLICABLE RIGHT-TO-KNOW REGULATIONS.

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

REF	HAZARDOUS INGREDIENTS	MAX %	CAS NUMBER	CARCINOGEN*
01	METHYL ISOBUTYL KETONE	5 - <10	108-10-1	
02	TOLUENE	40 - <50	108-88-3	
03	XYLENES	1 - <5	1330-20-7	
04	TITANIUM DIOXIDE	10 - <20	13463-67-7	
05	ETHYL ALCOHOL	1 - <5	64-17-5	
06	NAPHTHA	1 - <5	64742-95-6	
07	ISOPROPYL ALCOHOL	1 - <5	67-63-0	
08	N-BUTYL ALCOHOL	1 - <5	71-36-3	
09	ISOBUTYL ALCOHOL	1 - <5	78-83-1	
10	METHYL ETHYL KETONE	40 - <50	78-93-3	
11	NAPHTHA	1 - <5	8052-41-3	
12	DIO-HEPTYL ACETATE	5 - <10	90438-79-2	
13	1,2,4-TRIMETHYL BENZENE	1 - <5	95-63-6	

* Carcinogens: O=OSHA; A=ACGIH; N=NTP; I=IARC

SARA TITLE III & CERCLA CLASSIFICATIONS

REF	SARA 102 RQ (LBS)	SARA 302 TPQ (LBS)	SARA 311/312					
			AC	CH	FL	PR RE		
01	5000	NOT ESTAB	Y	Y	N	Y	N	N
02	1000	NOT ESTAB	Y	Y	N	Y	N	N
03	100	NOT ESTAB	Y	Y	N	Y	N	N
04	NOT ESTAB	NOT ESTAB	N	N	N	N	N	N
05	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N
06	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N
07	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N
08	5000	NOT ESTAB	Y	Y	N	Y	N	N
09	5000	NOT ESTAB	N	Y	N	Y	N	N
10	5000	NOT ESTAB	Y	Y	N	Y	N	N
11	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N
12	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N
13	NOT ESTAB	NOT ESTAB	Y	Y	N	Y	N	N

SARA 311/312 CATEGORIES FOR THIS PRODUCT: ACUTE = Y, CHRONIC = N, FLAMMABILITY = Y, PRESSURE = N, REACTIVITY = N

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

REF	ACGIH		U.S. OSHA	
	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
01	50 ppm	75 ppm	50 ppm	75 ppm
02	S- 50 ppm	NOT ESTAB.	100 ppm	150 ppm
03	100 ppm	150 ppm	100 ppm	150 ppm
04	10 mg/m3	NOT ESTAB.	10 mg/m3	NOT ESTAB.
05	1000 ppm	NOT ESTAB.	1000 ppm	NOT ESTAB.

06	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
07	400 ppm	500 ppm	400 ppm	500 ppm
08	C-S-50 ppm	NOT ESTAB.	C-S-50 ppm	NOT ESTAB.
09	50 ppm	NOT ESTAB.	50 ppm	NOT ESTAB.
10	200 ppm	300 ppm	200 ppm	300 ppm
10	IPEL-TWA: NOT ESTAB.		IPEL-STEL: 250 ppm	
11	100 ppm	NOT ESTAB.	100 ppm	NOT ESTAB.
12	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
13	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.

(C- Ceiling Limit; S- Potential Skin Absorption; R- Respirable Dust) [NOT ESTAB. = NOT ESTABLISHED = NOT APPLICABLE]

PRODUCT STATUS RELATIVE TO THE U.S. EPA TOXIC SUBSTANCES

CONTROL ACT

All chemical substances in this product are listed on the U.S. TSCA Inventory or are otherwise exempt from TSCA Inventory reporting requirements.

SECTION 3 HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE FROM:

- **INGESTION:** Harmful if swallowed.
- **EYE CONTACT:** Causes severe eye irritation.
- **SKIN CONTACT:** May cause moderate skin irritation.
- **INHALATION:** Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage.
- **CHRONIC OVEREXPOSURE:** Avoid long-term and repeated contact. This product contains titanium dioxide. Animals inhaling massive quantities of titanium dioxide dust in a long-term study developed lung tumors. Studies with humans involved in manufacture of this pigment indicate no increased risk of cancer from exposure. Potential for inhalation of titanium dioxide dusts from coatings is very limited. Since overexposures are not expected, there is no significant hazard for man. This product contains methyl ethyl ketone (MEK). MEK has been shown to cause minor embryotoxic/fetotoxic effects in laboratory animals exposed for prolonged periods at high concentrations via inhalation. The potential for human exposure to high concentrations is expected to be low due to the irritating effects of MEK at low concentrations. This product contains toluene. Toluene inhalation in animals (greater than 1500 ppm) and intentional inhalation of toluene-containing products by humans (e.g. glue) has caused adverse fetal development effects.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Eye watering, headaches, nausea, dizziness, and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

SECTION 4 FIRST AID MEASURES

- **INGESTION:** If swallowed, do not induce vomiting. Gently wipe out inside mouth to remove any residual material.
- **EYE CONTACT:** In case of eye contact, remove contact lenses and flush eyes immediately with a gentle stream of luke warm water for at least 15 minutes.
- **SKIN CONTACT:** In case of skin contact, flush immediately with plenty of water for at least 15 minutes followed by washing with soap and water.
- **INHALATION:** If affected by inhalation of vapor or spray mist, remove to fresh air. Apply artificial respiration and other support measures as required.
- **OTHER:** If ingestion, any type of overexposure or symptoms of overexposure occur during or following the use of this product, contact a poison control center, emergency room or physician immediately; have Material Safety Data Sheet information available.

SECTION 5 FIRE FIGHTING MEASURES

- **FLASHPOINT:** 21 Degrees F (-6 Degrees C) (PENSKEY-MARTENS CLOSED CUP)
- **FLAMMABLE LIMITS:** Lower explosion limit (LEL): 1.7
- **Upper explosion limit (UEL):** Not available
- **EXTINGUISHING MEDIA:** Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IB flammable liquid fires.



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 REFINISH PRODUCTS
 19699 PROGRESS DRIVE STRONGSVILLE, OH 44136

► **UNUSUAL FIRE AND EXPLOSION HAZARDS:** Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat.

► **SPECIAL FIRE FIGHTING PROCEDURES:** Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable. Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

SECTION 6 ACCIDENTAL RELEASE MEASURES

► **STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible, absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

► **WASTE DISPOSAL METHOD:** Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

SECTION 7 HANDLING AND STORAGE

► **HANDLING AND STORAGE PRECAUTIONS:** Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class IB flammable liquids.

► **OTHER PRECAUTIONS:** Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT FOR:

► **EYE PROTECTION:** Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.

► **SKIN PROTECTION:** Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: nitrile rubber or latex. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment.

► **RESPIRATORY PROTECTION:** Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used.

► **OTHER EQUIPMENT:** Clean contaminated clothing and shoes.

VENTILATION REQUIREMENTS: Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

[FORMULA VALUES, NOT SALES SPECIFICATIONS]

BOILING RANGE: 149- 392degrees F	SOLUBILITY IN WATER: 16.6 %
VAPOR PRESSURE: 40.6 mmHg	WEIGHT/GALLON : 8.00 (LBS/U.S. GAL.)
VAPOR DENSITY: Heavier than air	pH: Not applicable
% VOLATILE/VOLUME: 55-80	% SOLIDS BY WEIGHT: 29-49
SPECIFIC GRAVITY: .960	EVAPORATION RATE(BuOAc = 100): 374
ODDR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.	

SECTION 10 STABILITY AND REACTIVITY

► This product is normally stable and will not undergo hazardous reactions.

► **INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID):** Avoid contact with strong alkalis, strong mineral acids, or strong oxidizing agents.

► **HAZARDOUS DECOMPOSITION PRODUCTS:** May produce the following hazardous decomposition products when exposed to extreme heat: carbon monoxide ; carbon dioxide ; lower molecular weight polymer fractions; . . . Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

PPG Safety and Health In-Plant Index System (SHIS): HEALTH = 2 , FLAMMABILITY = 3, REACTIVITY = 0

Acute Hazard Rating System: 0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4 = Severe.

Chronic Hazard Rating System: 3* or 4*

SHIS ratings are assigned to identify the relative magnitude of potential hazards. Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments.

THIS IS THE END OF THE MSDS FOR: DDL- (00054062.002DDL)



Manufactured and Supplied by:
 REFINISH PRODUCTS
 19699 PROGRESS DRIVE STRONGSVILLE, OH 44136

MATERIAL SAFETY DATA SHEET

COATINGS AND RESINS GROUP

PPG Industries, Inc.

DDL MSDS #2

SECTION 1 CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: DDL
REVISION DATE: 11/27/96 (T) 0808
CUSTOMER PART #/NAME: Not applicable
PRODUCT TRADE NAME: DURACRYL ACRYLIC LACQUER
CHEMICAL FAMILY: Acrylic
EMERGENCY MEDICAL/SPILL INFO: (304) 843-1300 (U.S.)
 91-800-00-214 (MEXICO)
TECHNICAL INFORMATION: (216)-572-2800
PRODUCT SAFETY/MSDS INFORMATION: 4325 ROSANNA DRIVE, P.O. BOX 9
 ALLISON PARK, PA 15101
 (412) 492-5555
DATE OF MSDS PREPARATION: 12/09/96

PRIMARY HAZARD WARNING

Flammable. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone. Harmful if swallowed. Contains lead. Lead poisoning is characterized by a metallic taste in the mouth, loss of appetite, indigestion, nausea, vomiting, constipation, abdominal cramps, disturbance of rest and sleep, and weakness. Dried film of this product may be harmful if chewed or swallowed. May cause moderate skin irritation. Causes severe eye irritation. May be harmful if absorbed through the skin. Prolonged or repeated contact may cause an allergic skin reaction. Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat. Sanding and grinding dusts may be harmful if inhaled.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200), THE SUPPLIER NOTIFICATION REQUIREMENTS OF SARA TITLE III, SECTION 313, AND OTHER APPLICABLE RIGHT-TO-KNOW REGULATIONS.

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

REF	HAZARDOUS INGREDIENTS	MAX %	CAS NUMBER	CARCINOGEN*
01	METHYL ISOBUTYL KETONE	5 - <10	108-10-1	
02	TOLUENE	40 - <50	108-88-3	
03	XYLENES	1 - <5	1330-20-7	
04	LEAD CHROMATE SULFATE	10 - <20	1344-37-2	I A
05	TITANIUM DIOXIDE	10 - <20	13463-67-7	
06	ETHYL ALCOHOL	1 - <5	64-17-5	
07	NAPHTHA	1 - <5	64742-95-6	
08	ISOPROPYL ALCOHOL	1 - <5	67-63-0	
09	N-BUTYL ALCOHOL	1 - <5	71-36-3	
10	ISOBUTYL ALCOHOL	1 - <5	78-83-1	
11	METHYL ETHYL KETONE	40 - <50	78-93-3	
12	NAPHTHA	1 - <5	8052-41-3	
13	OXO-HEPTYL ACETATE	5 - <10	90438-79-2	
14	1,2,4-TRIMETHYL BENZENE	1 - <5	95-63-6	

* Carcinogens: O = OSHA; A = ACGIH; N = NTP; I = IARC

SARA TITLE III & CERCLA CLASSIFICATIONS

REF	SARA 102 RQ (LBS)	SARA 302 TPQ (LBS)	SARA 313	SARA 311/312				
				AC	CH	FL	PR	RE
01	5000	NOT ESTAB	Y	Y	N	Y	N	N
02	1000	NOT ESTAB	Y	Y	N	Y	N	N
03	100	NOT ESTAB	Y	Y	N	Y	N	N
04	NOT ESTAB	NOT ESTAB	Y	Y	Y	N	N	N
05	NOT ESTAB	NOT ESTAB	N	N	N	N	N	N
06	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N
07	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N
08	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N
09	5000	NOT ESTAB	Y	Y	N	Y	N	N
10	5000	NOT ESTAB	N	Y	N	Y	N	N
11	5000	NOT ESTAB	Y	Y	N	Y	N	N
12	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N
13	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N
14	NOT ESTAB	NOT ESTAB	Y	Y	N	Y	N	N

SARA 311/312 CATEGORIES FOR THIS PRODUCT: ACUTE = Y, CHRONIC = Y, FLAMMABILITY = Y, PRESSURE = N, REACTIVITY = N

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

REF	ACGIH		U.S. OSHA	
	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL

01	50 ppm	75 ppm	50 ppm	75 ppm
02	S- 50 ppm	NOT ESTAB.	100 ppm	150 ppm
03	100 ppm	150 ppm	100 ppm	150 ppm
04	0.05 mg/m3	NOT ESTAB.	0.05 mg/m3	NOT ESTAB.
05	10 mg/m3	NOT ESTAB.	10 mg/m3	NOT ESTAB.
06	1000 ppm	NOT ESTAB.	1000 ppm	NOT ESTAB.
07	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
08	400 ppm	500 ppm	400 ppm	500 ppm
09	C-S-50 ppm	NOT ESTAB.	C-S-50 ppm	NOT ESTAB.
10	50 ppm	NOT ESTAB.	50 ppm	NOT ESTAB.
11	200 ppm	300 ppm	200 ppm	300 ppm
11	IPEL-TWA:	NOT ESTAB.	IPEL-STEL:	250 ppm
12	100 ppm	NOT ESTAB.		NOT ESTAB.
13	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
14	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.

[C- Ceiling Limit; S- Potential Skin Absorption; R- Respirable Dust] [NOT ESTAB. = NOT ESTABLISHED = NOT APPLICABLE]

PRODUCT STATUS RELATIVE TO THE U.S. EPA TOXIC SUBSTANCES

CONTROL ACT

All chemical substances in this product are listed on the U.S. TSCA Inventory or are otherwise exempt from TSCA Inventory reporting requirements.

SECTION 3 HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE FROM:

► **INGESTION:** Harmful if swallowed. Contains lead. Lead poisoning is characterized by a metallic taste in the mouth, loss of appetite, indigestion, nausea, vomiting, constipation, abdominal cramps, disturbance of rest and sleep, and weakness. Dried film of this product may be harmful if chewed or swallowed.

► **EYE CONTACT:** Causes severe eye irritation.

► **SKIN CONTACT:** May cause moderate skin irritation. May be harmful if absorbed through the skin. Prolonged or repeated contact may cause an allergic skin reaction.

► **INHALATION:** Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat. Sanding and grinding dusts may be harmful if inhaled. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage.

► **CHRONIC OVEREXPOSURE:** Avoid long-term and repeated contact. Overexposure to lead adversely affects blood and blood forming tissues, kidneys, liver and the central nervous system, reproductive organs and causes adverse developmental effects. NTP and IARC have classified chromium (+6) compounds as carcinogenic. No human data were available on the risk associated with use of strontium chromate or other chromate pigments. This product contains an insoluble form of a chromium (6+) compound. NTP and IARC associate these materials with an increased risk of cancer. This product contains titanium dioxide. Animals inhaling massive quantities of titanium dioxide dust in a long-term study developed lung tumors. Studies with humans involved in manufacture of this pigment indicate no increased risk of cancer from exposure. Potential for inhalation of titanium dioxide dusts from coatings is very limited. Since overexposures are not expected, there is no significant hazard for man. This product contains methyl ethyl ketone (MEK). MEK has been shown to cause minor embryotoxic/fetotoxic effects in laboratory animals exposed for prolonged periods at high concentrations via inhalation. The potential for human exposure to high concentrations is expected to be low due to the irritating effects of MEK at low concentrations. This product contains toluene. Toluene inhalation in animals (greater than 1500 ppm) and intentional inhalation of toluene-containing products by humans (e.g. glue) has caused adverse fetal development effects.

► **SIGNS AND SYMPTOMS OF OVEREXPOSURE:** Contains lead. Lead poisoning is characterized by a metallic taste in the mouth, loss of appetite, indigestion, nausea, vomiting, constipation, abdominal cramps, disturbance of rest and sleep, and weakness. Dried film of this product may be harmful if chewed or swallowed. Eye watering, headaches, nausea, dizziness, and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

► **MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Not applicable.

WARNING: This product contains a chemical(s) known to the State



Manufactured and Supplied by:
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of California to cause cancer and birth defects or other reproductive harm.

SECTION 4: FIRST AID MEASURES

- ▶ **INGESTION:** If swallowed, induce vomiting by giving 1 ounce of syrup of ipecac followed by 8 to 16 ounces of water. Wipe out inside mouth to remove any residual material.
- ▶ **EYE CONTACT:** In case of eye contact, remove contact lenses and flush eyes immediately with a gentle stream of luke warm water for at least 15 minutes.
- ▶ **SKIN CONTACT:** In case of skin contact, flush immediately with plenty of water for at least 15 minutes followed by washing with soap and water.
- ▶ **INHALATION:** If affected by inhalation of vapor or spray mist, remove to fresh air. Apply artificial respiration and other support measures as required.
- ▶ **OTHER:** If ingestion, any type of overexposure or symptoms of overexposure occur during or following the use of this product, contact a poison control center, emergency room or physician immediately; have Material Safety Data Sheet information available.

SECTION 5: FIRE FIGHTING MEASURES

- ▶ **FLASHPOINT:** 21 Degrees F (-6 Degrees C) (PENSKY-MARTENS CLOSED CUP)
- ▶ **FLAMMABLE LIMITS:** Lower explosion limit (LEL): 1.7
- ▶ **Upper explosion limit (UEL):** Not available
- ▶ **EXTINGUISHING MEDIA:** Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IB flammable liquid fires.
- ▶ **UNUSUAL FIRE AND EXPLOSION HAZARDS:** Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat.
- ▶ **SPECIAL FIRE FIGHTING PROCEDURES:** Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable. Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- ▶ **STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.
- ▶ **WASTE DISPOSAL METHOD:** Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

SECTION 7: HANDLING AND STORAGE

- ▶ **HANDLING AND STORAGE PRECAUTIONS:** Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class IB flammable liquids.
- ▶ **OTHER PRECAUTIONS:** Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches. Do not apply on toys or other children's articles, furniture, or interior surfaces of any dwelling or facility. Do not apply on those exterior surfaces of any dwelling units, such as windowsills, porches, stairs, or railings to which children may be commonly exposed. Wash thoroughly before eating or smoking.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT FOR:

- ▶ **EYE PROTECTION:** Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.
- ▶ **SKIN PROTECTION:** Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: nitrile rubber or latex. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment.
- ▶ **RESPIRATORY PROTECTION:** Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used.
- ▶ **OTHER EQUIPMENT:** Clean contaminated clothing and shoes.

VENTILATION REQUIREMENTS: Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

(FORMULA VALUES, NOT SALES SPECIFICATIONS)

BOILING RANGE: 149- 392Degrees F
 SOLUBILITY IN WATER: 16.6 %
 VAPOR PRESSURE: 40.6 mmHg
 VAPOR DENSITY: Heavier than air
 % VOLATILE/VOLUME: 55-80
 SPECIFIC GRAVITY: .960
 ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.

WEIGHT/GALLON : 8.00 (LBS/U.S. GAL.)
 pH: Not applicable
 % SOLIDS BY WEIGHT: 29-49
 EVAPORATION RATE(BuOAc = 100): 374

SECTION 10: STABILITY AND REACTIVITY

- ▶ **This product is normally stable and will not undergo hazardous reactions.**
 - ▶ **INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID):** Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents.
 - ▶ **HAZARDOUS DECOMPOSITION PRODUCTS:** May produce the following hazardous decomposition products when exposed to extreme heat: carbon monoxide ; carbon dioxide ; oxides of chromium ; oxides of lead ; oxides of sulfur ; lower molecular weight polymer fractions; . Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.
- PPG Safety and Health In-Plant Index System (SHIS): HEALTH = 4*, FLAMMABILITY = 3, REACTIVITY = 0
 Acute Hazard Rating System: 0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4 = Severe.
 Chronic Hazard Rating System: 3* or 4*
 SHIS ratings are assigned to identify the relative magnitude of potential hazards. Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments.

THIS IS THE END OF THE MSDS FOR: DDL (00054063.002DDL-)



Manufactured and Supplied by:
REFINISH PRODUCTS
19699 PROGRESS DRIVE STRONGSVILLE, OH 44136

MATERIAL SAFETY DATA SHEET

COATINGS AND RESINS GROUP

PPG Industries, Inc.

DDL MSDS #3

SECTION 1: CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: DDL
REVISION DATE: 11/27/96 (T) 0808
CUSTOMER PART #/NAME: Not applicable
PRODUCT TRADE NAME: DURACRYL ACRYLIC LACQUER
CHEMICAL FAMILY: Acrylic
EMERGENCY MEDICAL/SPILL INFO: (304) 843-1300 (U.S.)
 91-800-00-214 (MEXICO)
TECHNICAL INFORMATION: (216)-672-2800
PRODUCT SAFETY/MSDS INFORMATION: 4325 ROSANNA DRIVE, P.O. BOX 9
 ALLISON PARK, PA 15101
 (412) 492-5555
DATE OF MSDS PREPARATION: 12/09/96

PRIMARY HAZARD WARNING:

Flammable. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone. Harmful or fatal if swallowed. Dried film of this product may be harmful if chewed or swallowed. May cause moderate skin irritation. Causes severe eye irritation. Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat. Sanding and grinding dusts may be harmful if inhaled.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200), THE SUPPLIER NOTIFICATION REQUIREMENTS OF SARA TITLE III, SECTION 313, AND OTHER APPLICABLE RIGHT-TO-KNOW REGULATIONS.

SECTION 2: COMPOSITION INFORMATION ON INGREDIENTS

REF	HAZARDOUS INGREDIENTS	MAX %	CAS NUMBER	CARCINOGEN*
01	METHYL ISOBUTYL KETONE	5 - <10	108-10-1	
02	TOLUENE	40 - <50	108-88-3	
03	XYLENES	1 - <5	1330-20-7	
04	TITANIUM DIOXIDE	10 - <20	13463-67-7	
05	CADMIUM PIGMENT RED 108	0.1 - <1	58339-34-7	I H A
06	ETHYL ALCOHOL	1 - <5	64-17-5	
07	NAPHTHA	1 - <5	64742-95-6	
08	ISOPROPYL ALCOHOL	1 - <5	67-63-0	
09	N-BUTYL ALCOHOL	1 - <5	71-36-3	
10	CADMIUM	5 - <10	7440-43-9	I H O A
11	SELENIUM	1 - <5	7782-49-2	
12	ISOBUTYL ALCOHOL	1 - <5	78-83-1	
13	METHYL ETHYL KETONE	40 - <50	78-93-3	
14	NAPHTHA	1 - <5	8052-41-3	
15	OXO-HEPTYL ACETATE	5 - <10	90438-79-2	
16	1,2,4-TRIMETHYL BENZENE	1 - <5	95-63-6	

* Carcinogens: O = OSHA; A = ACGIH; N = NTP; I = IARC

SARA TITLE III & CERCLA CLASSIFICATIONS

REF	SARA 311/312			
	SARA 102 RO (LBS)	SARA 302 TPQ (LBS)	SARA 313	AC CH FL PR RE
01	5000	NOT ESTAB	Y	Y N Y N N
02	1000	NOT ESTAB	Y	Y N Y N N
03	100	NOT ESTAB	Y	Y N Y N N
04	NOT ESTAB	NOT ESTAB	N	N N N N N
05	NOT ESTAB	NOT ESTAB	Y	Y Y N N N
06	NOT ESTAB	NOT ESTAB	N	Y N Y N N
07	NOT ESTAB	NOT ESTAB	N	Y N Y N N
08	NOT ESTAB	NOT ESTAB	N	Y N Y N N
09	5000	NOT ESTAB	Y	Y N Y N N
10	10	NOT ESTAB	Y	Y Y N N N
11	100	NOT ESTAB	Y	N N N N N
12	5000	NOT ESTAB	N	Y N Y N N
13	5000	NOT ESTAB	Y	Y N Y N N
14	NOT ESTAB	NOT ESTAB	N	Y N Y N N
15	NOT ESTAB	NOT ESTAB	N	Y N Y N N
16	NOT ESTAB	NOT ESTAB	Y	Y N Y N N

SARA 311/312 CATEGORIES FOR THIS PRODUCT: ACUTE = Y, CHRONIC = Y, FLAMMABILITY = Y, PRESSURE = N, REACTIVITY = N

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

ACGIH U.S. OSHA

REF	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
01	50 ppm	75 ppm	50 ppm	75 ppm
02	S- 50 ppm	NOT ESTAB.	100 ppm	150 ppm
03	100 ppm	150 ppm	100 ppm	150 ppm
04	10 mg/m3	NOT ESTAB.	10 mg/m3	NOT ESTAB.
05	R- 0.002 mg/m3	NOT ESTAB.	C- 0.6 mg/m3	NOT ESTAB.
06	1000 ppm	NOT ESTAB.	1000 ppm	NOT ESTAB.
07	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
08	400 ppm	500 ppm	400 ppm	500 ppm
09	C-S- 50 ppm	NOT ESTAB.	C-S- 50 ppm	NOT ESTAB.
10	R- 0.002 mg/m3	NOT ESTAB.	0.005 mg/m3	NOT ESTAB.
11	0.2 mg/m3	NOT ESTAB.	0.2 mg/m3	NOT ESTAB.
12	50 ppm	NOT ESTAB.	50 ppm	NOT ESTAB.
13	200 ppm	300 ppm	200 ppm	300 ppm
13	IPEL-TWA: NOT ESTAB.		IPEL-STEL: 250 ppm	
14	100 ppm	NOT ESTAB.	100 ppm	NOT ESTAB.
15	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
16	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.

[C- Ceiling Limit; S- Potential Skin Absorption; R- Respirable Dust] [NOT ESTAB. = NOT ESTABLISHED = NOT APPLICABLE]

PRODUCT STATUS RELATIVE TO THE U.S. EPA TOXIC SUBSTANCES

CONTROL ACT

All chemical substances in this product are listed on the U.S. TSCA Inventory or are otherwise exempt from TSCA Inventory reporting requirements.

SECTION 3: HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE FROM:

- INGESTION:** Harmful or fatal if swallowed. Dried film of this product may be harmful if chewed or swallowed.
- EYE CONTACT:** Causes severe eye irritation.
- SKIN CONTACT:** May cause moderate skin irritation.
- INHALATION:** Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat. Sanding and grinding dusts may be harmful if inhaled. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage.
- CHRONIC OVEREXPOSURE:** Avoid long-term and repeated contact. Exposure to high levels of airborne cadmium damages kidneys, liver, blood and/or blood forming tissues. NTP and IARC also associate cadmium with increased risk of lung cancer. This product contains titanium dioxide. Animals inhaling massive quantities of titanium dioxide dust in a long-term study developed lung tumors. Studies with humans involved in manufacture of this pigment indicate no increased risk of cancer from exposure. Potential for inhalation of titanium dioxide dusts from coatings is very limited. Since overexposures are not expected, there is no significant hazard for man. This product contains methyl ethyl ketone (MEK). MEK has been shown to cause minor embryotoxic/fetotoxic effects in laboratory animals exposed for prolonged periods at high concentrations via inhalation. The potential for human exposure to high concentrations is expected to be low due to the irritating effects of MEK at low concentrations. This product contains toluene. Toluene inhalation in animals (greater than 1500 ppm) and intentional inhalation of toluene-containing products by humans (e.g. glue) has caused adverse fetal development effects.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Respiratory irritation, throat constriction, metallic taste, shortness of breath, chest pain and flu-like symptoms are signs of cadmium over-exposure. Dried film of this product may be harmful if chewed or swallowed. Eye watering, headaches, nausea, dizziness, and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

WARNING: This product contains a chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

SECTION 4: FIRST AID MEASURES

- INGESTION:** If swallowed, do not induce vomiting. Gently wipe out inside mouth to remove any residual material.



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- ▶ **EYE CONTACT:** In case of eye contact, remove contact lenses and flush eyes immediately with a gentle stream of luke warm water for at least 15 minutes.
- ▶ **SKIN CONTACT:** In case of skin contact, flush immediately with plenty of water for at least 15 minutes followed by washing with soap and water.
- ▶ **INHALATION:** If affected by inhalation of vapor or spray mist, remove to fresh air. Apply artificial respiration and other support measures as required.
- ▶ **OTHER:** If ingestion, any type of overexposure or symptoms of overexposure occur during or following the use of this product, contact a poison control center, emergency room or physician immediately; have Material Safety Data Sheet information available.

SECTION 5: FIRE FIGHTING MEASURES

- ▶ **FLASHPOINT:** 21 Degrees F (-6 Degrees C) (PENSKEY-MARTENS CLOSED CUP)
- ▶ **FLAMMABLE LIMITS:** Lower explosion limit (LEL): 1.7
- ▶ **Upper explosion limit (UEL):** Not available
- ▶ **EXTINGUISHING MEDIA:** Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IB flammable liquid fires.
- ▶ **UNUSUAL FIRE AND EXPLOSION HAZARDS:** Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat.
- ▶ **SPECIAL FIRE FIGHTING PROCEDURES:** Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable. Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- ▶ **STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.
- ▶ **WASTE DISPOSAL METHOD:** Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

SECTION 7: HANDLING AND STORAGE

- ▶ **HANDLING AND STORAGE PRECAUTIONS:** Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class IB flammable liquids.
- ▶ **OTHER PRECAUTIONS:** Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches. Do not apply on interior surfaces or other surfaces to which children may be commonly exposed.

SECTION 8: EXPOSURE CONTROL AND PERSONAL PROTECTION**PERSONAL PROTECTIVE EQUIPMENT FOR:**

- ▶ **EYE PROTECTION:** Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.
- ▶ **SKIN PROTECTION:** Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: nitrile rubber or latex. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment.
- ▶ **RESPIRATORY PROTECTION:** Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used.
- ▶ **OTHER EQUIPMENT:** Clean contaminated clothing and shoes.

VENTILATION REQUIREMENTS: Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

(FORMULA VALUES, NOT SALES SPECIFICATIONS)

BOILING RANGE: 149- 392Degrees F	SOLUBILITY IN WATER: 16.6 %
VAPOR PRESSURE: 40.6 mmHg	WEIGHT/GALLON : 8.00 (LBS/U.S. GAL.)
VAPOR DENSITY: Heavier than air	pH: Not applicable
% VOLATILE/VOLUME: 55-80	% SOLIDS BY WEIGHT: 29-49
SPECIFIC GRAVITY: .960	EVAPORATION RATE(BuOAc = 100): 374
ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.	

SECTION 10: STABILITY AND REACTIVITY

- ▶ This product is normally stable and will not undergo hazardous reactions.
 - ▶ **INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID):** Avoid contact with strong alkalis, strong mineral acids, or strong oxidizing agents.
 - ▶ **HAZARDOUS DECOMPOSITION PRODUCTS:** May produce the following hazardous decomposition products when exposed to extreme heat: carbon monoxide ; carbon dioxide ; lower molecular weight polymer fractions; oxides of cadmium ; . . . Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.
- PPG Safety and Health In-Plant Index System (SHIS): HEALTH = 4*, FLAMMABILITY = 3, REACTIVITY = 0
- Acute Hazard Rating System: 0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4 = Severe.
- Chronic Hazard Rating System: 3* or 4*
- SHIS ratings are assigned to identify the relative magnitude of potential hazards. Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments.

THIS IS THE END OF THE MSDS FOR: DDL (00054064.002DDL)



Manufactured and Supplied by:
REFINISH PRODUCTS
19699 PROGRESS DRIVE STRONGSVILLE, OH 44136

MATERIAL SAFETY DATA SHEET
COATINGS AND RESINS GROUP

PPG Industries, Inc.

DDL MSDS #4

SECTION 1: CHEMICAL, PRODUCT AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: DDL
REVISION DATE: 11/27/96 (T) 0808
CUSTOMER PART #/NAME: Not applicable
PRODUCT TRADE NAME: DURACRYL ACRYLIC LACQUER
CHEMICAL FAMILY: Acrylic
EMERGENCY MEDICAL/SPILL INFO: (304) 843-1300 (U.S.)
 91-800-00-214 (MEXICO)
TECHNICAL INFORMATION: (216)-572-2800
PRODUCT SAFETY/MSDS INFORMATION: 4325 ROSANNA DRIVE, P.O. BOX 9
 ALLISON PARK, PA 15101
 (412) 492-5555
DATE OF MSDS PREPARATION: 12/09/96

PRIMARY HAZARD WARNING

Flammable. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone. Harmful or fatal if swallowed. Contains lead. Lead poisoning is characterized by a metallic taste in the mouth, loss of appetite, indigestion, nausea, vomiting, constipation, abdominal cramps, disturbance of rest and sleep, and weakness. Dried film of this product may be harmful if chewed or swallowed. May cause moderate skin irritation. Causes severe eye irritation. May be harmful if absorbed through the skin. Prolonged or repeated contact may cause an allergic skin reaction. Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat. Sanding and grinding dusts may be harmful if inhaled.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200), THE SUPPLIER NOTIFICATION REQUIREMENTS OF SARA TITLE III, SECTION 313, AND OTHER APPLICABLE RIGHT-TO-KNOW REGULATIONS.

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

REF	HAZARDOUS INGREDIENTS	MAX %	CAS NUMBER	CARCINOGEN*
01	METHYL ISOBUTYL KETONE	5 - <10	108-10-1	
02	TOLUENE	40 - <50	108-88-3	
03	XYLENES	1 - <5	1330-20-7	
04	LEAD CHROMATE SULFATE	10 - <20	1344-37-2	I A
05	TITANIUM DIOXIDE	10 - <20	13463-67-7	
06	CADMIUM PIGMENT RED 108	0.1 - <1	58339-34-7	I N A
07	ETHYL ALCOHOL	1 - <5	64-17-5	
08	NAPHTHA	1 - <5	64742-95-6	
09	ISOPROPYL ALCOHOL	1 - <5	67-63-0	
10	N-BUTYL ALCOHOL	1 - <5	71-36-3	
11	CADMIUM	5 - <10	7440-43-9	I N O A
12	SELENIUM	1 - <5	7782-49-2	
13	ISOBUTYL ALCOHOL	1 - <5	78-83-1	
14	METHYL ETHYL KETONE	40 - <50	78-93-3	
15	NAPHTHA	1 - <5	8052-41-3	
16	OXO-HEPTYL ACETATE	5 - <10	90438-79-2	
17	1,2,4-TRIMETHYL BENZENE	1 - <5	95-63-6	

* Carcinogens: O = OSHA; A = ACGIH; N = NTP; I = IARC

SARA TITLE III & CERCLA CLASSIFICATIONS

REF	SARA 311/312			
	SARA 102 RQ (LBS)	SARA 302 TPQ (LBS)	SARA 313	AC CH FL PR RE
01	5000	NOT ESTAB	Y	Y N Y N N
02	1000	NOT ESTAB	Y	Y N Y N N
03	100	NOT ESTAB	Y	Y H Y H H
04	NOT ESTAB	NOT ESTAB	Y	Y Y N N N
05	NOT ESTAB	NOT ESTAB	N	N N N N N
06	NOT ESTAB	NOT ESTAB	Y	Y Y N N N
07	NOT ESTAB	NOT ESTAB	N	Y N Y N N
08	NOT ESTAB	NOT ESTAB	N	Y N Y N N
09	NOT ESTAB	NOT ESTAB	N	Y N Y N N
10	5000	NOT ESTAB	Y	Y N Y N N
11	10	NOT ESTAB	Y	Y Y N N N
12	100	NOT ESTAB	Y	N N N N N
13	5000	NOT ESTAB	N	Y N Y N N
14	5000	NOT ESTAB	Y	Y N Y N N
15	NOT ESTAB	NOT ESTAB	N	Y N Y N N
16	NOT ESTAB	NOT ESTAB	N	Y N Y N N
17	NOT ESTAB	NOT ESTAB	Y	Y H Y N N

SARA 311/312 CATEGORIES FOR THIS PRODUCT: ACUTE = Y, CHRONIC = Y, FLAMMABILITY = Y, PRESSURE = N, REACTIVITY = N

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

REF	ACGIH		U.S. OSHA	
	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
01	50 ppm	75 ppm	50 ppm	75 ppm
02	S- 50 ppm	NOT ESTAB.	100 ppm	150 ppm
03	100 ppm	150 ppm	100 ppm	150 ppm
04	0.05 mg/m3	NOT ESTAB.	0.05 mg/m3	NOT ESTAB.
05	10 mg/m3	NOT ESTAB.	10 mg/m3	NOT ESTAB.
06	R- 0.002 mg/m3	NOT ESTAB.	C- 0.6 mg/m3	NOT ESTAB.
07	1000 ppm	NOT ESTAB.	1000 ppm	NOT ESTAB.
08	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
09	400 ppm	500 ppm	400 ppm	500 ppm
10	C-S-50 ppm	NOT ESTAB.	C-S-50 ppm	NOT ESTAB.
11	R- 0.002 mg/m3	NOT ESTAB.	0.005 mg/m3	NOT ESTAB.
12	0.2 mg/m3	NOT ESTAB.	0.2 mg/m3	NOT ESTAB.
13	50 ppm	NOT ESTAB.	50 ppm	NOT ESTAB.
14	200 ppm	300 ppm	200 ppm	300 ppm
14	IPEL-TWA: NOT ESTAB.		IPEL-STEL: 250 ppm	
15	100 ppm	NOT ESTAB.	100 ppm	NOT ESTAB.
16	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
17	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.

(C - Ceiling Limit; S - Potential Skin Absorption; R - Respirable Dust) [NOT ESTAB. = NOT ESTABLISHED = NOT APPLICABLE]

PRODUCT STATUS RELATIVE TO THE U.S. EPA TOXIC SUBSTANCES

CONTROL ACT

All chemical substances in this product are listed on the U.S. TSCA Inventory or are otherwise exempt from TSCA Inventory reporting requirements.

SECTION 3: HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE FROM:

INGESTION: Harmful or fatal if swallowed. Contains lead. Lead poisoning is characterized by a metallic taste in the mouth, loss of appetite, indigestion, nausea, vomiting, constipation, abdominal cramps, disturbance of rest and sleep, and weakness. Dried film of this product may be harmful if chewed or swallowed.

EYE CONTACT: Causes severe eye irritation.

SKIN CONTACT: May cause moderate skin irritation. May be harmful if absorbed through the skin. Prolonged or repeated contact may cause an allergic skin reaction.

INHALATION: Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat. Sanding and grinding dusts may be harmful if inhaled. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage.

CHRONIC OVEREXPOSURE: Avoid long-term and repeated contact. Overexposure to lead adversely affects blood and blood forming tissues, kidneys, liver and the central nervous system, reproductive organs and causes adverse developmental effects. NTP and IARC have classified chromium (+6) compounds as carcinogenic. No human data were available on the risk associated with use of strontium chromate or other chromate pigments. This product contains an insoluble form of a chromium (6+) compound. NTP and IARC associate these materials with an increased risk of cancer. Exposure to high levels of airborne cadmium damages kidneys, liver, blood and/or blood forming tissues. NTP and IARC also associate cadmium with increased risk of lung cancer. This product contains titanium dioxide. Animals inhaling massive quantities of titanium dioxide dust in a long-term study developed lung tumors. Studies with humans involved in manufacture of this pigment indicate no increased risk of cancer from exposure. Potential for inhalation of titanium dioxide dusts from coatings is very limited. Since overexposures are not expected, there is no significant hazard for man. This product contains methyl ethyl ketone (MEK). MEK has been shown to cause minor embryotoxic/fetotoxic effects in laboratory animals exposed for prolonged periods at high concentrations via inhalation. The potential for human exposure to high concentrations is expected to be low due to the irritating effects of MEK at low concentrations. This product contains toluene. Toluene inhalation in animals (greater than 1500 ppm) and intentional inhalation of toluene-containing products by humans (e.g. glue) has caused adverse fetal development effects.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Respiratory irritation, throat



Manufactured and Supplied by:
 REFINISH PRODUCTS
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constriction, metallic taste, shortness of breath, chest pain and flu-like symptoms are signs of cadmium over-exposure. Contains lead. Lead poisoning is characterized by a metallic taste in the mouth, loss of appetite, indigestion, nausea, vomiting, constipation, abdominal cramps, disturbance of rest and sleep, and weakness. Dried film of this product may be harmful if chewed or swallowed. Eye watering, headaches, nausea, dizziness, and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

WARNING: This product contains a chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

SECTION 4: FIRST AID MEASURES

- ▶ **INGESTION:** If swallowed, induce vomiting by giving 1 ounce of syrup of ipecac followed by 8 to 16 ounces of water. Wipe out inside mouth to remove any residual material.
- ▶ **EYE CONTACT:** In case of eye contact, remove contact lenses and flush eyes immediately with a gentle stream of luke warm water for at least 15 minutes.
- ▶ **SKIN CONTACT:** In case of skin contact, flush immediately with plenty of water for at least 15 minutes followed by washing with soap and water.
- ▶ **INHALATION:** If affected by inhalation of vapor or spray mist, remove to fresh air. Apply artificial respiration and other support measures as required.
- ▶ **OTHER:** If ingestion, any type of overexposure or symptoms of overexposure occur during or following the use of this product, contact a poison control center, emergency room or physician immediately; have Material Safety Data Sheet information available.

SECTION 5: FIRE FIGHTING MEASURES

- ▶ **FLASHPOINT:** 21 Degrees F (-6 Degrees C) (PENSKEY-MARTENS CLOSED CUP)
- ▶ **FLAMMABLE LIMITS:** Lower explosion limit (LEL): 1.7
- ▶ **Upper explosion limit (UEL):** Not available
- ▶ **EXTINGUISHING MEDIA:** Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IB flammable liquid fires.
- ▶ **UNUSUAL FIRE AND EXPLOSION HAZARDS:** Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat.
- ▶ **SPECIAL FIRE FIGHTING PROCEDURES:** Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable. Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- ▶ **STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.
- ▶ **WASTE DISPOSAL METHOD:** Waste material must be disposed of in accordance with Federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

SECTION 7: HANDLING AND STORAGE

- ▶ **HANDLING AND STORAGE PRECAUTIONS:** Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class IB flammable liquids.
- ▶ **OTHER PRECAUTIONS:** Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches. Do not apply on toys or other children's articles, furniture, or interior surfaces of any dwelling or facility. Do not apply on those exterior surfaces of any dwelling units, such as windowsills, porches, stairs, or railings to which children may be commonly exposed. Wash thoroughly before eating or smoking. Do not apply on interior surfaces or other surfaces to which children may be commonly exposed.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT FOR:

- ▶ **EYE PROTECTION:** Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.
- ▶ **SKIN PROTECTION:** Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: nitrile rubber or latex. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment.
- ▶ **RESPIRATORY PROTECTION:** Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure,

air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used.

▶ **OTHER EQUIPMENT:** Clean contaminated clothing and shoes.

VENTILATION REQUIREMENTS: Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

[FORMULA VALUES, NOT SALES SPECIFICATIONS]

- BOILING RANGE: 149- 392Degrees F
- VAPOR PRESSURE: 40.6 mmHg
- VAPOR DENSITY: Heavier than air
- % VOLATILE/VOLUME: 55-80
- SPECIFIC GRAVITY: .960
- ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.
- SOLUBILITY IN WATER: 16.6 %
- WEIGHT/GALLON : 8.00 (LBS/U.S. GAL.)
- pH: Not applicable
- % SOLIDS BY WEIGHT: 29-49
- EVAPORATION RATE(BuOAc= 100): 374

SECTION 10: STABILITY AND REACTIVITY

- ▶ **This product is normally stable and will not undergo hazardous reactions.**
- ▶ **INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID):** Avoid contact with strong alkalis, strong mineral acids, or strong oxidizing agents.
- ▶ **HAZARDOUS DECOMPOSITION PRODUCTS:** May produce the following hazardous decomposition products when exposed to extreme heat: carbon monoxide ; carbon dioxide ; oxides of chromium ; oxides of lead ; oxides of sulfur ; lower molecular weight polymer fractions; oxides of cadmium ; Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.
- PPG Safety and Health In-Plant Index System (SHIS): HEALTH = 4*, FLAMMABILITY = 3, REACTIVITY = 0
- Acute Hazard Rating System: 0= Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4 = Severe.
- Chronic Hazard Rating System: 3* or 4*
- SHIS ratings are assigned to identify the relative magnitude of potential hazards. Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments.

THIS IS THE END OF THE MSDS FOR: DDL (00054065.002DDL)



Manufactured and Supplied by:
REFINISH PRODUCTS
19699 PROGRESS DRIVE STRONGSVILLE, OH 44136



SECTION 1 - PRODUCT AND COMPANY INFORMATION

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

EMERGENCY PHONE NUMBERS (412) 434-4515 (U.S.)
(24 hours/day):

(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
0532-83889090 (China)

PRODUCT SAFETY/MSDS INFORMATION: (412) 492-5555 7:00 a.m.

- 4:30 p.m. EST

Product ID: ATT10 (0882-F1)
PRODUCT NAME: T-10 THINNER 010T0000
SYNONYMS: None
ISSUE DATE: 06/03/2008
EDITION NO.: 2
CHEMICAL: SOLVENT
FAMILY:

EMERGENCY OVERVIEW:

Flammable. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone. CAUSES SEVERE EYE IRRITATION. MAY CAUSE MODERATE SKIN IRRITATION. MAY BE ABSORBED THROUGH THE SKIN. VAPOR AND/OR SPRAY MIST MAY BE HARMFUL IF INHALED. VAPOR IRRITATES EYES, NOSE, AND THROAT. VAPOR GENERATED AT ELEVATED TEMPERATURES IRRITATES EYES, NOSE AND THROAT. HARMFUL IF SWALLOWED.

SECTION 2 - COMPOSITION INFORMATION

The following ingredient(s) marked with an "x" are considered hazardous under applicable U.S. OSHA and/or Canadian WHMIS regulations. If no ingredients are listed, then there are no U.S. OSHA and/or Canadian WHMIS hazardous ingredients in this product.

Material/ CAS Number	Percent	Hazardous
N-BUTYL ALCOHOL 71-36-3	15 - 40	X
XYLENES 1330-20-7	15 - 40	X
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	X
ETHYL BENZENE 100-41-4	3 - 7	X

SECTION 3 - HAZARDS IDENTIFICATION

ACUTE OVEREXPOSURE EFFECTS

EYE CONTACT:

Causes severe eye irritation. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact.

SKIN CONTACT:

May cause moderate skin irritation. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

SKIN ABSORPTION:

May be absorbed through the skin.

INHALATION:

Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat. Vapor generated at elevated temperatures irritates eyes, nose and throat.

INGESTION:

Harmful if swallowed.

SIGNS & SYMPTOMS OF OVEREXPOSURE:

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

CHRONIC OVEREXPOSURE EFFECTS

Avoid long-term and repeated contact.

Repeated exposure to vapors above recommended exposure limits (see Section 8) may cause irritation of the respiratory system and permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Prolonged exposure to an ingredient(s) in this product may cause kidney and/or liver damage. High exposures to xylenes in some animal studies have been reported to cause health effects on the developing embryo and fetus. These effects were often at levels toxic to the mother. There is some evidence that repeated overexposure to n-butyl alcohol vapors at concentrations above the stated threshold limits can contribute to hearing loss by damaging the auditory nerve and can cause specific injury to the cornea of the eye known as keratitis. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone.

The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures. See Section 11, of this MSDS for a detailed list of chronic health effects information available on individual ingredients in this product.

SECTION 4 - FIRST AID MEASURES

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available.

EYE CONTACT:

Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.

SKIN CONTACT:

Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.

INHALATION:

Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

INGESTION:

Gently wipe or rinse the inside of the mouth with water. Sips of water may be given. Never give anything by mouth to an unconscious person. Contact a poison control center, emergency room or physician right away as further treatment may be necessary.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASHPOINT: 81 Degrees F (27 Degrees C)

FLASHPOINT TEST METHOD:

Pensky-Martens Closed Cup

UEL: Not Available.

LEL: 1.2

AUTOIGNITION TEMPERATURE:

Not Available.

EXTINGUISHING MEDIA:

Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IC flammable liquid fires. Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

PROTECTION OF FIREFIGHTERS:

Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat. May produce hazardous decomposition products when exposed to extreme heat. Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 6 - ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:

Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

STORAGE:

Do not store above 120 degrees F. (48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class IC flammable liquids.

SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 8 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

PERSONAL PROTECTIVE EQUIPMENT

EYES:

Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.

SKIN/GLOVES:

Wear protective clothing. Gloves should be constructed of: butyl rubber. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment. Clean contaminated clothing and shoes.

RESPIRATOR:

Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used. Provide general dilution or local exhaust ventilation in volume, and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

GENERAL HYGIENE - ESTABLISHED EXPOSURE LIMITS

If Threshold Limit Values (TLVs) have been established by ACGIH, OSHA, Ontario or PPG, they will be listed below. These limits are intended for use in the practice of industrial hygiene as guidelines or recommendations in the control of potential workplace health hazards. These limits are not a relative index of toxicity and should not be used by anyone without industrial hygiene training.

Material/ CAS Number	Percent	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
N-BUTYL ALCOHOL 71-36-3	15 - 40	20 PPM	Not established	C-S-50 ppm	Not established
XYLENES 1330-20-7	15 - 40	100 ppm	150 PPM	100 ppm	150 ppm
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	50 ppm	Not established	100 ppm	Not established
ETHYL BENZENE 100-41-4	3 - 7	100 ppm	125 ppm	100 ppm	125 ppm

Material/ CAS Number	Percent	Ontario TWA	Ontario STEL	PPG IPEL	PPG STEL
N-BUTYL ALCOHOL 71-36-3	15 - 40	C-S-50 ppm	Not established	Not established	Not established
XYLENES 1330-20-7	15 - 40	100 ppm	150 ppm	Not established	Not established
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	25 ppm	Not established	Not established	Not established
ETHYL BENZENE 100-41-4	3 - 7	100 PPM	125 PPM	Not established	Not established

Key: ACGIH=American Conference of Governmental Industrial Hygienists; OSHA=Occupational Safety and Health Administration; TLV=Threshold Limit Value; TWA=Time Weighted Average; PEL=Permissible Exposure Limit (1989 Vacated values); IPEL=Internal Permissible Exposure Limit; Ceiling=TLV or PEL Ceiling Limit; STEL=TLV or PEL Short-Term Exposure Limit; Skin= Skin Absorption Designation. [C- Ceiling Limit; S-Potential Skin Absorption; R-Respirable Dust] Additional Information Not applicable.

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

(FORMULA VALUES, NOT SALES SPECIFICATIONS)

SPECIFIC GRAVITY: .834
PHYSICAL STATE: Liquid
Percent Solids: .00
Percent Volatile by Volume: 100.000
pH: Not available.
ODOR THRESHOLD: Not available.
Vapour Pressure: 4.2 mmHg
ODOR/APPEARANCE: Non-viscous liquid with an odor characteristic of the ingredients listed in Section 2.
VAPOR DENSITY: HEAVIER THAN AIR

Evaporation Rate: 52
BOILING POINT OR RANGE: 241 - 304 Degrees F
Freezing Point or Range: Not Applicable.
Melting Point or Range(°C): Not Applicable.
Partition coefficient (n-octanol/water): Not Applicable.
WEIGHT PER GALLON: 6.95 (U.S.) / 8.3 (IMPERIAL)

SECTION 10 - STABILITY AND REACTIVITY

STABILITY:

This product is normally stable and will not undergo hazardous reactions.

CONDITIONS TO AVOID:

None Known.

INCOMPATIBLE MATERIALS:

Avoid contact with strong alkalis, strong mineral acids, or strong oxidizing agents.

HAZARDOUS POLYMERIZATION:

None Known.

HAZARDOUS DECOMPOSITION PRODUCTS:

- Carbon monoxide - Carbon dioxide

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Material/ CAS Number	Percent	ORAL LD50 (g/kg)	DERMAL LD50 (g/kg)	INHALATION LC50 (mg/l)
N-BUTYL ALCOHOL 71-36-3	15 - 40	.79 g/kg	3.40 g/kg	24.25 mg/l 4 hr
XYLENES 1330-20-7	15 - 40	4.30 g/kg	1.70 g/kg	21.88 mg/l 4 hr
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	1.60 g/kg	10.21 g/kg	Not Available
ETHYL BENZENE 100-41-4	3 - 7	3.50 g/kg	17.80 g/kg	Not Available

CHRONIC TOXICITY

Ingredient Target Organ/Chronic Effects:

- Carcinogen - Eye - Embryotoxin - Ear - Kidney - Liver - Brain - Central nervous system - Lung

Mutagenicity Toxicity:

This has not been tested for this product.

Reproductive Toxicity:

This has not been tested for this product.

SUPPLEMENTAL HEALTH INFORMATION:

Material/ CAS Number	Percent	Ingredient Specific Animal Data:
N-BUTYL ALCOHOL 71-36-3	15 - 40	This product contains an ingredient which has been shown to cause adverse reproductive effects in animals at doses which are also toxic to the mother.
ETHYL BENZENE 100-41-4	3 - 7	Ethylbenzene has been reported by NTP to cause cancer in laboratory animals following a chronic (2 year) inhalation exposure. Dose levels of 75, 250 and 750 ppm were used, with evidence of carcinogenicity found in the kidneys of rats and the lung and liver of mice at 750 ppm. The No Observed Effect Level (NOEL) was 75 ppm. The relevance of these findings to humans is uncertain, but appropriate safeguards should be employed to reduce or eliminate inhalation exposure to ethylbenzene.

SECTION 12 - ECOLOGICAL INFORMATION

POTENTIAL ENVIRONMENTAL EFFECTS

Ecotoxicity: No Information Available.

ENVIRONMENTAL FATE

Mobility: No information available.

Biodegradation: No information available.

Bioaccumulation: No Information Available.

PHYSICAL/CHEMICAL

Hydrolysis: No information available.

Photolysis: No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Provide maximum ventilation, only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Take up spilled material with sawdust, vermiculite, or other absorbent material and place in containers for disposal.

Waste material must be disposed of in accordance with federal, state, provincial and local environmental control regulations. Empty containers should be recycled by an appropriately licensed reconditioner/salvager or disposed of through a permitted waste management facility. Additional disposal information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name: NOT AVAILABLE

NOS Technical Name: NOT AVAILABLE

Hazard Class: N.A.

Subsidiary Class(es): N.A.

UN Number: N.A.

Packing Group: N.A.

USA - RQ Hazardous Substances: NOT AVAILABLE

USA-RQ Hazardous Substance: NOT AVAILABLE

Threshold Ship Weight:

Marine Pollutant Name: NOT AVAILABLE

SECTION 15 - REGULATORY INFORMATION

INVENTORY STATUS

U.S. TSCA: This product and/or all of its components are listed on the U.S. TSCA Inventory or is otherwise exempt from TSCA Inventory reporting requirements.

FEDERAL REGULATIONS

US Regulations

Material/ CAS Number	Percent	CERCLA HS - RQ (LBS)	SARA EHS - TPQ (LBS)	SARA 313
N-BUTYL ALCOHOL 71-36-3	15 - 40	5000 lbs	Not Listed	Listed
XYLENES 1330-20-7	15 - 40	100 lbs	Not Listed	Listed
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	Not Listed	Not Listed	Not Listed
ETHYL BENZENE 100-41-4	3 - 7	1000 lbs	Not Listed	Listed

SARA 311/312

Health (acute): Yes

Health (chronic): Yes

Fire (flammable): Yes

Pressure: No

Reactivity: No

WHMIS HAZARD CLASS: - Class B, Division 2 - Class D, Division 2,
 Subdivision A - Class D, Division 2, Subdivision B

STATE/PROVINCIAL REGULATIONS

CALIFORNIA PROP. 65: WARNING: This product contains a chemical known to the State of California to cause cancer.

Additional Information

Material/ CAS Number	Percent	IARC	IARC	IARC	ACGIH	NTP	OSHA
		Group 1(Kno wn Human Carc.)	Group 2A (Proba ble Carc.)	2B (Suspec ted Carc.)	Carc.	Known Carc.	Carc.
ETHYL BENZENE 100-41-4	3-7	N	N	Y	N	N	Y

Key: IARC- International Agency on the Research of Cancer; ACGIH- American Conference of Governmental Industrial Hygienists; NTP- National Toxicology Program *Denotes chemical as NTP Known Carcinogen; + Denotes NTP Possible Carcinogen; OSHA- Occupational Safety and Health Administration.

SECTION 16 - OTHER INFORMATION

Hazard Rating Systems

NFPA Rating: 2 30

HMIS Rating: 2*30

Rating System: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe,
 *=Chronic Effects.

HMIS=Hazardous Materials Identification System; NFPA=National Fire Protection Association;

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

PREPARED BY: Product Safety Department

REASON FOR REVISION: Section 14 has been updated. Date. Edition.
 Updated MSDS format.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200), the supplier notification requirements of SARA Title III, Section 313 and other applicable right-to-know regulations.

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

ATT10 001001 (00442666.002)(06/02/08)
 070109, 001, 0882

*** END OF MSDS ***

MATERIAL SAFETY DATA SHEET



SECTION 1 - PRODUCT AND COMPANY INFORMATION

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

EMERGENCY PHONE NUMBERS (412) 434-4515 (U.S.)
(24 hours/day):

(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
0532-83889090 (China)

PRODUCT SAFETY/MSDS INFORMATION: (412) 492-5555 7:00 a.m.
- 4:30 p.m. EST

Product ID: ABC3-71 (0882)
PRODUCT NAME: ABC #3 RED 283S5416 AF
SYNONYMS: None
ISSUE DATE: 08/15/2007
EDITION NO.: 2
CHEMICAL: Hydrocarbon
FAMILY:

EMERGENCY OVERVIEW:

Flammable. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone. CAUSES SEVERE EYE IRRITATION. MAY CAUSE MODERATE SKIN IRRITATION. MAY BE ABSORBED THROUGH THE SKIN. PROLONGED OR REPEATED CONTACT MAY CAUSE AN ALLERGIC SKIN REACTION. VAPOR AND/OR SPRAY MIST MAY BE HARMFUL IF INHALED. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. VAPOR IRRITATES EYES, NOSE, AND THROAT. VAPOR GENERATED AT ELEVATED TEMPERATURES IRRITATES EYES, NOSE AND THROAT. MAY CAUSE IRRITATION AND/OR ALLERGIC RESPIRATORY REACTION IN LUNGS. HARMFUL OR FATAL IF SWALLOWED. DRIED FILM OF THIS PRODUCT MAY BE HARMFUL IF CHEWED OR SWALLOWED. STABLE - HAZARDOUS REACTIONS POSSIBLE AT EXTREMELY HIGH TEMPERATURES/PRESSURES.

SECTION 2 - COMPOSITION INFORMATION

The following ingredient(s) marked with an "x" are considered hazardous under applicable U.S. OSHA and/or Canadian WHMIS regulations. If no ingredients are listed, then there are no U.S. OSHA and/or Canadian WHMIS hazardous ingredients in this product.

Material/ CAS Number	Percent	Hazardous	
CUPROUS OXIDE 1317-39-1	15 - 40	X	
ZINC OXIDE 1314-13-2	10 - 30	X	
N-BUTYL ALCOHOL 71-36-3	5 - 10	X	
ROSIN 8050-09-7	5 - 10	X	
XYLENES 1330-20-7	5 - 10	X	
ZIRAM, ZINC BIS(DIMETHYLCARBAMODITHI OATO-S,S')- 137-30-4	1 - 5	X	
RED IRON OXIDE 1309-37-1	1 - 5	X	
N-ETHYL-O-TOLUENE SULFONAMIDE 1077-56-1	1 - 5	X	
N-BUTYL ACETATE 123-86-4	0.5-1.5	X	
ETHYL BENZENE 100-41-4	0.1-1.0	X	
(As Zinc Cmpnds) 1314-13-2	*	X	See Sections 8 and 15 for information.
(As Copper Cmpnds) 1317-39-1	*	X	See Sections 8 and 15 for information.
(As Zinc Cmpnds) 137-30-4	*	X	See Sections 8 and 15 for information.

SECTION 3 - HAZARDS IDENTIFICATION

ACUTE OVEREXPOSURE EFFECTS

EYE CONTACT:

Causes severe eye irritation. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact.

SKIN CONTACT:

May cause moderate skin irritation. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

SKIN ABSORPTION:

May be absorbed through the skin. Prolonged or repeated contact may cause an allergic skin reaction.

INHALATION:

Vapor and/or spray mist may be harmful if inhaled. Sanding and grinding dusts may be harmful if inhaled. Vapor irritates eyes, nose, and throat. Vapor generated at elevated temperatures irritates eyes, nose and throat. May cause irritation and/or allergic respiratory reaction in lungs.

INGESTION:

Harmful or fatal if swallowed. Dried film of this product may be harmful if chewed or swallowed.

SIGNS & SYMPTOMS OF OVEREXPOSURE:

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

CHRONIC OVEREXPOSURE EFFECTS

Avoid long-term and repeated contact.

Repeated exposure to vapors above recommended exposure limits (see Section 8) may cause irritation of the respiratory system and permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Prolonged exposure to an ingredient(s) in this product may cause kidney and/or liver damage. High exposures to xylenes in some animal studies have been reported to cause health effects on the developing embryo and fetus. These effects were often at levels toxic to the mother. There is some evidence that repeated overexposure to n-butyl alcohol vapors at concentrations above the stated threshold limits can contribute to hearing loss by damaging the auditory nerve and can cause specific injury to the cornea of the eye known as keratitis. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. An ingredient in this product has caused fetal toxicity in experimental animals. The significance of these findings for humans is unknown.

The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures. See Section 11, of this MSDS for a detailed list of chronic health effects information available on individual ingredients in this product.

SECTION 4 - FIRST AID MEASURES

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available.

EYE CONTACT:

Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.

SKIN CONTACT:

Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.

INHALATION:

Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

INGESTION:

Gently wipe or rinse the inside of the mouth with water. Sips of water may be given if person is fully conscious. Never give anything by mouth to an unconscious or convulsing person. Do Not induce vomiting. Contact a poison control center, emergency room or physician right away as further treatment will be necessary.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASHPOINT: 83 Degrees F (28 Degrees C)

FLASHPOINT TEST METHOD:

Pensky-Martens Closed Cup

UEL: Not Available.

LEL: 1.4

AUTOIGNITION TEMPERATURE:

Not Available.

EXTINGUISHING MEDIA:

Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IC flammable liquid fires. Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

PROTECTION OF FIREFIGHTERS:

Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

When this product is used, the overspray and other combustible materials such as paint booth filters, rags, masking materials, etc., contaminated by coating material are subject to spontaneous combustion. Wetting the contaminated materials and not packing them tightly together in refuse containers will minimize the potential for this to occur. Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat. May produce hazardous decomposition products when exposed to extreme heat. Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 6 - ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:

Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

Do not apply on interior surfaces or other surfaces to which children may be commonly exposed.

STORAGE:

Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class IC flammable liquids.

SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 8 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

PERSONAL PROTECTIVE EQUIPMENT

EYES:

Wear chemical-type splash goggles and full face shield when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.

SKIN/GLOVES:

Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: butyl rubber. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment. Clean contaminated clothing and shoes.

RESPIRATOR:

Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used. Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

Do not apply on interior surfaces or other surfaces to which children may be commonly exposed.

GENERAL HYGIENE - ESTABLISHED EXPOSURE LIMITS

If Threshold Limit Values (TLVs) have been established by ACGIH, OSHA, Ontario or PPG, they will be listed below. These limits are intended for use in the practice of industrial hygiene as guidelines or recommendations in the control of potential workplace health hazards. These limits are not a relative index of toxicity and should not be used by anyone without industrial hygiene training.

Material/ CAS Number	Percent	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
ZINC OXIDE 1314-13-2	10 - 30	R- 2 MG/m ³	10 MG/m ³	R- 5 mg/m ³	10 mg/m ³
N-BUTYL ALCOHOL 71-36-3	5 - 10	C- 50 ppm	Not established	C-S-50 ppm	Not established
XYLENES 1330-20-7	5 - 10	100 ppm	150 PPM	100 ppm	150 ppm
RED IRON OXIDE 1309-37-1	1 - 5	5 MG/m ³	Not established	10 mg/m ³	Not established
N-BUTYL ACETATE 123-86-4	0.5-1.5	150 PPM	200 ppm	150 ppm	200 ppm
ETHYL BENZENE 100-41-4	0.1-1.0	100 ppm	125 ppm	100 ppm	125 ppm

Material/ CAS Number	Percent	Ontario TWA	Ontario STEL	PPG IPEL	PPG STEL
ZINC OXIDE 1314-13-2	10 - 30	R- 2 MG/m ³	10 MG/m ³	Not established	Not established
N-BUTYL ALCOHOL 71-36-3	5 - 10	C-S-50 ppm	Not established	Not established	Not established
XYLENES 1330-20-7	5 - 10	100 ppm	150 ppm	Not established	Not established
RED IRON OXIDE 1309-37-1	1 - 5	5 MG/m ³	Not established	Not established	Not established
N-BUTYL ACETATE 123-86-4	0.5-1.5	150 ppm	200 ppm	Not established	Not established
ETHYL BENZENE 100-41-4	0.1-1.0	100 PPM	125 PPM	Not established	Not established

Key: ACGIH=American Conference of Governmental Industrial Hygienists; OSHA=Occupational Safety and Health Administration; TLV=Threshold Limit Value; TWA=Time Weighted Average; PEL=Permissible Exposure Limit (1989 Vacated values); IPEL=Internal Permissible Exposure Limit; Ceiling=TLV or PEL Ceiling Limit; STEL=TLV or PEL Short-Term Exposure Limit; Skin= Skin Absorption Designation. [C- Ceiling Limit; S-Potential Skin Absorption; R-Respirable Dust] Additional Information Not applicable.

**SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES
(FORMULA VALUES, NOT SALES SPECIFICATIONS)**

SPECIFIC GRAVITY: 1.969
PHYSICAL STATE: Liquid
Percent Solids: 80.42
Percent Volatile by Volume: 45.970

pH: Not available.
ODOR THRESHOLD: Not available.
Vapour Pressure: 6.0 mmHg
ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.
VAPOR DENSITY: HEAVIER THAN AIR
Evaporation Rate: 58
BOILING POINT OR RANGE: 148 - 288Degrees F
Freezing Point or Range: Not Applicable.
Melting Point or Range(°C): Not Applicable.
Partition coefficient (n-octanol/water): Not Applicable.
WEIGHT PER GALLON: 16.41 (U.S.) / 19.6 (IMPERIAL)

SECTION 10 - STABILITY AND REACTIVITY

STABILITY:

This product is normally stable but may undergo hazardous reactions at extremely high temperatures and pressures.

CONDITIONS TO AVOID:

None Known.

INCOMPATIBLE MATERIALS:

Avoid contact with strong alkalis, strong mineral acids, or strong oxidizing agents.

HAZARDOUS POLYMERIZATION:

None Known.

HAZARDOUS DECOMPOSITION PRODUCTS:

- Carbon monoxide - Carbon dioxide - Oxides of nitrogen - Oxides of zinc - Oxides of sulfur - Iron oxides - Oxides of copper

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Material/ CAS Number	Percent	ORAL LD50 (g/kg)	DERMAL LD50 (g/kg)	INHALATION LC50 (mg/l)
CUPROUS OXIDE 1317-39-1	15 - 40	.47 g/kg	Not Available	Not Available
N-BUTYL ALCOHOL 71-36-3	5 - 10	.79 g/kg	3.40 g/kg	24.25 mg/l 4 hr
XYLENES 1330-20-7	5 - 10	4.30 g/kg	1.70 g/kg	21.88 mg/l 4 hr
ZIRAM, ZINC BIS(DIMETHYLCAR BAMODITHIOATO- S,S')- 137-30-4	1 - 5	.32 g/kg	2.00 g/kg	.08 mg/l 4 hr
RED IRON OXIDE 1309-37-1	1 - 5	10.00 g/kg	Not Available	Not Available
N-ETHYL-O- TOLUENE SULFONAMIDE 1077-56-1	1 - 5	2.25 g/kg	1.00 g/kg	Not Available
N-BUTYL ACETATE 123-86-4	0.5-1.5	10.77 g/kg	17.60 g/kg	Not Available
ETHYL BENZENE 100-41-4	0.1-1.0	3.50 g/kg	17.80 g/kg	Not Available

CHRONIC TOXICITY

Ingredient Target Organ/Chronic Effects:

- Respiratory sensitizer - Carcinogen - Eye - Embryotoxin - Ear - Kidney - Liver - Brain - Central nervous system - Lung - Fetotoxin

Mutagenicity Toxicity:

This has not been tested for this product.

Reproductive Toxicity:
This has not been tested for this product.

SUPPLEMENTAL HEALTH INFORMATION:

Material/ CAS Number	Percent	Ingredient Specific Animal Data:
N-BUTYL ALCOHOL 71-36-3	5 - 10	This product contains an ingredient which has been shown to cause adverse reproductive effects in animals at doses which are also toxic to the mother.
ETHYL BENZENE 100-41-4	0.1-1.0	Ethylbenzene has been reported by NTP to cause cancer in laboratory animals following a chronic (2 year) inhalation exposure. Dose levels of 75, 250 and 750 ppm were used, with evidence of carcinogenicity found in the kidneys of rats and the lung and liver of mice at 750 ppm. The No Observed Effect Level (NOEL) was 75 ppm. The relevance of these findings to humans is uncertain, but appropriate safeguards should be employed to reduce or eliminate inhalation exposure to ethylbenzene.

SECTION 12 - ECOLOGICAL INFORMATION

POTENTIAL ENVIRONMENTAL EFFECTS

Ecotoxicity: No Information Available.

ENVIRONMENTAL FATE

Mobility: No information available.

Biodegradation: No information available.

Bioaccumulation: No Information Available.

PHYSICAL/CHEMICAL

Hydrolysis: No information available.

Photolysis: No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Provide maximum ventilation, only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Take up spilled material with sawdust, vermiculite, or other absorbent material and place in containers for disposal.

Waste material must be disposed of in accordance with federal, state, provincial and local environmental control regulations. Empty containers should be recycled by an appropriately licensed reconditioner/salvager or disposed of through a permitted waste management facility. Additional disposal information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name: Paint
NOS Technical Name: None
Hazard Class: 3
Subsidiary Class(es): None
UN Number: UN1263
Packing Group: III

USA - RQ Hazardous Substances: Xylenes, Lead
USA-RQ Hazardous Substance Xylenes>1268.91 Pounds,
Threshold Ship Weight: Lead>33366.67 Pounds
Marine Pollutant Name: None
USA Shipments Only - RQ Threshold Ship Weight: This is the total weight of this product that must be shipped to exceed the RQ quantity.

SECTION 15 - REGULATORY INFORMATION

INVENTORY STATUS

U.S. TSCA: This product and/or all of its components are listed on the U.S. TSCA inventory or is otherwise exempt from TSCA inventory reporting requirements.

FEDERAL REGULATIONS

US Regulations

Material/ CAS Number	Percent	CERCLA HS - RQ (LBS)	SARA EHS- TPQ (LBS)	SARA 313
CUPROUS OXIDE 1317-39-1	15 - 40	Not Listed	Not Listed	Listed
ZINC OXIDE 1314-13-2	10 - 30	Not Listed	Not Listed	Not Listed
N-BUTYL ALCOHOL 71-36-3	5 - 10	5000 lbs	Not Listed	Listed
ROSIN 8050-09-7	5 - 10	Not Listed	Not Listed	Not Listed
XYLENES 1330-20-7	5 - 10	100 lbs	Not Listed	Listed
ZIRAM, ZINC BIS(DIMETHYLCAR BAMODITHIOATO- S,S')- 137-30-4	1 - 5	10 LB	Not Listed	Not Listed
RED IRON OXIDE 1309-37-1	1 - 5	Not Listed	Not Listed	Not Listed
N-ETHYL-O- TOLUENE SULFONAMIDE 1077-56-1	1 - 5	Not Listed	Not Listed	Not Listed
N-BUTYL ACETATE 123-86-4	0.5-1.5	5000 lbs	Not Listed	Not Listed
ETHYL BENZENE 100-41-4	0.1-1.0	1000 lbs	Not Listed	Listed
(As Zinc Cmpnds) 1314-13-2	*	Not Listed	Not Listed	Listed
(As Copper Cmpnds) 1317-39-1	*	Not Listed	Not Listed	Listed
(As Zinc Cmpnds) 137-30-4	*	Not Listed	Not Listed	Listed

SARA 311/312

Health (acute): Yes

Health (chronic): Yes

Fire (flammable): Yes

Pressure: No

Reactivity: No

WHMIS HAZARD CLASS: - Class B, Division 6 - Class D, Division 2, Subdivision A - Class D, Division 2, Subdivision B - Class D, Division 1, Subdivision B

STATE/PROVINCIAL REGULATIONS

CALIFORNIA PROP. 65: WARNING: This product contains a chemical known to the State of California to cause cancer.

Additional Information

Material/ CAS Number	Percent	IARC Group 1(Kno wn Human Carc.)	IARC Group 2A (Proba ble Carc.)	IARC 2B (Suspec ted Carc.)	ACGIH Carc.	NTP Known Carc.	OSHA Carc.
ETHYL BENZENE 100-41-4	0.1-1.0	N	N	Y	N	N	Y

Key: IARC- International Agency on the Research of Cancer; ACGIH- American Conference of Governmental Industrial Hygienists; NTP- National Toxicology Program *Denotes chemical as NTP Known Carcinogen; + Denotes NTP Possible Carcinogen; OSHA- Occupational Safety and Health Administration.

SECTION 16 - OTHER INFORMATION

Hazard Rating Systems

NFPA Rating: 3 31

HMS Rating: 3*31

Rating System: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe,
*=Chronic Effects.

HMS=Hazardous Materials Identification System; NFPA=National Fire
Protection Association;

Safe handling of this product requires that all of the information on the
MSDS be evaluated for specific work environments and conditions of use.

PREPARED BY: Product Safety Department

REASON FOR REVISION: Section 2 has been updated. Changes to this
section may also result in changes in sections 8, 11 and/or 15. Date.
Edition.

Updated MSDS
format.

This Material Safety Data Sheet has been prepared in accordance with
Canada's Workplace Hazardous Materials Information System (WHMIS)
and the OSHA Hazard Communication Standard (29 CFR 1910.1200),
the supplier notification requirements of SARA Title III, Section 313 and
other applicable right-to-know regulations.

Additional environmental information is contained on the Environmental
Data Sheet for this product, which can be obtained from your PPG
representative.

ABC3-71 000001 (00460996.002)(08/14/07)
070504, 000, 0882

*** END OF MSDS ***

MATERIAL SAFETY DATA SHEET



SECTION 1 - PRODUCT AND COMPANY INFORMATION

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

EMERGENCY PHONE NUMBERS (412) 434-4515 (U.S.)
(24 hours/day):

(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
0532-83889090 (China)

PRODUCT SAFETY/MSDS INFORMATION: (412) 492-5555 7:00 a.m.
- 4:30 p.m. EST

Product ID: ABC3-92 (0882)
PRODUCT NAME: ABC #3 BLACK 283S5773 AF
SYNONYMS: None
ISSUE DATE: 08/15/2007
EDITION NO.: 2
CHEMICAL FAMILY: Hydrocarbon

EMERGENCY OVERVIEW:

Flammable. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone. CAUSES SEVERE EYE IRRITATION. MAY CAUSE MODERATE SKIN IRRITATION. MAY BE ABSORBED THROUGH THE SKIN. PROLONGED OR REPEATED CONTACT MAY CAUSE AN ALLERGIC SKIN REACTION. VAPOR AND/OR SPRAY MIST MAY BE HARMFUL IF INHALED. VAPOR IRRITATES EYES, NOSE, AND THROAT. VAPOR GENERATED AT ELEVATED TEMPERATURES IRRITATES EYES, NOSE AND THROAT. MAY CAUSE IRRITATION AND/OR ALLERGIC RESPIRATORY REACTION IN LUNGS. HARMFUL OR FATAL IF SWALLOWED. STABLE - HAZARDOUS REACTIONS POSSIBLE AT EXTREMELY HIGH TEMPERATURES/PRESSURES.

SECTION 2 - COMPOSITION INFORMATION

The following ingredient(s) marked with an "x" are considered hazardous under applicable U.S. OSHA and/or Canadian WHMIS regulations. If no ingredients are listed, then there are no U.S. OSHA and/or Canadian WHMIS hazardous ingredients in this product.

Material/ CAS Number	Percent	Hazardous	
CUPROUS OXIDE 1317-39-1	40 - 70	X	
ZINC OXIDE 1314-13-2	7 - 13	X	
N-BUTYL ALCOHOL 71-36-3	5 - 10	X	
ROSIN 8050-09-7	5 - 10	X	
XYLENES 1330-20-7	5 - 10	X	
N-ETHYL-O-TOLUENE SULFONOMIDE 1077-56-1	1 - 5	X	
N-BUTYL ACETATE 123-86-4	0.5-1.5	X	
ETHYL BENZENE 100-41-4	0.1-1.0	X	
(As Copper Cmpnds) 1317-39-1	*	X	See Sections 8 and 15 for information.
(As Zinc Cmpnds) 1314-13-2	*	X	See Sections 8 and 15 for information.

SECTION 3 - HAZARDS IDENTIFICATION

ACUTE OVEREXPOSURE EFFECTS

EYE CONTACT:

Causes severe eye irritation. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact.

SKIN CONTACT:

May cause moderate skin irritation. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

SKIN ABSORPTION:

May be absorbed through the skin. Prolonged or repeated contact may cause an allergic skin reaction.

INHALATION:

Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat. Vapor generated at elevated temperatures irritates eyes, nose and throat. May cause irritation and/or allergic respiratory reaction in lungs.

INGESTION:

Harmful or fatal if swallowed.

SIGNS & SYMPTOMS OF OVEREXPOSURE:

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

CHRONIC OVEREXPOSURE EFFECTS

Avoid long-term and repeated contact.

Repeated exposure to vapors above recommended exposure limits (see Section 8) may cause irritation of the respiratory system and permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Prolonged exposure to an ingredient(s) in this product may cause kidney and/or liver damage. High exposures to xylenes in some animal studies have been reported to cause health effects on the developing embryo and fetus. These effects were often at levels toxic to the mother. There is some evidence that repeated overexposure to n-butyl alcohol vapors at concentrations above the stated threshold limits can contribute to hearing loss by damaging the auditory nerve and can cause specific injury to the cornea of the eye known as keratitis. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. An ingredient in this product has caused fetal toxicity in experimental animals. The significance of these findings for humans is unknown.

The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures. See Section 11, of this MSDS for a detailed list of chronic health effects information available on individual ingredients in this product.

SECTION 4 - FIRST AID MEASURES

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available.

EYE CONTACT:

Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.

SKIN CONTACT:

Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.

INHALATION:

Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

INGESTION:

Gently wipe or rinse the inside of the mouth with water. Sips of water may be given if person is fully conscious. Never give anything by mouth to an unconscious or convulsing person. Do Not induce vomiting. Contact a poison control center, emergency room or physician right away as further treatment will be necessary.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASHPOINT: 83 Degrees F (28 Degrees C)

FLASHPOINT TEST METHOD:

Pensky-Martens Closed Cup

UEL: Not Available.

LEL: 1.8

AUTOIGNITION TEMPERATURE:

Not Available.

EXTINGUISHING MEDIA:

Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IC flammable liquid fires. Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

PROTECTION OF FIREFIGHTERS:

Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

When this product is used, the overspray and other combustible materials such as paint booth filters, rags, masking materials, etc., contaminated by coating material are subject to spontaneous combustion. Wetting the contaminated materials and not packing them tightly together in refuse containers will minimize the potential for this to occur. Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat. May produce hazardous decomposition products when exposed to extreme heat. Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 6 - ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbent should be placed in this container.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:

Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

STORAGE:

Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class IC flammable liquids.

SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 8 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

PERSONAL PROTECTIVE EQUIPMENT

EYES:

Wear chemical-type splash goggles and full face shield when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.

SKIN/GLOVES:

Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: butyl rubber. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment. Clean contaminated clothing and shoes.

RESPIRATOR:

Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used. Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

GENERAL HYGIENE - ESTABLISHED EXPOSURE LIMITS

If Threshold Limit Values (TLVs) have been established by ACGIH, OSHA, Ontario or PPG, they will be listed below. These limits are intended for use in the practice of industrial hygiene as guidelines or recommendations in the control of potential workplace health hazards. These limits are not a relative index of toxicity and should not be used by anyone without industrial hygiene training.

Material/ CAS Number	Percent	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
ZINC OXIDE 1314-13-2	7 - 13	R- 2 MG/m ³	10 MG/m ³	R- 5 mg/m ³	10 mg/m ³
N-BUTYL ALCOHOL 71-36-3	5 - 10	C- 50 ppm	Not established	C-S-50 ppm	Not established
XYLENES 1330-20-7	5 - 10	100 ppm	150 PPM	100 ppm	150 ppm
N-BUTYL ACETATE 123-86-4	0.5-1.5	150 PPM	200 ppm	150 ppm	200 ppm
ETHYL BENZENE 100-41-4	0.1-1.0	100 ppm	125 ppm	100 ppm	125 ppm

Material/ CAS Number	Percent	Ontario TWA	Ontario STEL	PPG IPEL	PPG STEL
ZINC OXIDE 1314-13-2	7 - 13	R- 2 MG/m ³	10 MG/m ³	Not established	Not established
N-BUTYL ALCOHOL 71-36-3	5 - 10	C-S-50 ppm	Not established	Not established	Not established
XYLENES 1330-20-7	5 - 10	100 ppm	150 ppm	Not established	Not established
N-BUTYL ACETATE 123-86-4	0.5-1.5	150 ppm	200 ppm	Not established	Not established
ETHYL BENZENE 100-41-4	0.1-1.0	100 PPM	125 PPM	Not established	Not established

Key: ACGIH=American Conference of Governmental Industrial Hygienists; OSHA=Occupational Safety and Health Administration; TLV=Threshold Limit Value; TWA=Time Weighted Average; PEL=Permissible Exposure Limit (1989 Vacated values); IPEL=Internal Permissible Exposure Limit; Ceiling=TLV or PEL Ceiling Limit; STEL=TLV or PEL Short-Term Exposure Limit; Skin= Skin Absorption Designation. [C- Ceiling Limit; S-Potential Skin Absorption; R-Respirable Dust] Additional Information Not applicable.

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES
(FORMULA VALUES, NOT SALES SPECIFICATIONS)

SPECIFIC GRAVITY: 2.059
PHYSICAL STATE: Liquid
Percent Solids: 81.23
Percent Volatile by Volume: 46.190
pH: Not available.
ODOR THRESHOLD: Not available.
Vapour Pressure: 10.1 mmHg
ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.
VAPOR DENSITY: HEAVIER THAN AIR
Evaporation Rate: 64
BOILING POINT OR RANGE: 148 - 288Degrees F
Freezing Point or Range: Not Applicable.
Melting Point or Range(°C): Not Applicable.
Partition coefficient (n-octanol/water): Not Applicable.
WEIGHT PER GALLON: 17.16 (U.S.) / 20.5 (IMPERIAL)

SECTION 10 - STABILITY AND REACTIVITY

STABILITY:
This product is normally stable but may undergo hazardous reactions at extremely high temperatures and pressures.
CONDITIONS TO AVOID:
None Known.
INCOMPATIBLE MATERIALS:
Avoid contact with strong alkalis, strong mineral acids, or strong oxidizing agents.
HAZARDOUS POLYMERIZATION:
None Known.
HAZARDOUS DECOMPOSITION PRODUCTS:
- Carbon monoxide - Carbon dioxide - Oxides of zinc - Oxides of sulfur - Iron oxides - Oxides of copper - Lower molecular weight polymer fractions

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Material/ CAS Number	Percent	ORAL LD50 (g/kg)	DERMAL LD50 (g/kg)	INHALATION LC50 (mg/l)
CUPROUS OXIDE 1317-39-1	40 - 70	.47 g/kg	Not Available	Not Available
N-BUTYL ALCOHOL 71-36-3	5 - 10	.79 g/kg	3.40 g/kg	24.25 mg/l 4 hr
XYLENES 1330-20-7	5 - 10	4.30 g/kg	1.70 g/kg	21.88 mg/l 4 hr
N-ETHYL-O- TOLUENE SULFONAMIDE 1077-56-1	1 - 5	2.25 g/kg	1.00 g/kg	Not Available
N-BUTYL ACETATE 123-86-4	0.5-1.5	10.77 g/kg	17.60 g/kg	Not Available
ETHYL BENZENE 100-41-4	0.1-1.0	3.50 g/kg	17.80 g/kg	Not Available

CHRONIC TOXICITY

Ingredient Target Organ/Chronic Effects:

- Respiratory sensitizer - Carcinogen - Eye - Embryotoxin - Ear - Kidney - Liver - Brain - Central nervous system - Lung - Fetotoxin

Mutagenicity Toxicity:

This has not been tested for this product.

Reproductive Toxicity:

This has not been tested for this product.

SUPPLEMENTAL HEALTH INFORMATION:

Material/ CAS Number	Percent	Ingredient Specific Animal Data:
N-BUTYL ALCOHOL 71-36-3	5 - 10	This product contains an ingredient which has been shown to cause adverse reproductive effects in animals at doses which are also toxic to the mother.
ETHYL BENZENE 100-41-4	0.1-1.0	Ethylbenzene has been reported by NTP to cause cancer in laboratory animals following a chronic (2 year) inhalation exposure. Dose levels of 75, 250 and 750 ppm were used, with evidence of carcinogenicity found in the kidneys of rats and the lung and liver of mice at 750 ppm. The No Observed Effect Level (NOEL) was 75 ppm. The relevance of these findings to humans is uncertain, but appropriate safeguards should be employed to reduce or eliminate inhalation exposure to ethylbenzene.

SECTION 12 - ECOLOGICAL INFORMATION

POTENTIAL ENVIRONMENTAL EFFECTS

Ecotoxicity: No Information Available.

ENVIRONMENTAL FATE

Mobility: No information available.
Biodegradation: No information available.
Bioaccumulation: No Information Available.

PHYSICAL/CHEMICAL

Hydrolysis: No information available.
Photolysis: No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Provide maximum ventilation, only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Take up spilled material with sawdust, vermiculite, or other absorbent material and place in containers for disposal.

Waste material must be disposed of in accordance with federal, state, provincial and local environmental control regulations. Empty containers should be recycled by an appropriately licensed reconditioner/salvager or disposed of through a permitted waste management facility. Additional disposal information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

SECTION 14 - TRANSPORTATION INFORMATION	
Proper Shipping Name:	Paint
NOS Technical Name:	None
Hazard Class:	3
Subsidiary Class(es):	None
UN Number:	UN1263
Packing Group:	III

USA - RQ Hazardous Substances: Xylenes, Lead
 USA-RQ Hazardous Substance Xylenes>1406.33 Pounds,
 Threshold Ship Weight: Lead>25025 Pounds
 Marine Pollutant Name: None
 USA Shipments Only - RQ Threshold Ship Weight: This is the total weight of this product that must be shipped to exceed the RQ quantity.

SECTION 15 - REGULATORY INFORMATION

INVENTORY STATUS
 U.S. TSCA: This product and/or all of its components are listed on the U.S. TSCA Inventory or is otherwise exempt from TSCA Inventory reporting requirements.

FEDERAL REGULATIONS

US Regulations

Material/ CAS Number	Percent	CERCLA HS - RQ (LBS)	SARA EHS- TPQ (LBS)	SARA 313
CUPROUS OXIDE 1317-39-1	40 - 70	Not Listed	Not Listed	Listed
ZINC OXIDE 1314-13-2	7 - 13	Not Listed	Not Listed	Not Listed
N-BUTYL ALCOHOL 71-36-3	5 - 10	5000 lbs	Not Listed	Listed
ROSIN 8050-09-7	5 - 10	Not Listed	Not Listed	Not Listed
XYLENES 1330-20-7	5 - 10	100 lbs	Not Listed	Listed
N-ETHYL-O- TOLUENE SULFONOMIDE 1077-56-1	1 - 5	Not Listed	Not Listed	Not Listed
N-BUTYL ACETATE 123-86-4	0.5-1.5	5000 lbs	Not Listed	Not Listed
ETHYL BENZENE 100-41-4	0.1-1.0	1000 lbs	Not Listed	Listed
(As Copper Cmpnds) 1317-39-1	*	Not Listed	Not Listed	Listed
(As Zinc Cmpnds) 1314-13-2	*	Not Listed	Not Listed	Listed

SARA 311/312

Health (acute): Yes
 Health (chronic): Yes
 Fire (flammable): Yes
 Pressure: No
 Reactivity: No

WHMIS HAZARD CLASS: - Class B, Division 6 - Class D, Division 2,
 Subdivision A - Class D, Division 2, Subdivision B - Class D, Division 1,
 Subdivision B

STATE/PROVINCIAL REGULATIONS

CALIFORNIA PROP. 65: WARNING: This product contains a chemical known to the State of California to cause cancer.

Additional Information

Material/ CAS Number	Percent	IARC Group 1(Kno wn Human Carc.)	IARC Group 2A (Proba ble Carc.)	IARC 2B (Suspec ted Carc.)	ACGIH Carc.	NTP Known Carc.	OSHA Carc.
ETHYL BENZENE 100-41-4	0.1-1.0	N	N	Y	N	N	Y

Key: IARC- International Agency on the Research of Cancer; ACGIH- American Conference of Governmental Industrial Hygienists; NTP- National Toxicology Program *Denotes chemical as NTP Known Carcinogen; + Denotes NTP Possible Carcinogen; OSHA- Occupational Safety and Health Administration.

SECTION 16 - OTHER INFORMATION

Hazard Rating Systems

NFPA Rating: 3 31

HMIS Rating: 3*31

Rating System: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, * =Chronic Effects.

HMIS=Hazardous Materials Identification System; NFPA=National Fire Protection Association;

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

PREPARED BY: Product Safety Department

REASON FOR REVISION: Section 2 has been updated. Changes to this section may also result in changes in sections 8, 11 and/or 15. Section 9 has been updated. Date. Edition.

Updated MSDS

format.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200), the supplier notification requirements of SARA Title III, Section 313 and other applicable right-to-know regulations.

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

ABC3-92 000001 (00454233.002)(08/14/07)
 070323, 000, 0882

*** END OF MSDS ***

MATERIAL SAFETY DATA SHEET



SECTION 1 - PRODUCT AND COMPANY INFORMATION

PPG Industries, Inc.
 One PPG Place
 Pittsburgh, PA 15272

EMERGENCY PHONE NUMBERS (412) 434-4515 (U.S.)
 (24 hours/day):

(514) 645-1320 (Canada)
 01-800-00-21-400 (Mexico)
 0532-83889090 (China)

PRODUCT SAFETY/MSDS INFORMATION: (412) 492-5555 7:00 a.m. - 4:30 p.m. EST

Product ID: AT240-126 (0882)
PRODUCT NAME: AMERCOAT 240 BUFF DV1642
SYNONYMS: None
ISSUE DATE: 08/07/2007
EDITION NO.: 2
CHEMICAL FAMILY: Epoxy

EMERGENCY OVERVIEW:

Combustible. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. CAUSES SEVERE EYE IRRITATION. CAUSES PRIMARY SKIN IRRITATION. MAY BE ABSORBED THROUGH THE SKIN. PROLONGED OR REPEATED CONTACT MAY CAUSE AN ALLERGIC SKIN REACTION. VAPOR AND/OR SPRAY MIST MAY BE HARMFUL IF INHALED. VAPOR IRRITATES EYES, NOSE, AND THROAT. HARMFUL IF SWALLOWED.

SECTION 2 - COMPOSITION INFORMATION

The following ingredient(s) marked with an "x" are considered hazardous under applicable U.S. OSHA and/or Canadian WHMIS regulations. If no ingredients are listed, then there are no U.S. OSHA and/or Canadian WHMIS hazardous ingredients in this product.

Material/ CAS Number	Percent	Hazardous	
SODIUM POTASSIUM ALUMINUM SILICATE 37244-96-5	40 - 70	X	
EPOXY RESIN 67924-34-9	10 - 30	X	
EPOXY RESIN 25066-38-6	5 - 10	X	
MICA 12001-26-2	3 - 7	X	
METHYL (N-AMYL) KETONE 110-43-0	3 - 7	X	
TITANIUM DIOXIDE 13463-67-7	3 - 7	X	
N-BUTYL ALCOHOL 71-36-3	1 - 5	X	
BUTANDIOLDIGLYCIDYL ETHER 2425-79-8	1 - 5	X	
XYLENES 1330-20-7	0.1-1.0	X	
(As Nuisance Particulates) 37244-96-5	*	X	See Sections 8 and 15 for information.

SECTION 3 - HAZARDS IDENTIFICATION

ACUTE OVEREXPOSURE EFFECTS

EYE CONTACT:

Causes severe eye irritation. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact.

SKIN CONTACT:

Causes primary skin irritation. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

SKIN ABSORPTION:

May be absorbed through the skin. Prolonged or repeated contact may cause an allergic skin reaction.

INHALATION:

Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat.

INGESTION:

Harmful if swallowed.

SIGNS & SYMPTOMS OF OVEREXPOSURE:

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

CHRONIC OVEREXPOSURE EFFECTS

Avoid long-term and repeated contact.

Repeated exposure to vapors above recommended exposure limits (see Section 8) may cause irritation of the respiratory system and permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Prolonged exposure to an ingredient(s) in this product may cause kidney and/or liver damage. High exposures to xylenes in some animal studies have been reported to cause health effects on the developing embryo and fetus. These effects were often at levels toxic to the mother. There is some evidence that repeated overexposure to n-butyl alcohol vapors at concentrations above the stated threshold limits can contribute to hearing loss by damaging the auditory nerve and can cause specific injury to the cornea of the eye known as keratitis. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone.

The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures. See Section 11, of this MSDS for a detailed list of chronic health effects information available on individual ingredients in this product.

SECTION 4 - FIRST AID MEASURES

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available.

EYE CONTACT:

Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.

SKIN CONTACT:

Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.

INHALATION:

Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

INGESTION:

Gently wipe or rinse the inside of the mouth with water. Sips of water may be given if person is fully conscious. Never give anything by mouth to an unconscious or convulsing person. Do Not induce vomiting. Contact a poison control center, emergency room or physician right away as further treatment will be necessary.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASHPOINT: 122 Degrees F (50 Degrees C)

FLASHPOINT TEST METHOD:

Pensky-Martens Closed Cup

UEL: Not Available.

LEL: 1.3

AUTOIGNITION TEMPERATURE:

Not Available.

EXTINGUISHING MEDIA:

Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class II combustible liquid fires. Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

PROTECTION OF FIREFIGHTERS:

Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

The curing process of this two component product is an exothermic reaction. As the mixture nears the end of its potlife, it increases in temperature rapidly. The mixed product gels and may smoke. Contact with the material or the container may cause burns. To avoid the increase in temperature, spread the material out or mix it with a bucket of sand. Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat. May produce hazardous decomposition products when exposed to extreme heat. Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 6 - ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:

Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

STORAGE:

Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class II combustible liquids.

SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 8 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

PERSONAL PROTECTIVE EQUIPMENT

EYES:

Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.

SKIN/GLOVES:

Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: nitrile rubber. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment. Clean contaminated clothing and shoes.

RESPIRATOR:

Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used. Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

GENERAL HYGIENE - ESTABLISHED EXPOSURE LIMITS

If Threshold Limit Values (TLVs) have been established by ACGIH, OSHA, Ontario or PPG, they will be listed below. These limits are intended for use in the practice of industrial hygiene as guidelines or recommendations in the control of potential workplace health hazards. These limits are not a relative index of toxicity and should not be used by anyone without industrial hygiene training.

Material/ CAS Number	Percent	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
SODIUM POTASSIUM ALUMINUM SILICATE 37244-96-5	40 - 70	10 MG/m ³	Not established	Not established	Not established
MICA 12001-26-2	3 - 7	R- 3 MG/m ³	Not established	R- 3 mg/m ³	Not established
METHYL (N-AMYL) KETONE 110-43-0	3 - 7	50 ppm	Not established	100 ppm	Not established
TITANIUM DIOXIDE 13463-67-7	3 - 7	10 mg/m ³	Not established	10 mg/m ³	Not established
N-BUTYL ALCOHOL 71-36-3	1 - 5	C- 50 ppm	Not established	C-S-50 ppm	Not established
XYLENES 1330-20-7	0.1-1.0	100 ppm	150 PPM	100 ppm	150 ppm
(As Nuisance Particulates) 37244-96-5	*	R- 3 MG/m ³	Not established	R- 5 mg/m ³	Not established

Material/ CAS Number	Percent	Ontario TWA	Ontario STEL	PPG IPEL	PPG STEL
SODIUM POTASSIUM ALUMINUM SILICATE 37244-96-5	40 - 70	10 MG/m ³	Not established	Not established	Not established
MICA 12001-26-2	3 - 7	R- 3 MG/m ³	Not established	Not established	Not established
METHYL (N-AMYL) KETONE 110-43-0	3 - 7	25 ppm	Not established	Not established	Not established
TITANIUM DIOXIDE 13463-67-7	3 - 7	10 MG/m ³	Not established	Not established	Not established
N-BUTYL ALCOHOL 71-36-3	1 - 5	C-S-50 ppm	Not established	Not established	Not established
XYLENES 1330-20-7	0.1-1.0	100 ppm	150 ppm	Not established	Not established
(As Nuisance Particulates) 37244-96-5	*	R- 3 MG/m ³	Not established	Not established	Not established

Key: ACGIH=American Conference of Governmental Industrial Hygienists; OSHA=Occupational Safety and Health Administration; TLV=Threshold Limit Value; TWA=Time Weighted Average; PEL=Permissible Exposure Limit (1989 Vacated values); IPEL=Internal Permissible Exposure Limit; Ceiling=TLV or PEL Ceiling Limit; STEL=TLV or PEL Short-Term Exposure Limit; Skin= Skin Absorption Designation. [C- Ceiling Limit; S-Potential Skin Absorption; R-Respirable Dust] Additional Information Not applicable.

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES
(FORMULA VALUES, NOT SALES SPECIFICATIONS)

SPECIFIC GRAVITY: 1.625
PHYSICAL STATE: Liquid
Percent Solids: 90.35
Percent Volatile by Volume: 18.930
pH: Not available.
ODOR THRESHOLD: Not available.
Vapour Pressure: 3.3 mmHg
ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.
VAPOR DENSITY: HEAVIER THAN AIR
Evaporation Rate: 44
BOILING POINT OR RANGE: 199 - 370Degrees F
Freezing Point or Range: Not Applicable.
Melting Point or Range(°C): Not Applicable.
Partition coefficient (n-octanol/water): Not Applicable.
WEIGHT PER GALLON: 13.54 (U.S.) / 16.2 (IMPERIAL)

SECTION 10 - STABILITY AND REACTIVITY

STABILITY:
This product is normally stable and will not undergo hazardous reactions.
CONDITIONS TO AVOID:
None Known.
INCOMPATIBLE MATERIALS:
Avoid contact with strong alkalis, strong mineral acids, or strong oxidizing agents.
HAZARDOUS POLYMERIZATION:
None Known.
HAZARDOUS DECOMPOSITION PRODUCTS:
- Carbon monoxide - Carbon dioxide - Oxides of aluminum - Lower molecular weight polymer fractions

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Material/ CAS Number	Percent	ORAL LD50 (g/kg)	DERMAL LD50 (g/kg)	INHALATION LC50 (mg/l)
EPOXY RESIN 25068-38-6	5 - 10	2.00 g/kg	2.00 g/kg	Not Available
METHYL (N-AMYL) KETONE 110-43-0	3 - 7	1.60 g/kg	10.21 g/kg	Not Available
TITANIUM DIOXIDE 13463-67-7	3 - 7	10.00 g/kg	Not Available	Not Available
N-BUTYL ALCOHOL 71-36-3	1 - 5	.79 g/kg	3.40 g/kg	24.25 mg/l 4 hr
XYLENES 1330-20-7	0.1-1.0	4.30 g/kg	1.70 g/kg	21.88 mg/l 4 hr

CHRONIC TOXICITY

Ingredient Target Organ/Chronic Effects:

- Carcinogen - Mutagen - Eye - Embryotoxin - Ear - Kidney - Liver - Brain
- Central nervous system - Lung

Mutagenicity Toxicity:

This has not been tested for this product.

Reproductive Toxicity:

This has not been tested for this product.

SUPPLEMENTAL HEALTH INFORMATION:

Material/ CAS Number	Percent	Ingredient Specific Animal Data:
TITANIUM DIOXIDE 13463-67-7	3 - 7	This product contains titanium dioxide. Animals inhaling massive quantities of titanium dioxide dust in a long-term study developed lung tumors. Studies with humans involved in manufacture of this pigment indicate no increased risk of cancer from exposure.
N-BUTYL ALCOHOL 71-36-3	1 - 5	This product contains an ingredient which has been shown to cause adverse reproductive effects in animals at doses which are also toxic to the mother.

SECTION 12 - ECOLOGICAL INFORMATION

POTENTIAL ENVIRONMENTAL EFFECTS

Ecotoxicity: No Information Available.

ENVIRONMENTAL FATE

Mobility: No information available.
Biodegradation: No information available.
Bioaccumulation: No Information Available.

PHYSICAL/CHEMICAL

Hydrolysis: No information available.
Photolysis: No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Provide maximum ventilation, only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Take up spilled material with sawdust, vermiculite, or other absorbent material and place in containers for disposal. Waste material must be disposed of in accordance with federal, state, provincial and local environmental control regulations. Empty containers should be recycled by an appropriately licensed reconditioner/salvager or disposed of through a permitted waste management facility. Additional disposal information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Product ID: AT240-126 (0882)
PRODUCT NAME: AMERCOAT 240 BUFF DV1642

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name: Paint
NOS Technical Name: None
Hazard Class: 3
Subsidiary Class(es): None
UN Number: UN1263
Packing Group: III

USA - RQ Hazardous Substances: None
USA-RQ Hazardous Substance None
Threshold Ship Weight:
Marine Pollutant Name: None
USA and Canada Shipments Only- Combustible Liquid Exception: Non-bulk (<=119 Gallons/450 L) ground shipments can be reclassified to "not regulated" for transportation. Bulk shipments - USA Only (> 119 Gallons/450 L) can be reclassified to a Combustible Liquid.

SECTION 15 - REGULATORY INFORMATION

INVENTORY STATUS
U.S. TSCA: This product and/or all of its components are listed on the U.S. TSCA Inventory or is otherwise exempt from TSCA Inventory reporting requirements.
FEDERAL REGULATIONS
US Regulations

Material/ CAS Number	Percent	CERCLA HS - RQ (LBS)	SARA EHS - TPQ (LBS)	SARA 313
SODIUM POTASSIUM ALUMINUM SILICATE 37244-96-5	40 - 70	Not Listed	Not Listed	Not Listed
EPOXY RESIN 67924-34-9	10 - 30	Not Listed	Not Listed	Not Listed
EPOXY RESIN 25068-38-6	5 - 10	Not Listed	Not Listed	Not Listed
MICA 12001-26-2	3 - 7	Not Listed	Not Listed	Not Listed
METHYL (N-AMYL) KETONE 110-43-0	3 - 7	Not Listed	Not Listed	Not Listed
TITANIUM DIOXIDE 13463-67-7	3 - 7	Not Listed	Not Listed	Not Listed
N-BUTYL ALCOHOL 71-36-3	1 - 5	5000 lbs	Not Listed	Listed
BUTANDIOLDIGLY CIDYL ETHER 2425-79-8	1 - 5	Not Listed	Not Listed	Not Listed
XYLENES 1330-20-7	0.1-1.0	100 lbs	Not Listed	Listed

SARA 311/312

Health (acute): Yes
Health (chronic): Yes
Fire (flammable): Yes
Pressure: No
Reactivity: No

WHMIS HAZARD CLASS: - Class B, Division 3 - Class D, Division 2, Subdivision A - Class D, Division 2, Subdivision B

STATE/PROVINCIAL REGULATIONS

Additional Information

Material/ CAS Number	Percent	IARC Group 1(Kno wn Human Carc.)	IARC Group 2A (Proba ble Carc.)	IARC 2B (Suspec ted Carc.)	ACGIH Carc.	NTP Known Carc.	OSHA Carc.
		TITANIUM DIOXIDE 13463-67-7	3 - 7	N	N	Y	N

Key: IARC- International Agency on the Research of Cancer; ACGIH- American Conference of Governmental Industrial Hygienists; NTP- National Toxicology Program *Denotes chemical as NTP Known Carcinogen; + Denotes NTP Possible Carcinogen; OSHA- Occupational Safety and Health Administration.

SECTION 16 - OTHER INFORMATION

Hazard Rating Systems

NFPA Rating: 2 20
HMIS Rating: 2*20

Rating System: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

HMIS=Hazardous Materials Identification System; NFPA=National Fire Protection Association;

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

PREPARED BY: Product Safety Department

REASON FOR REVISION: Section 5 has been updated. Section 9 has been updated. Date. Edition.
Updated MSDS format.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200), the supplier notification requirements of SARA Title III, Section 313 and other applicable right-to-know regulations. Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.
AT240-126 000001 (00438578.002)(08/06/07)
061212, 000, 0882

*** END OF MSDS ***

MATERIAL SAFETY DATA SHEET



SECTION 1 - PRODUCT AND COMPANY INFORMATION

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

EMERGENCY PHONE NUMBERS (412) 434-4515 (U.S.)
(24 hours/day):

(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
0532-83889090 (China)

PRODUCT SAFETY/MSDS INFORMATION: (412) 492-5555 7:00 a.m.
- 4:30 p.m. EST

Product ID: AT240-9 (0882)
PRODUCT NAME: AMERCOAT 240 BLACK RESIN
SYNONYMS: None
ISSUE DATE: 11/22/2006
EDITION NO.: 1
CHEMICAL: Epoxy
FAMILY:

EMERGENCY OVERVIEW:

Combustible. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. CAUSES SEVERE EYE IRRITATION. CAUSES PRIMARY SKIN IRRITATION. MAY BE ABSORBED THROUGH THE SKIN. PROLONGED OR REPEATED CONTACT MAY CAUSE AN ALLERGIC SKIN REACTION. VAPOR AND/OR SPRAY MIST MAY BE HARMFUL IF INHALED. VAPOR IRRITATES EYES, NOSE, AND THROAT. HARMFUL IF SWALLOWED.

SECTION 2 - COMPOSITION INFORMATION

The following ingredient(s) marked with an "X" are considered hazardous under applicable U.S. OSHA and/or Canadian WHMIS regulations. If no ingredients are listed, then there are no U.S. OSHA and/or Canadian WHMIS hazardous ingredients in this product.

Material/ CAS Number	Percent	Hazardous	
SODIUM POTASSIUM ALUMINUM SILICATE 37244-86-5	40 - 70	X	
EPOXY RESIN 67924-34-9	10 - 30	X	
EPOXY RESIN 25068-38-6	7 - 13	X	
MICA 12001-28-2	3 - 7	X	
METHYL (N-AMYL) KETONE 110-43-0	3 - 7	X	
N-BUTYL ALCOHOL 71-36-3	1 - 5	X	
CARBON BLACK 1333-86-4	1 - 5	X	
BUTANDIOLDIGLYCIDYL ETHER 2425-79-8	1 - 5	X	
XYLENES 1330-20-7	0.1-1.0	X	
(As Nuisance Particulates) 37244-86-5	*	X	See Sections 8 and 15 for information.

SECTION 3 - HAZARDS IDENTIFICATION

ACUTE OVEREXPOSURE EFFECTS

EYE CONTACT:

Causes severe eye irritation. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact.

SKIN CONTACT:

Causes primary skin irritation. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

SKIN ABSORPTION:

May be absorbed through the skin. Prolonged or repeated contact may cause an allergic skin reaction.

INHALATION:

Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat.

INGESTION:

Harmful if swallowed.

SIGNS & SYMPTOMS OF OVEREXPOSURE:

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

CHRONIC OVEREXPOSURE EFFECTS

Avoid long-term and repeated contact.

Repeated exposure to vapors above recommended exposure limits (see Section 8) may cause irritation of the respiratory system and permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Prolonged exposure to an ingredient(s) in this product may cause kidney and/or liver damage. High exposures to xylenes in some animal studies have been reported to cause health effects on the developing embryo and fetus. These effects were often at levels toxic to the mother. There is some evidence that repeated overexposure to n-butyl alcohol vapors at concentrations above the stated threshold limits can contribute to hearing loss by damaging the auditory nerve and can cause specific injury to the cornea of the eye known as keratitis. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone.

The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures. See Section 11, of this MSDS for a detailed list of chronic health effects information available on individual ingredients in this product.

SECTION 4 - FIRST AID MEASURES

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available.

EYE CONTACT:

Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.

SKIN CONTACT:

Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.

INHALATION:

Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

INGESTION:

Gently wipe or rinse the inside of the mouth with water. Sips of water may be given if person is fully conscious. Never give anything by mouth to an unconscious or convulsing person. Do Not induce vomiting. Contact a poison control center, emergency room or physician right away as further treatment will be necessary.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASHPOINT: 138 Degrees F (59 Degrees C)

FLASHPOINT TEST METHOD:

Pensky-Martens Closed Cup

UEL: Not Available.

LEL: 1.3

AUTOIGNITION TEMPERATURE:

Not Available.

EXTINGUISHING MEDIA:

Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class II combustible liquid fires. Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

PROTECTION OF FIREFIGHTERS:

Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

The curing process of this two component product is an exothermic reaction. As the mixture nears the end of its potlife, it increases in temperature rapidly. The mixed product gels and may smoke. Contact with the material or the container may cause burns. To avoid the increase in temperature, spread the material out or mix it with a bucket of sand. Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat. May produce hazardous decomposition products when exposed to extreme heat. Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 6 - ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:

Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

STORAGE:

Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class II combustible liquids.

SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 8 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

PERSONAL PROTECTIVE EQUIPMENT

EYES:

Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.

SKIN/GLOVES:

Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: nitrile rubber. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment. Clean contaminated clothing and shoes.

RESPIRATOR:

Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used. Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

GENERAL HYGIENE - ESTABLISHED EXPOSURE LIMITS

If Threshold Limit Values (TLVs) have been established by ACGIH, OSHA, Ontario or PPG, they will be listed below. These limits are intended for use in the practice of industrial hygiene as guidelines or recommendations in the control of potential workplace health hazards. These limits are not a relative index of toxicity and should not be used by anyone without industrial hygiene training.

Material/ CAS Number	Percent	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
SODIUM POTASSIUM ALUMINUM SILICATE 37244-96-5	40 - 70	10 MG/m ³	Not established	Not established	Not established
MICA 12001-26-2	3 - 7	R- 3 MG/m ³	Not established	R- 3 mg/m ³	Not established
METHYL (N-AMYL) KETONE 110-43-0	3 - 7	50 ppm	Not established	100 ppm	Not established
N-BUTYL ALCOHOL 71-36-3	1 - 5	C- 50 ppm	Not established	C-S-50 ppm	Not established
CARBON BLACK 1333-86-4	1 - 5	3.5 mg/m ³	Not established	3.5 mg/m ³	Not established
XYLENES 1330-20-7	0.1-1.0	100 ppm	150 PPM	100 ppm	150 ppm
(As Nuisance Particulates) 37244-96-5	*	R- 3 MG/m ³	Not established	R- 5 mg/m ³	Not established

Material/ CAS Number	Percent	Ontario TWA	Ontario STEL	PPG IPEL	PPG STEL
SODIUM POTASSIUM ALUMINUM SILICATE 37244-96-5	40 - 70	10 MG/m ³	Not established	Not established	Not established
MICA 12001-26-2	3 - 7	R- 3 MG/m ³	Not established	Not established	Not established
METHYL (N-AMYL) KETONE 110-43-0	3 - 7	25 ppm	Not established	Not established	Not established
N-BUTYL ALCOHOL 71-36-3	1 - 5	C-S-50 ppm	Not established	Not established	Not established
CARBON BLACK 1333-86-4	1 - 5	3.5 mg/m ³	Not established	Not established	Not established
XYLENES 1330-20-7	0.1-1.0	100 ppm	150 ppm	Not established	Not established
(As Nuisance Particulates) 37244-96-5	*	R- 3 MG/m ³	Not established	Not established	Not established

Key: ACGIH=American Conference of Governmental Industrial Hygienists; OSHA=Occupational Safety and Health Administration; TLV=Threshold Limit Value; TWA=Time Weighted Average; PEL=Permissible Exposure Limit (1989 Vacated values); IPEL=Internal Permissible Exposure Limit; Ceiling=TLV or PEL Ceiling Limit; STEL=TLV or PEL Short-Term Exposure Limit; Skin= Skin Absorption Designation. [C- Ceiling Limit; S-Potential Skin Absorption; R-Respirable Dust] Additional Information Not applicable.

**SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES
(FORMULA VALUES, NOT SALES SPECIFICATIONS)**

SPECIFIC GRAVITY: 1.571
PHYSICAL STATE: Liquid
Percent Solids: 89.62
Percent Volatile by Volume: 19.680
pH: Not available.
ODOR THRESHOLD: Not available.
Vapour Pressure: 3.4 mmHg
ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.
VAPOR DENSITY: HEAVIER THAN AIR
Evaporation Rate: 44
BOILING POINT OR RANGE: 226 - 370Degrees F
Freezing Point or Range: Not Applicable.
Melting Point or Range(°C): Not Applicable.
Partition coefficient (n-octanol/water): Not Applicable.
WEIGHT PER GALLON: 13.09 (U.S.) / 15.7 (IMPERIAL)

SECTION 10 - STABILITY AND REACTIVITY

STABILITY:
This product is normally stable and will not undergo hazardous reactions.
CONDITIONS TO AVOID:
None Known.
INCOMPATIBLE MATERIALS:
Avoid contact with strong alkalis, strong mineral acids, or strong oxidizing agents.
HAZARDOUS POLYMERIZATION:
None Known.
HAZARDOUS DECOMPOSITION PRODUCTS:
- Carbon monoxide - Carbon dioxide - Oxides of aluminum - Lower molecular weight polymer fractions

**SECTION 11 - TOXICOLOGICAL INFORMATION
ACUTE TOXICITY**

Material/ CAS Number	Percent	ORAL LD50 (g/kg)	DERMAL LD50 (g/kg)	INHALATION LC50 (mg/l)
EPOXY RESIN 25068-38-6	7 - 13	2.00 g/kg	2.00 g/kg	Not Available
METHYL (N-AMYL) KETONE 110-43-0	3 - 7	1.60 g/kg	10.21 g/kg	Not Available
N-BUTYL ALCOHOL 71-36-3	1 - 5	.79 g/kg	3.40 g/kg	24.25 g/L. 4 hr.
CARBON BLACK 1333-86-4	1 - 5	15.40 g/kg	3.00 g/kg	Not Available
XYLENES 1330-20-7	0.1-1.0	4.30 g/kg	1.70 g/kg	21.88 g/L. 4 hr.

CHRONIC TOXICITY

Ingredient Target Organ/Chronic Effects:

- Carcinogen - Mutagen - Eye - Embryotoxin - Ear - Kidney - Liver - Brain
- Central nervous system - Lung

Mutagenicity Toxicity:

This has not been tested for this product.

Reproductive Toxicity:

This has not been tested for this product.

SUPPLEMENTAL HEALTH INFORMATION:

Material/ CAS Number	Percent	Ingredient Specific Animal Data:
N-BUTYL ALCOHOL 71-36-3	1 - 5	This product contains an ingredient which has been shown to cause adverse reproductive effects in animals at doses which are also toxic to the mother.
CARBON BLACK 1333-86-4	1 - 5	This product contains carbon black which has been rated an IARC 2B carcinogen due to animal data.

SECTION 12 - ECOLOGICAL INFORMATION

POTENTIAL ENVIRONMENTAL EFFECTS

Ecotoxicity: No Information Available.

ENVIRONMENTAL FATE

Mobility: No information available.
Biodegradation: No information available.
Bioaccumulation: No Information Available.

PHYSICAL/CHEMICAL

Hydrolysis: No information available.
Photolysis: No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Provide maximum ventilation, only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Take up spilled material with sawdust, vermiculite, or other absorbent material and place in containers for disposal. Waste material must be disposed of in accordance with federal, state, provincial and local environmental control regulations. Empty containers should be recycled by an appropriately licensed reconditioner/salvager or disposed of through a permitted waste management facility. Additional disposal information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name: Paint
NOS Technical Name: None
Hazard Class: 3
Subsidiary Class(es): None
UN Number: UN1263
Packing Group: III

USA - RQ Hazardous Substances: None
USA-RQ Hazardous Substance: None
Threshold Ship Weight:
Marine Pollutant Name: None
USA and Canada Shipments Only- Combustible Liquid Exception: Non-bulk (<=119 Gallons/450 L) ground shipments can be reclassified to "not regulated" for transportation. Bulk shipments - USA Only (> 119 Gallons/450 L) can be reclassified to a Combustible Liquid.

Material/ CAS Number	Percent	IARC	IARC	IARC	ACGIH Carc.	NTP Known Carc.	OSHA Carc.
		Group 1(Kno wn Human Carc.)	Group 2A (Proba ble Carc.)	2B (Suspec ted Carc.)			
CARBON BLACK 1333-86-4	1-5	N	N	Y	N	N	Y

Key: IARC- International Agency on the Research of Cancer; ACGIH- American Conference of Governmental Industrial Hygienists; NTP- National Toxicology Program *Denotes chemical as NTP Known Carcinogen; + Denotes NTP Possible Carcinogen; OSHA- Occupational Safety and Health Administration.

SECTION 16 - OTHER INFORMATION

Hazard Rating Systems

NFPA Rating: 2 20
HMIS Rating: 2*20

Rating System: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, * =Chronic Effects.

HMIS=Hazardous Materials Identification System; NFPA=National Fire Protection Association;

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

PREPARED BY: Product Safety Department

REASON FOR REVISION: Date. Edition.

Updated MSDS format.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200), the supplier notification requirements of SARA Title III, Section 313 and other applicable right-to-know regulations.

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

AT240-9 000001 (00434872.002)(11/21/06)
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*** END OF MSDS ***

SECTION 15 - REGULATORY INFORMATION

INVENTORY STATUS

U.S. TSCA: This product and/or all of its components are listed on the U.S. TSCA Inventory or is otherwise exempt from TSCA Inventory reporting requirements.

FEDERAL REGULATIONS

US Regulations

Material/ CAS Number	Percent	CERCLA HS - RQ (LBS)	SARA EHS- TPQ (LBS)	SARA 313
SODIUM POTASSIUM ALUMINUM SILICATE 37244-96-5	40 - 70	Not Listed	Not Listed	Not Listed
EPOXY RESIN 67924-34-9	10 - 30	Not Listed	Not Listed	Not Listed
EPOXY RESIN 25068-38-6	7 - 13	Not Listed	Not Listed	Not Listed
MICA 12001-26-2	3 - 7	Not Listed	Not Listed	Not Listed
METHYL (N-AMYL) KETONE 110-43-0	3 - 7	Not Listed	Not Listed	Not Listed
N-BUTYL ALCOHOL 71-36-3	1 - 5	5000 lbs	Not Listed	Listed
CARBON BLACK 1333-86-4	1 - 5	Not Listed	Not Listed	Not Listed
BUTANDIOLDIGLY CIDYL ETHER 2425-79-8	1 - 5	Not Listed	Not Listed	Not Listed
XYLENES 1330-20-7	0.1-1.0	100 lbs	Not Listed	Listed

SARA 311/312

Health (acute): Yes
Health (chronic): Yes
Fire (flammable): Yes
Pressure: No
Reactivity: No

WHMIS HAZARD CLASS: - Class B, Division 3 - Class D, Division 2, Subdivision A - Class D, Division 2, Subdivision B

STATE/PROVINCIAL REGULATIONS

CALIFORNIA PROP. 65: WARNING: This product contains a chemical known to the State of California to cause cancer.

Additional Information

MATERIAL SAFETY DATA SHEET



SECTION 1 - PRODUCT AND COMPANY INFORMATION

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

EMERGENCY PHONE NUMBERS (412) 434-4515 (U.S.)
 (24 hours/day):

(514) 645-1320 (Canada)
 01-800-00-21-400 (Mexico)
 0532-83889090 (China)

PRODUCT SAFETY/MSDS INFORMATION: (412) 492-5555 7:00 a.m.
 - 4:30 p.m. EST

Product ID: AT240-B (0882)
PRODUCT NAME: AMERCOAT 240 CURE
SYNONYMS: None
ISSUE DATE: 12/07/2006
EDITION NO.: 1
CHEMICAL: Polyamide
FAMILY:

EMERGENCY OVERVIEW:

Combustible. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. CAUSES IRREVERSIBLE EYE DAMAGE. MAY BE CORROSIVE. THIS PRODUCT CONTAINS A MATERIAL WHICH CAUSES SKIN BURNS. MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN. PROLONGED OR REPEATED CONTACT MAY CAUSE AN ALLERGIC SKIN REACTION. VAPOR AND/OR SPRAY MIST HARMFUL IF INHALED. VAPOR IRRITATES EYES, NOSE, AND THROAT. MAY CAUSE IRRITATION AND/OR ALLERGIC RESPIRATORY REACTION IN LUNGS. HARMFUL OR FATAL IF SWALLOWED.

SECTION 2 - COMPOSITION INFORMATION

The following ingredient(s) marked with an "x" are considered hazardous under applicable U.S. OSHA and/or Canadian WHMIS regulations. If no ingredients are listed, then there are no U.S. OSHA and/or Canadian WHMIS hazardous ingredients in this product.

Material/ CAS Number	Percent	Hazardous
N-BUTYL ALCOHOL 71-36-3	5 - 10	X
ETHYLENEDIAMINE 107-15-3	1 - 5	X
DIETHYLENE TRIAMINE 111-40-0	0.1-1.0	X

SECTION 3 - HAZARDS IDENTIFICATION

ACUTE OVEREXPOSURE EFFECTS

EYE CONTACT:

This product contains a material which causes irreversible eye damage. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact.

SKIN CONTACT:

May be corrosive. This product contains a material which causes skin burns. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

SKIN ABSORPTION:

May be harmful if absorbed through the skin. Prolonged or repeated contact may cause an allergic skin reaction.

INHALATION:

Vapor and/or spray mist harmful if inhaled. Vapor irritates eyes, nose, and throat. May cause irritation and/or allergic respiratory reaction in lungs.

INGESTION:

Harmful or fatal if swallowed.

SIGNS & SYMPTOMS OF OVEREXPOSURE:

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

CHRONIC OVEREXPOSURE EFFECTS

Avoid long-term and repeated contact.

Repeated exposure to vapors above recommended exposure limits (see Section 8) may cause irritation of the respiratory system and permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. This product either contains formaldehyde or is capable of releasing formaldehyde above 0.5 ppm under certain conditions. If this product contains free formaldehyde, formaldehyde will be listed as an ingredient in Section 2 and 11 of this MSDS; if formaldehyde is not specifically listed, this product contains ingredients capable of releasing formaldehyde under certain conditions. Formaldehyde is a known cancer hazard, a skin sensitizer and a respiratory sensitizer. There is some evidence that repeated overexposure to n-butyl alcohol vapors at concentrations above the stated threshold limits can contribute to hearing loss by damaging the auditory nerve and can cause specific injury to the cornea of the eye known as keratitis.

The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures. See Section 11, of this MSDS for a detailed list of chronic health effects information available on individual ingredients in this product.

SECTION 4 - FIRST AID MEASURES

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available.

EYE CONTACT:

Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. Contact a poison control center, emergency room or physician right away as further treatment will be necessary.

SKIN CONTACT:

Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. Contact a poison control center, emergency room or physician right away as further treatment will be necessary.

INHALATION:

Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

INGESTION:

Gently wipe or rinse the inside of the mouth with water. Sips of water may be given if person is fully conscious. Never give anything by mouth to an unconscious or convulsing person. Do Not induce vomiting. Contact a poison control center, emergency room or physician right away as further treatment will be necessary.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASHPOINT: 138 Degrees F (59 Degrees C)

FLASHPOINT TEST METHOD:

Pensky-Martens Closed Cup

UEL: Not Available.

LEL: 2.4

AUTOIGNITION TEMPERATURE:

Not Available.

EXTINGUISHING MEDIA:

Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class II combustible liquid fires. Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

PROTECTION OF FIREFIGHTERS:

Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

The curing process of this two component product is an exothermic reaction. As the mixture nears the end of its potlife, it increases in temperature rapidly. The mixed product gels and may smoke. Contact with the material or the container may cause burns. To avoid the increase in temperature, spread the material out or mix it with a bucket of sand. Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat. May produce hazardous decomposition products when exposed to extreme heat. Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 6 - ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:

Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

STORAGE:

Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class II combustible liquids.

SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 8 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

PERSONAL PROTECTIVE EQUIPMENT

EYES:

Wear chemical-type splash goggles and full face shield when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.

SKIN/GLOVES:

Wear protective clothing sufficient to cover exposed skin surfaces. For applications where skin contact is likely and impermeable clothing is necessary, select clothing constructed of: butyl rubber. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment. Clean contaminated clothing and shoes.

RESPIRATOR:

Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used. Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

GENERAL HYGIENE - ESTABLISHED EXPOSURE LIMITS

If Threshold Limit Values (TLVs) have been established by ACGIH, OSHA, Ontario or PPG, they will be listed below. These limits are intended for use in the practice of industrial hygiene as guidelines or recommendations in the control of potential workplace health hazards. These limits are not a relative index of toxicity and should not be used by anyone without industrial hygiene training.

Material/ CAS Number	Percent	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
N-BUTYL ALCOHOL 71-36-3	5 - 10	C- 50 ppm	Not established	C-S-50 ppm	Not established
ETHYLENEDIAMIN E 107-15-3	1 - 5	S- 10 PPM	Not established	10 ppm	Not established
DIETHYLENE TRIAMINE 111-40-0	0.1-1.0	S- 1 ppm	Not established	1 ppm	Not established

Material/ CAS Number	Percent	Ontario TWA	Ontario STEL	PPG IPEL	PPG STEL
N-BUTYL ALCOHOL 71-36-3	5 - 10	C-S-50 ppm	Not established	Not established	Not established
ETHYLENEDIAMIN E 107-15-3	1 - 5	10 ppm	Not established	Not established	Not established
DIETHYLENE TRIAMINE 111-40-0	0.1-1.0	S- 1 PPM	Not established	Not established	Not established

Key: ACGIH=American Conference of Governmental Industrial Hygienists; OSHA=Occupational Safety and Health Administration; TLV=Threshold Limit Value; TWA=Time Weighted Average; PEL=Permissible Exposure Limit (1989 Vacated values); IPEL=Internal Permissible Exposure Limit; Ceiling=TLV or PEL Ceiling Limit; STEL=TLV or PEL Short-Term Exposure Limit; Skin= Skin Absorption Designation. [C- Ceiling Limit; S-Potential Skin Absorption; R-Respirable Dust] Additional Information Not applicable.

**SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES
(FORMULA VALUES, NOT SALES SPECIFICATIONS)**

SPECIFIC GRAVITY: .968
PHYSICAL STATE: Liquid
Percent Solids: 87.10
Percent Volatile by Volume: 14.930

pH: Not available.
ODOR THRESHOLD: Not available.
Vapour Pressure: 6.3 mmHg
ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.
VAPOR DENSITY: HEAVIER THAN AIR
Evaporation Rate: 32
BOILING POINT OR RANGE: 241 - 246 Degrees F
Freezing Point or Range: Not Applicable.
Melting Point or Range(°C): Not Applicable.
Partition coefficient (n-octanol/water): Not Applicable.
WEIGHT PER GALLON: 8.07 (U.S.) / 9.6 (IMPERIAL)

SECTION 10 - STABILITY AND REACTIVITY

STABILITY:
This product is normally stable and will not undergo hazardous reactions.
CONDITIONS TO AVOID:
None Known.
INCOMPATIBLE MATERIALS:
Avoid contact with strong alkalis, strong mineral acids, or strong oxidizing agents.
HAZARDOUS POLYMERIZATION:
None Known.
HAZARDOUS DECOMPOSITION PRODUCTS:
- Oxides of nitrogen - Carbon monoxide - Carbon dioxide - Aldehydes

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Material/ CAS Number	Percent	ORAL LD50 (g/kg)	DERMAL LD50 (g/kg)	INHALATION LC50 (mg/l)
N-BUTYL ALCOHOL 71-36-3	5 - 10	.79 g/kg	3.40 g/kg	24.25 g/L, 4 hr.
ETHYLENEDIAMIN E 107-15-3	1 - 5	.50 g/kg	.73 g/kg	Not Available
DIETHYLENE TRIAMINE 111-40-0	0.1-1.0	1.08 g/kg	1.09 g/kg	Not Available

CHRONIC TOXICITY

Ingredient Target Organ/Chronic Effects:
- Kidney - Liver - Respiratory sensitizer - Brain - Central nervous system - Lung - Ear - Eye

Mutagenicity Toxicity:

This has not been tested for this product.

Reproductive Toxicity:

This has not been tested for this product.

SUPPLEMENTAL HEALTH INFORMATION:

Material/ CAS Number	Percent	Ingredient Specific Animal Data:
N-BUTYL ALCOHOL 71-36-3	5 - 10	This product contains an ingredient which has been shown to cause adverse reproductive effects in animals at doses which are also toxic to the mother.
ETHYLENE DIAMINE 107-15-3	1 - 5	This product contains ethylene diamine. Ethylene diamine has caused kidney, liver and lung damage in laboratory animals when repeatedly inhaled at high concentrations.

SECTION 12 - ECOLOGICAL INFORMATION

POTENTIAL ENVIRONMENTAL EFFECTS

Ecotoxicity: No Information Available.

ENVIRONMENTAL FATE

Mobility: No information available.

Biodegradation: No information available.

Bioaccumulation: No Information Available.

PHYSICAL/CHEMICAL

Hydrolysis: No information available.

Photolysis: No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Provide maximum ventilation, only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Take up spilled material with sawdust, vermiculite, or other absorbent material and place in containers for disposal. Waste material must be disposed of in accordance with federal, state, provincial and local environmental control regulations. Empty containers should be recycled by an appropriately licensed reconditioner/salvager or disposed of through a permitted waste management facility. Additional disposal information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name: Paint
NOS Technical Name: None
Hazard Class: 3
Subsidiary Class(es): None
UN Number: UN1263
Packing Group: III

USA - RQ Hazardous Substances: None

USA-RQ Hazardous Substance: None

Threshold Ship Weight:

Marine Pollutant Name: None

USA and Canada Shipments Only- Combustible Liquid Exception: Non-bulk (<=119 Gallons/450 L) ground shipments can be reclassified to "not regulated" for transportation. Bulk shipments - USA Only (> 119 Gallons/450 L) can be reclassified to a Combustible Liquid.

SECTION 15 - REGULATORY INFORMATION

INVENTORY STATUS

U.S. TSCA: This product and/or all of its components are listed on the U.S. TSCA Inventory or is otherwise exempt from TSCA inventory reporting requirements.

FEDERAL REGULATIONS

US Regulations

Material/ CAS Number	Percent	CERCLA HS - RQ (LBS)	SARA EHS- TPQ (LBS)	SARA 313
N-BUTYL ALCOHOL 71-36-3	5 - 10	5000 lbs	Not Listed	Listed
ETHYLENEDIAMIN E 107-15-3	1 - 5	5000 lbs	10000 LB	Not Listed
DIETHYLENE TRIAMINE 111-40-0	0.1-1.0	Not Listed	Not Listed	Not Listed

SARA 311/312

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Product ID: AT240-B (0882)
PRODUCT NAME: AMERCOAT 240 CURE

Health (acute): Yes
Health (chronic): Yes
Fire (flammable): Yes
Pressure: No
Reactivity: No

WHMIS HAZARD CLASS: - Class B, Division 3 - Class D, Division 1,
Subdivision B - Class D, Division 2, Subdivision A - Class D, Division 2,
Subdivision B - Class E

STATE/PROVINCIAL REGULATIONS

Additional Information

Key: IARC- International Agency on the Research of Cancer; ACGIH-
American Conference of Governmental Industrial Hygienists; NTP-
National Toxicology Program *Denotes chemical as NTP Known
Carcinogen; + Denotes NTP Possible Carcinogen; OSHA-
Occupational Safety and Health Administration.

SECTION 16 - OTHER INFORMATION

Hazard Rating Systems

NFPA Rating: 3 20

HMIS Rating: 3*20

Rating System: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe,
*=Chronic Effects.

HMIS=Hazardous Materials Identification System; NFPA=National Fire
Protection Association;

Safe handling of this product requires that all of the information on the
MSDS be evaluated for specific work environments and conditions of use.

PREPARED BY: Product Safety Department

REASON FOR REVISION: Date. Edition.

Updated MSDS
format.

This Material Safety Data Sheet has been prepared in accordance with
Canada's Workplace Hazardous Materials Information System (WHMIS)
and the OSHA Hazard Communication Standard (29 CFR 1910.1200),
the supplier notification requirements of SARA Title III, Section 313 and
other applicable right-to-know regulations.

Additional environmental information is contained on the Environmental
Data Sheet for this product, which can be obtained from your PPG
representative.

AT240-B 000001 (00437348.001)(12/06/06)

061206, 000, 0882

*** END OF MSDS ***

MATERIAL SAFETY DATA SHEET



SECTION 1 - PRODUCT AND COMPANY INFORMATION

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

EMERGENCY PHONE NUMBERS (412) 434-4515 (U.S.)
(24 hours/day):

(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
0532-83889090 (China)

PRODUCT SAFETY/MSDS INFORMATION: (412) 492-5555 7:00 a.m. - 4:30 p.m. EST

Product ID: AT240G219 (0882)
PRODUCT NAME: AMERCOAT 240 DEEP GRAY F/
SYNONYMS: None
ISSUE DATE: 02/23/2007
EDITION NO.: 2
CHEMICAL: Epoxy
FAMILY:

EMERGENCY OVERVIEW:

Combustible. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. CAUSES SEVERE EYE IRRITATION. CAUSES PRIMARY SKIN IRRITATION. MAY BE ABSORBED THROUGH THE SKIN. PROLONGED OR REPEATED CONTACT MAY CAUSE AN ALLERGIC SKIN REACTION. VAPOR AND/OR SPRAY MIST MAY BE HARMFUL IF INHALED. VAPOR IRRITATES EYES, NOSE, AND THROAT. HARMFUL IF SWALLOWED.

SECTION 2 - COMPOSITION INFORMATION

The following ingredient(s) marked with an "x" are considered hazardous under applicable U.S. OSHA and/or Canadian WHMIS regulations. If no ingredients are listed, then there are no U.S. OSHA and/or Canadian WHMIS hazardous ingredients in this product.

Material/ CAS Number	Percent	Hazardous	
SODIUM POTASSIUM ALUMINIUM SILICATE 37244-86-5	40 - 70	X	
EPOXY RESIN 67924-34-9	10 - 30	X	
EPOXY RESIN 25068-38-6	5 - 10	X	
GLASS OXIDES 65997-17-3	3 - 7	X	
MICA 12001-26-2	3 - 7	X	
METHYL (N-AMYL) KETONE 110-43-0	3 - 7	X	
TITANIUM DIOXIDE 13463-67-7	1 - 5	X	
N-BUTYL ALCOHOL 71-36-3	1 - 5	X	
BUTANDIOLDIGLYCIDYL ETHER 2425-79-8	1 - 5	X	
AROMATIC NAPHTHA 64742-95-6	0.5-1.5	X	
CARBON BLACK 1333-86-4	0.1-1.0	X	
XYLENES 1330-20-7	0.1-1.0	X	
(As Nuisance Particulates) 37244-96-5	*	X	See Sections 8 and 15 for information.
(As Nuisance Particulates) 65997-17-3	*	X	See Sections 8 and 15 for information.

SECTION 3 - HAZARDS IDENTIFICATION

ACUTE OVEREXPOSURE EFFECTS

EYE CONTACT:

Causes severe eye irritation. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact.

SKIN CONTACT:

Causes primary skin irritation. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

SKIN ABSORPTION:

May be absorbed through the skin. Prolonged or repeated contact may cause an allergic skin reaction.

INHALATION:

Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat.

INGESTION:

Harmful if swallowed.

SIGNS & SYMPTOMS OF OVEREXPOSURE:

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

CHRONIC OVEREXPOSURE EFFECTS

Avoid long-term and repeated contact.

Repeated exposure to vapors above recommended exposure limits (see Section 8) may cause irritation of the respiratory system and permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Prolonged exposure to an ingredient(s) in this product may cause kidney and/or liver damage. This product contains fiberglass. Implantation or intratracheal injection of fiberglass has caused cancer in laboratory animals (IARC 2B). Fiberglass has been associated with non-malignant respiratory diseases in humans. High exposures to xylenes in some animal studies have been reported to cause health effects on the developing embryo and fetus. These effects were often at levels toxic to the mother. There is some evidence that repeated overexposure to n-butyl alcohol vapors at concentrations above the stated threshold limits can contribute to hearing loss by damaging the auditory nerve and can cause specific injury to the cornea of the eye known as keratitis. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone.

The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures. See Section 11, of this MSDS for a detailed list of chronic health effects information available on individual ingredients in this product.

SECTION 4 - FIRST AID MEASURES

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available.

EYE CONTACT:

Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.

SKIN CONTACT:

Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.

INHALATION:

Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

INGESTION:

Gently wipe or rinse the inside of the mouth with water. Sips of water may be given if person is fully conscious. Never give anything by mouth to an unconscious or convulsing person. Do Not induce vomiting. Contact a poison control center, emergency room or physician right away as further treatment will be necessary.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASHPOINT: 122 Degrees F (50 Degrees C)

FLASHPOINT TEST METHOD:

Pensky-Martens Closed Cup

UEL: Not Available.

LEL: 1.3

AUTOIGNITION TEMPERATURE:

Not Available.

EXTINGUISHING MEDIA:

Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class II combustible liquid fires. Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

PROTECTION OF FIREFIGHTERS:

Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

The curing process of this two component product is an exothermic reaction. As the mixture nears the end of its potlife, it increases in temperature rapidly. The mixed product gels and may smoke. Contact with the material or the container may cause burns. To avoid the increase in temperature, spread the material out or mix it with a bucket of sand. Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat. May produce hazardous decomposition products when exposed to extreme heat. Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 6 - ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:

Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

STORAGE:

Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class II combustible liquids.

SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 8 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

PERSONAL PROTECTIVE EQUIPMENT

EYES:

Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.

SKIN/GLOVES:

Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: nitrile rubber. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment. Clean contaminated clothing and shoes.

RESPIRATOR:

Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used. Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

GENERAL HYGIENE - ESTABLISHED EXPOSURE LIMITS

If Threshold Limit Values (TLVs) have been established by ACGIH, OSHA, Ontario or PPG, they will be listed below. These limits are intended for use in the practice of industrial hygiene as guidelines or recommendations in the control of potential workplace health hazards. These limits are not a relative index of toxicity and should not be used by anyone without industrial hygiene training.

Material/ CAS Number	Percent	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
SODIUM POTASSIUM ALUMINUM SILICATE 37244-96-5	40 - 70	10 MG/m ³	Not established	Not established	Not established
MICA 12001-26-2	3 - 7	R- 3 MG/m ³	Not established	R- 3 mg/m ³	Not established
METHYL (N-AMYL) KETONE 110-43-0	3 - 7	50 ppm	Not established	100 ppm	Not established
TITANIUM DIOXIDE 13463-67-7	1 - 5	10 mg/m ³	Not established	10 mg/m ³	Not established
N-BUTYL ALCOHOL 71-36-3	1 - 5	C- 50 ppm	Not established	C-S-50 ppm	Not established
CARBON BLACK 1333-86-4	0.1-1.0	3.5 mg/m ³	Not established	3.5 mg/m ³	Not established
XYLENES 1330-20-7	0.1-1.0	100 ppm	150 PPM	100 ppm	150 ppm
(As Nuisance Particulates) 37244-96-5	*	R- 3 MG/m ³	Not established	R- 5 mg/m ³	Not established
(As Nuisance Particulates) 65997-17-3	*	R- 3 MG/m ³	Not established	R- 5 mg/m ³	Not established

Material/ CAS Number	Percent	Ontario TWA	Ontario STEL	PPG IPEL	PPG STEL
SODIUM POTASSIUM ALUMINUM SILICATE 37244-96-5	40 - 70	10 MG/m ³	Not established	Not established	Not established
MICA 12001-26-2	3 - 7	R- 3 MG/m ³	Not established	Not established	Not established
METHYL (N-AMYL) KETONE 110-43-0	3 - 7	25 ppm	Not established	Not established	Not established
TITANIUM DIOXIDE 13463-67-7	1 - 5	10 MG/m ³	Not established	Not established	Not established
N-BUTYL ALCOHOL 71-36-3	1 - 5	C-S-50 ppm	Not established	Not established	Not established
CARBON BLACK 1333-86-4	0.1-1.0	3.5 mg/m ³	Not established	Not established	Not established
XYLENES 1330-20-7	0.1-1.0	100 ppm	150 ppm	Not established	Not established
(As Nuisance Particulates) 37244-96-5	*	R- 3 MG/m ³	Not established	Not established	Not established
(As Nuisance Particulates) 65997-17-3	*	R- 10 MG/m ³	Not established	Not established	Not established

Key: ACGIH=American Conference of Governmental Industrial Hygienists; OSHA=Occupational Safety and Health Administration; TLV=Threshold Limit Value; TWA=Time Weighted Average; PEL=Permissible Exposure Limit (1989 Vacated values); IPEL=Internal Permissible Exposure Limit; Ceiling=TLV or PEL Ceiling Limit; STEL=TLV or PEL Short-Term Exposure Limit; Skin= Skin Absorption Designation. [C- Ceiling Limit; S-Potential Skin Absorption; R-Respirable Dust] Additional Information Not applicable.

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES
(FORMULA VALUES, NOT SALES SPECIFICATIONS)

SPECIFIC GRAVITY: 1.634
PHYSICAL STATE: Liquid
Percent Solids: 90.34
Percent Volatile by Volume: 19.040
pH: Not available.

ODOR THRESHOLD: Not available.
Vapour Pressure: 3.2 mmHg
ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.
VAPOR DENSITY: HEAVIER THAN AIR
Evaporation Rate: 43
BOILING POINT OR RANGE: 199 - N.A.Degrees F
Freezing Point or Range: Not Applicable.
Melting Point or Range(°C): Not Applicable.
Partition coefficient (n-octanol/water): Not Applicable.
WEIGHT PER GALLON: 13.62 (U.S.) / 16.3 (IMPERIAL)

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: This product is normally stable and will not undergo hazardous reactions.
CONDITIONS TO AVOID: None Known.
INCOMPATIBLE MATERIALS: Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents.
HAZARDOUS POLYMERIZATION: None Known.
HAZARDOUS DECOMPOSITION PRODUCTS: - Carbon monoxide - Carbon dioxide - Oxides of aluminum - Lower molecular weight polymer fractions

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Material/ CAS Number	Percent	ORAL LD50 (g/kg)	DERMAL LD50 (g/kg)	INHALATION LC50 (mg/l)
EPOXY RESIN 25068-38-6	5 - 10	2.00 g/kg	2.00 g/kg	Not Available
METHYL (N-AMYL) KETONE 110-43-0	3 - 7	1.60 g/kg	10.21 g/kg	Not Available
TITANIUM DIOXIDE 13463-67-7	1 - 5	10.00 g/kg	Not Available	Not Available
N-BUTYL ALCOHOL 71-36-3	1 - 5	.79 g/kg	3.40 g/kg	24.25 g/L. 4 hr.
AROMATIC NAPHTHA 64742-95-6	0.5-1.5	8.40 g/kg	3.48 g/kg	5.20 g/L. 4 hr.
CARBON BLACK 1333-86-4	0.1-1.0	15.40 g/kg	3.00 g/kg	Not Available
XYLENES 1330-20-7	0.1-1.0	4.30 g/kg	1.70 g/kg	21.88 g/L. 4 hr.

CHRONIC TOXICITY

Ingredient Target Organ/Chronic Effects:
- Carcinogen - Mutagen - Eye - Embryotoxin - Ear - Kidney - Liver - Brain
- Central nervous system - Lung

Mutagenicity Toxicity:

This has not been tested for this product.

Reproductive Toxicity:

This has not been tested for this product.

SUPPLEMENTAL HEALTH INFORMATION:

Material/ CAS Number	Percent	Ingredient Specific Animal Data:
TITANIUM DIOXIDE 13463-67-7	1 - 5	This product contains titanium dioxide. Animals inhaling massive quantities of titanium dioxide dust in a long-term study developed lung tumors. Studies with humans involved in manufacture of this pigment indicate no increased risk of cancer from exposure.
N-BUTYL ALCOHOL 71-36-3	1 - 5	This product contains an ingredient which has been shown to cause adverse reproductive effects in animals at doses which are also toxic to the mother.
CARBON BLACK 1333-86-4	0.1-1.0	This product contains carbon black which has been rated an IARC 2B carcinogen due to animal data.

SECTION 12 - ECOLOGICAL INFORMATION

POTENTIAL ENVIRONMENTAL EFFECTS

Ecotoxicity: No Information Available.

ENVIRONMENTAL FATE

Mobility: No information available.
Biodegradation: No information available.
Bioaccumulation: No Information Available.

PHYSICAL/CHEMICAL

Hydrolysis: No information available.
Photolysis: No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Provide maximum ventilation, only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Take up spilled material with sawdust, vermiculite, or other absorbent material and place in containers for disposal.

Waste material must be disposed of in accordance with federal, state, provincial and local environmental control regulations. Empty containers should be recycled by an appropriately licensed reconditioner/salvager or disposed of through a permitted waste management facility. Additional disposal information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name: Paint
NOS Technical Name: None
Hazard Class: 3
Subsidiary Class(es): None
UN Number: UN1263
Packing Group: III

USA - RQ Hazardous Substances: None

USA-RQ Hazardous Substance: None

Threshold Ship Weight:

Marine Pollutant Name: None

USA and Canada Shipments Only- Combustible Liquid Exception: Non-bulk (<=119 Gallons/450 L) ground shipments can be reclassified to "not regulated" for transportation. Bulk shipments - USA Only (> 119 Gallons/450 L) can be reclassified to a Combustible Liquid.

SECTION 15 - REGULATORY INFORMATION

INVENTORY STATUS

U.S. TSCA: This product and/or all of its components are listed on the U.S. TSCA inventory or is otherwise exempt from TSCA inventory reporting requirements.

FEDERAL REGULATIONS

US Regulations

Material/ CAS Number	Percent	CERCLA HS - RQ (LBS)	SARA EHS- TPQ (LBS)	SARA 313
SODIUM POTASSIUM ALUMINUM SILICATE 37244-96-5	40 - 70	Not Listed	Not Listed	Not Listed
EPOXY RESIN 67924-34-9	10 - 30	Not Listed	Not Listed	Not Listed
EPOXY RESIN 25068-38-6	5 - 10	Not Listed	Not Listed	Not Listed
GLASS OXIDES 65997-17-3	3 - 7	Not Listed	Not Listed	Not Listed
MICA 12001-26-2	3 - 7	Not Listed	Not Listed	Not Listed
METHYL (N-AMYL) KETONE 110-43-0	3 - 7	Not Listed	Not Listed	Not Listed
TITANIUM DIOXIDE 13463-67-7	1 - 5	Not Listed	Not Listed	Not Listed
N-BUTYL ALCOHOL 71-36-3	1 - 5	5000 lbs	Not Listed	Listed
BUTANDIOLDIGLYCIDYL ETHER 2425-79-8	1 - 5	Not Listed	Not Listed	Not Listed
AROMATIC NAPHTHA 64742-95-6	0.5-1.5	Not Listed	Not Listed	Not Listed
CARBON BLACK 1333-86-4	0.1-1.0	Not Listed	Not Listed	Not Listed
XYLENES 1330-20-7	0.1-1.0	100 lbs	Not Listed	Listed

SARA 311/312

Health (acute): Yes
Health (chronic): Yes
Fire (flammable): Yes
Pressure: No
Reactivity: No

WHMIS HAZARD CLASS: - Class B, Division 3 - Class D, Division 2, Subdivision A - Class D, Division 2, Subdivision B

STATE/PROVINCIAL REGULATIONS

CALIFORNIA PROP. 65: WARNING: This product contains a chemical known to the State of California to cause cancer.

Additional Information

Material/ CAS Number	Percent	IARC Group 1(Kno wn Human Carc.)	IARC Group 2A (Proba ble Carc.)	IARC 2B (Suspec ted Carc.)	ACGIH Carc.	NTP Known Carc.	OSHA Carc.
TITANIUM DIOXIDE 13463-67-7	1 - 5	N	N	Y	N	N	N
CARBON BLACK 1333-86-4	0.1-1.0	N	N	Y	N	N	Y

Key: IARC- International Agency on the Research of Cancer; ACGIH- American Conference of Governmental Industrial Hygienists; NTP- National Toxicology Program *Denotes chemical as NTP Known Carcinogen; + Denotes NTP Possible Carcinogen; OSHA- Occupational Safety and Health Administration.

SECTION 16 - OTHER INFORMATION

Hazard Rating Systems

NFPA Rating: 2 20

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Product ID: AT240G219 (0882)
PRODUCT NAME: AMERCOAT 240 DEEP GRAY F/

HMIS Rating: 2*20

Rating System: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe,
*=Chronic Effects.

HMIS=Hazardous Materials Identification System; NFPA=National Fire
Protection Association;

Safe handling of this product requires that all of the information on the
MSDS be evaluated for specific work environments and conditions of use.

PREPARED BY: Product Safety Department
REASON FOR REVISION: Section 14 has been updated. Date. Edition.
Updated MSDS
format.

This Material Safety Data Sheet has been prepared in accordance with
Canada's Workplace Hazardous Materials Information System (WHMIS)
and the OSHA Hazard Communication Standard (29 CFR 1910.1200),
the supplier notification requirements of SARA Title III, Section 313 and
other applicable right-to-know regulations.

Additional environmental information is contained on the Environmental
Data Sheet for this product, which can be obtained from your PPG
representative.

AT240G219 000002 (00450087.001)(02/22/07)
070222, 000, 0882

*** END OF MSDS ***

MATERIAL SAFETY DATA SHEET



SECTION 1 - PRODUCT AND COMPANY INFORMATION

Refinish Products
 19699 Progress Drive
 Strongsville, OH 44149

EMERGENCY PHONE NUMBERS (412) 434-4515 (U.S.)
 (24 hours/day):

(514) 645-1320 (Canada)
 01-800-00-21-400 (Mexico)
 0532-83889090 (China)

TECHNICAL (740) 363-9610 (DELAWARE, OH) 8:00 a.m. -
 INFORMATION: 5:00 p.m. EST
 PRODUCT SAFETY/MSDS INFORMATION: (412) 492-5555 7:00 a.m.
 - 4:30 p.m. EST
 Product ID: **DCX61 (0B08)**
 PRODUCT NAME: HIGH SOLIDS HARDENER
 SYNONYMS: None
 ISSUE DATE: 01/15/2007
 EDITION NO.: 5
 CHEMICAL ISOCYANATE
 FAMILY:

EMERGENCY OVERVIEW:

Combustible. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. CAUSES SEVERE EYE IRRITATION. MAY CAUSE MODERATE SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY CAUSE AN ALLERGIC SKIN REACTION. VAPOR AND/OR SPRAY MIST HARMFUL IF INHALED. VAPOR IRRITATES EYES, NOSE, AND THROAT. MAY CAUSE IRRITATION AND/OR ALLERGIC RESPIRATORY REACTION IN LUNGS. HARMFUL IF SWALLOWED. STABLE - HAZARDOUS REACTIONS POSSIBLE AT EXTREMELY HIGH TEMPERATURES/PRESSURES.

SECTION 2 - COMPOSITION INFORMATION

The following ingredient(s) marked with an "X" are considered hazardous under applicable U.S. OSHA and/or Canadian WHMIS regulations. If no ingredients are listed, then there are no U.S. OSHA and/or Canadian WHMIS hazardous ingredients in this product.

Material/ CAS Number	Percent	Hazardous	
HEXANE-1,6-DI-ISOCYANATE POLYMER 28182-81-2	40 - 70	X	
ISOPHORONE DIISOCYANATE POLYMER 53680-05-0	15 - 40	X	
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	X	
ISOPHORONE DIISOCYANATE 4098-71-9	0.1-1.0	X	
HEXAMETHYLENE-DI-ISOCYANATE 822-06-0	0.1-1.0	X	
(As Diisocyanates) 822-06-0	*	X	See Sections 8 and 15 for information.
(As Diisocyanates) 4098-71-9	*	X	See Sections 8 and 15 for information.

SECTION 3 - HAZARDS IDENTIFICATION

ACUTE OVEREXPOSURE EFFECTS

EYE CONTACT:

Causes severe eye irritation. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact.

SKIN CONTACT:

May cause moderate skin irritation. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

SKIN ABSORPTION:

Skin absorption not expected to occur. Prolonged or repeated contact may cause an allergic skin reaction.

INHALATION:

Vapor and/or spray mist harmful if inhaled. Vapor irritates eyes, nose, and throat. May cause irritation and/or allergic respiratory reaction in lungs.

INGESTION:

Harmful if swallowed.

SIGNS & SYMPTOMS OF OVEREXPOSURE:

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Do not use if you have chronic (long-term) lung or breathing problems, or if you have ever had a reaction to isocyanates.

CHRONIC OVEREXPOSURE EFFECTS

Avoid long-term and repeated contact. Repeated exposure to vapors above recommended exposure limits (see Section 8) may cause irritation of the respiratory system and permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Prolonged inhalation of an ingredient(s) in this product may cause lung sensitivity leading to pneumonitis. This product contains isocyanates. Inhalation may cause a burning sensation of the nose, throat and lungs. Allergic respiratory reactions to these materials are characterized by asthma-like symptoms such as chest tightness, wheezing, shortness of breath and coughing. These symptoms may follow repeated exposure or a single massive exposure and may be delayed. The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures. See Section 11, of this MSDS for a detailed list of chronic health effects information available on individual ingredients in this product.

SECTION 4 - FIRST AID MEASURES

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available.

EYE CONTACT:

Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.

SKIN CONTACT:

Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.

INHALATION:

Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

INGESTION:

Gently wipe or rinse the inside of the mouth with water. Sips of water may be given. Never give anything by mouth to an unconscious person. Contact a poison control center, emergency room or physician right away as further treatment may be necessary.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASHPOINT: 122 Degrees F (50 Degrees C)

FLASHPOINT TEST METHOD:

Pensky-Martens Closed Cup

UEL: Not Available.

LEL: 1.1

AUTOIGNITION TEMPERATURE:

Not Available.

EXTINGUISHING MEDIA:

Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class II combustible liquid fires. Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

PROTECTION OF FIREFIGHTERS:

Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat. May produce hazardous decomposition products when exposed to extreme heat. Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 6 - ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:

Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

STORAGE:

Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class II combustible liquids.

SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 8 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

PERSONAL PROTECTIVE EQUIPMENT

EYES:

Wear chemical-type splash goggles and full face shield when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.

SKIN/GLOVES:

Wear protective clothing sufficient to cover exposed skin surfaces. For applications where skin contact is likely and impermeable clothing is necessary, select clothing constructed of: butyl rubber. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment. The decision whether to clean or discard contaminated clothing should be based on the chemicals contaminating them. Some chemicals can cause skin irritation, sensitization or other health effects if the cleaning process does not remove all traces of them. Consult a safety professional to determine whether clothing contaminated with this product can be safely cleaned and reused.

RESPIRATOR:

Where vapors or overspray are present, use a NIOSH approved, positive-pressure, air- supplied respirator for the entire time of spraying and until all vapors and mists are gone. Follow the respirator manufacturer's directions for respirator use. Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

GENERAL HYGIENE - ESTABLISHED EXPOSURE LIMITS

If Threshold Limit Values (TLVs) have been established by ACGIH, OSHA, Ontario or PPG, they will be listed below. These limits are intended for use in the practice of industrial hygiene as guidelines or recommendations in the control of potential workplace health hazards. These limits are not a relative index of toxicity and should not be used by anyone without industrial hygiene training.

Material/ CAS Number	Percent	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	50 ppm	Not established	100 ppm	Not established
ISOPHORONE DIISOCYANATE 4098-71-9	0.1-1.0	0.005 PPM	Not established	S- 0.005 ppm	0.02 ppm
HEXAMETHYLENE- DI-ISOCYANATE 822-06-0	0.1-1.0	0.005 ppm	Not established	Not established	Not established

Material/ CAS Number	Percent	Ontario TWA	Ontario STEL	PPG IPEL	PPG STEL
HEXANE-1,6-DI- ISOCYANATE POLYMER 28182-81-2	40 - 70	Not established	Not established	0.5 mg/m ³	1 mg/m ³
ISOPHORONE DIISOCYANATE POLYMER 53880-05-0	15 - 40	Not established	Not established	0.46 MG/m ³	Not established
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	25 ppm	Not established	Not established	Not established
ISOPHORONE DIISOCYANATE 4098-71-9	0.1-1.0	C- 0.02 ppm	Not established	Not established	Not established
HEXAMETHYLENE- DI-ISOCYANATE 822-06-0	0.1-1.0	C- 0.02 PPM	Not established	Not established	Not established

Key: ACGIH=American Conference of Governmental Industrial Hygienists; OSHA=Occupational Safety and Health Administration; TLV=Threshold Limit Value; TWA=Time Weighted Average; PEL=Permissible Exposure Limit (1989 Vacated values); IPEL=Internal Permissible Exposure Limit; Ceiling=TLV or PEL Ceiling Limit; STEL=TLV or PEL Short-Term Exposure Limit; Skin= Skin Absorption Designation. [C- Ceiling Limit; S-Potential Skin Absorption; R-Respirable Dust] Additional Information Not applicable.

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES
(FORMULA VALUES, NOT SALES SPECIFICATIONS)

SPECIFIC GRAVITY: 1.088
PHYSICAL STATE: Liquid
Percent Solids: 83.91
Percent Volatile by Volume: 20.380
pH: Not available.
ODOR THRESHOLD: Not available.
Vapour Pressure: 2.1 mmHg
ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.
VAPOR DENSITY: HEAVIER THAN AIR
Evaporation Rate: 40
BOILING POINT OR RANGE: 300 - 304Degrees F
Freezing Point or Range: Not Applicable.
Melting Point or Range(°C): Not Applicable.
Partition coefficient (n-octanol/water): Not Applicable.
WEIGHT PER GALLON: 9.07 (U.S.)/ 10.8 (IMPERIAL)

SECTION 10 - STABILITY AND REACTIVITY

STABILITY:
This product is normally stable but may undergo hazardous reactions at extremely high temperatures and pressures.
CONDITIONS TO AVOID:
None Known.
INCOMPATIBLE MATERIALS:
Avoid contact with strong alkalis, strong mineral acids, or strong oxidizing agents. Avoid water and alcohols.
HAZARDOUS POLYMERIZATION:
None Known.
HAZARDOUS DECOMPOSITION PRODUCTS:
- Carbon monoxide - Carbon dioxide - Traces of isocyanate - Oxides of nitrogen - Hydrogen cyanide - Lower molecular weight polymer fractions

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Material/ CAS Number	Percent	ORAL LD50 (g/kg)	DERMAL LD50 (g/kg)	INHALATION LC50 (mg/l)
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	1.60 g/kg	10.21 g/kg	Not Available
ISOPHORONE DIISOCYANATE 4098-71-9	0.1-1.0	Not Available	1.10 g/kg	Not Available
HEXAMETHYLENE- DI-ISOCYANATE 822-06-0	0.1-1.0	.71 g/kg	.57 g/kg	.15 g/L. 4 hr.

CHRONIC TOXICITY

Ingredient Target Organ/Chronic Effects:
- Brain - Central nervous system - Lung - Respiratory sensitizer

Mutagenicity Toxicity:

This has not been tested for this product.

Reproductive Toxicity:

This has not been tested for this product.

SUPPLEMENTAL HEALTH INFORMATION:

SECTION 12 - ECOLOGICAL INFORMATION

POTENTIAL ENVIRONMENTAL EFFECTS

Ecotoxicity: No Information Available.

ENVIRONMENTAL FATE

Mobility: No information available.
Biodegradation: No information available.
Bioaccumulation: No Information Available.

PHYSICAL/CHEMICAL

Hydrolysis: No information available.
Photolysis: No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Provide maximum ventilation, only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Take up spilled material with sawdust, vermiculite, or other absorbent material and place in containers for disposal. Waste material must be disposed of in accordance with federal, state, provincial and local environmental control regulations. Empty containers should be recycled by an appropriately licensed reconditioner/salvager or disposed of through a permitted waste management facility. Additional disposal information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name: Resin Solution
NOS Technical Name: None
Hazard Class: 3
Subsidiary Class(es): None
UN Number: UN1866
Packing Group: III

USA - RQ Hazardous Substances: Hexamethylene-Di-Isocyanate

USA-RQ Hazardous Substance Hexamethylene-Di-

Threshold Ship Weight: Isocyanate>41662.5 Pounds

Marine Pollutant Name: None

USA and Canada Shipments Only- Combustible Liquid Exception: Non-bulk (<=119 Gallons/450 L) ground shipments can be reclassified to "not regulated" for transportation. Bulk shipments - USA Only (> 119 Gallons/450 L) can be reclassified to a Combustible Liquid.

USA Shipments Only - RQ Threshold Ship Weight: This is the total weight of this product that must be shipped to exceed the RQ quantity.

SECTION 15 - REGULATORY INFORMATION

INVENTORY STATUS

U.S. TSCA: This product and/or all of its components are listed on the U.S. TSCA Inventory or is otherwise exempt from TSCA Inventory reporting requirements.

FEDERAL REGULATIONS

US Regulations

Material/ CAS Number	Percent	CERCLA HS - RQ (LBS)	SARA EHS- TPQ (LBS)	SARA 313
HEXANE-1,6-DI- ISOCYANATE POLYMER 28182-81-2	40 - 70	Not Listed	Not Listed	Not Listed
ISOPHORONE DIISOCYANATE POLYMER 53880-05-0	15 - 40	Not Listed	Not Listed	Not Listed
METHYL (N-AMYL) KETONE 110-43-0	10 - 30	Not Listed	Not Listed	Not Listed
ISOPHORONE DIISOCYANATE 4098-71-9	0.1-1.0	Not Listed	500 LBS	Not Listed
HEXAMETHYLENE- DIISOCYANATE 822-06-0	0.1-1.0	100 LBS	Not Listed	Not Listed
(As Diisocyanates) 822-06-0	*	Not Listed	Not Listed	Listed
(As Diisocyanates) 4098-71-9	*	Not Listed	Not Listed	Listed

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200), the supplier notification requirements of SARA Title III, Section 313 and other applicable right-to-know regulations. Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.
DCX61 000005 (00442851.002)(01/15/07)
050103, 000, 0808

*** END OF MSDS ***

SARA 311/312

Health (acute): Yes
Health (chronic): Yes
Fire (flammable): Yes
Pressure: No
Reactivity: No

WHMIS HAZARD CLASS: - Class B, Division 3 - Class D, Division 2,
Subdivision A - Class D, Division 2, Subdivision B

STATE/PROVINCIAL REGULATIONS

Additional Information

Key: IARC- International Agency on the Research of Cancer; ACGIH-
American Conference of Governmental Industrial Hygienists; NTP-
National Toxicology Program *Denotes chemical as NTP Known
Carcinogen; + Denotes NTP Possible Carcinogen; OSHA-
Occupational Safety and Health Administration.

SECTION 16 - OTHER INFORMATION

Hazard Rating Systems

NFPA Rating: 3 21

HMIS Rating: 3*21

Rating System: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe,
*=Chronic Effects.

HMIS=Hazardous Materials Identification System; NFPA=National Fire
Protection Association;

Safe handling of this product requires that all of the information on the
MSDS be evaluated for specific work environments and conditions of use.

PREPARED BY: Product Safety Department

REASON FOR REVISION: Section 2 has been updated. Changes to this
section may also result in changes in sections 8, 11 and/or 15. Section
9 has been updated. Section 14 has been updated. Date. Edition.
Updated MSDS
format.



**Material Safety
Data Sheets**

Division of Facilities Services

**DOD Hazardous Material Information (ANSI Format)
For Cornell University Convenience Only**

PRESTONE ANTIFREEZE/COOLANT

Section 1 - Product and Company Identification	Section 9 - Physical & Chemical Properties
Section 2 - Composition/Information on Ingredients	Section 10 - Stability & Reactivity Data
Section 3 - Hazards Identification Including Emergency Overview	Section 11 - Toxicological Information
Section 4 - First Aid Measures	Section 12 - Ecological Information
Section 5 - Fire Fighting Measures	Section 13 - Disposal Considerations
Section 6 - Accidental Release Measures	Section 14 - MSDS Transport Information
Section 7 - Handling and Storage	Section 15 - Regulatory Information
Section 8 - Exposure Controls & Personal Protection	Section 16 - Other Information

The information in this document is compiled from information maintained by the United States Department of Defense (DOD). Anyone using this information is solely responsible for the accuracy and applicability of this information to a particular use or situation.

Cornell University does not in any way warrant or imply the applicability, viability or use of this information to any person or for use in any situation.

**Section 1 - Product and Company Identification
PRESTONE ANTIFREEZE/COOLANT**

Product Identification: PRESTONE ANTIFREEZE/COOLANT

Date of MSDS: 10/18/1999 **Technical Review Date:** 08/16/2000

FSC: 6850 **NIIN:** 01-252-8501

Submitter: D DG

Status Code: C

MFN: 01

Article: N

Kit Part: N

Manufacturer's Information

Manufacturer's Name: PRESTONE PRODUCTS CORP
Manufacturer's Address1: 39 OLD RIDGEBURRY RD
Manufacturer's Address2: DANBURY, CT 06513-5109
Manufacturer's Country: US
General Information Telephone: 203-830-7800/7865
Emergency Telephone: (800)424-9300
Other Number for MSDS Information: MSDSP149
Emergency Telephone: (800)424-9300
MSDS Preparer's Name: NOT PROVIDED.
Chemtec Telephone: (800)424-9300
Proprietary: N
Reviewed: N
Published: Y
CAGE: 0CXZ7
Special Project Code: N

Item Description

Item Name: ANTIFREEZE
Item Manager: S9G
Specification Number: N/R
Type/Grade/Class: N/R
Unit of Issue: CO **Quantitative Expression:** 0000000005GL
Unit of Issue Quantity: 0
Type of Container: CAN

Contractor Information

Contractor's Name: EMULTEC INDUSTRIAL PRODUCTS INC
Contractor's Address1: 1150 HAYDEN DR SUITE 100
Contractor's Address2: CHARROLLTON, TX 75006
Contractor's Telephone: 972-417-1288
Contract Number: SP0450-00-M-D704
Contractor's CAGE: 0WA27

Contractor Information

Contractor's Name: GOURMET INQUE LTD
Contractor's Address1: 191 STANLEY ST
Contractor's Address2: ELK GROVE VILLAGE, IL 60007-1555
Contractor's Telephone: 847-296-6192/FAX: 800-542-1042
Contract Number: SP0450-00-M-SC95
Contractor's CAGE: 0TNN7

Contractor Information

Contractor's Name: INDUSTRIAL CHEMICAL COMMODITIES INC
Contractor's Address1: 15944 DERWOOD RD

Contractor's Address2: ROCKVILLE, MD 20855
Contractor's Telephone: 800-284-5279
Contract Number: SP0450-00-M-SF15
Contractor's CAGE: 1ELU0

Contractor Information

Contractor's Name: PRESTONE PRODUCTS CORP
Contractor's Address1: 39 OLD RIDGEBURY RD
Contractor's Address2: DANBURY, CT 06810-5109
Contractor's Telephone: 203-830-7800
Contractor's CAGE: 0CXZ7

Section 2 - Composition/Information on Ingredients PRESTONE ANTIFREEZE/COOLANT

Ingredient Name: DIETHYLENE GLYCOL
Ingredient CAS Number: 111-46-6 **Ingredient CAS Code:** M
RTECS Number: ID5950000 **RTECS Code:** M
=WT: =WT Code:
=Volume: =Volume Code:
>WT: >WT Code:
>Volume: >Volume Code:
<WT: <WT Code:
<Volume: <Volume Code:
% Low WT: 0. % Low WT Code: M
% High WT: 8. % High WT Code: M
% Low Volume: % Low Volume Code:
% High Volume: % High Volume Code:
% Text:
% Enviromental Weight:
Other REC Limits: NONE SPECIFIED
OSHA PEL: NOT ESTABLISHED **OSHA PEL Code: M**
OSHA STEL: N/P **OSHA STEL Code:**
ACGIH TLV: NOT ESTABLISHED **ACGIH TLV Code: M**
ACGIH STEL: N/P **ACGIH STEL Code:**
EPA Reporting Quantity:
DOT Reporting Quantity:
Ozone Depleting Chemical: N

Ingredient Name: ETHYLENE GLYCOL (SARA III)
Ingredient CAS Number: 107-21-1 **Ingredient CAS Code:** M
RTECS Number: KW2975000 **RTECS Code:** M
=WT: =WT Code:
=Volume: =Volume Code:
>WT: >WT Code:
>Volume: >Volume Code:
<WT: <WT Code:
<Volume: <Volume Code:
% Low WT: 80. % Low WT Code: M
% High WT: 96. % High WT Code: M

% Low Volume: % Low Volume Code:
% High Volume: % High Volume Code:
% Text:
% Environmental Weight:
Other REC Limits: NONE RECOMMENDED
OSHA PEL: C 50 PPM OSHA PEL Code: M
OSHA STEL: N/P OSHA STEL Code:
ACGIH TLV: C 50 PPM ACGIH TLV Code: M
ACGIH STEL: N/P ACGIH STEL Code:
EPA Reporting Quantity: 1 LB
DOT Reporting Quantity: 1 LB
Ozone Depleting Chemical: N

Ingredient Name: NON-HAZARDOUS INGREDIENTS
Ingredient CAS Number: Ingredient CAS Code: X
RTECS Number: RTECS Code: X
=WT: =WT Code:
=Volume: =Volume Code:
>WT: 1. >WT Code: M
>Volume: >Volume Code:
<WT: <WT Code:
<Volume: <Volume Code:
% Low WT: % Low WT Code:
% High WT: % High WT Code:
% Low Volume: % Low Volume Code:
% High Volume: % High Volume Code:
% Text:
% Environmental Weight:
Other REC Limits: N/P
OSHA PEL: N/P OSHA PEL Code:
OSHA STEL: N/P OSHA STEL Code:
ACGIH TLV: N/P ACGIH TLV Code:
ACGIH STEL: N/P ACGIH STEL Code:
EPA Reporting Quantity:
DOT Reporting Quantity:
Ozone Depleting Chemical:

Ingredient Name: WATER
Ingredient CAS Number: 7732-18-5 Ingredient CAS Code: M
RTECS Number: ZC0110000 RTECS Code: M
=WT: =WT Code:
=Volume: =Volume Code:
>WT: >WT Code:
>Volume: >Volume Code:
<WT: <WT Code:
<Volume: <Volume Code:
% Low WT: % Low WT Code:
% High WT: % High WT Code:
% Low Volume: % Low Volume Code:
% High Volume: % High Volume Code:
% Text: UNKNOWN.

% Environmental Weight:**Other REC Limits:** NONE SPECIFIED**OSHA PEL:** NOT ESTABLISHED **OSHA PEL Code:** M**OSHA STEL:** N/P **OSHA STEL Code:****ACGIH TLV:** NOT ESTABLISHED **ACGIH TLV Code:** M**ACGIH STEL:** N/P **ACGIH STEL Code:****EPA Reporting Quantity:****DOT Reporting Quantity:****Ozone Depleting Chemical:** N

Section 3 - Hazards Identification, Including Emergency Overview
PRESTONE ANTIFREEZE/COOLANT

Health Hazards Acute & Chronic: INHALATION: MAY CAUSE IRRITATION OF NOSE AND THROAT. HIGH VAPOR CONCENTRATIONS MAY PRODUCE NAUSEA, VOMITING, HEADACHE, DIZZINESS AND IRREGULAR EYE MOVEMENTS. SKIN CONTACT: NO EVIDENCE OF ADVERSE EFFECTS. EYE CONTACT: LIQUID, VAPOR OR MIST MAY CAUSE DISCOMFORT IN THE EYE WITH PERSISTENT CONJUNCTIVITIS. INGESTION: MAY CAUSE ABDOMINAL DISCOMFORT/PAIN, A BITTER TASTE, NAUSEA, VOMITING, DIZZINESS, DROWSINESS, MALAISE, BLURRING VISION, BACK PAIN, KIDNEY FAILURE. CARDIAC FAILURE, PULMONARY EDEMA, SEVERE KIDNEY AND LIVER DAMAGE MAY ALSO OCCUR. MAY BE FATAL. CHRONIC: CENTRAL NERVOUS SYSTEM INVOLVEMENT, SKIN SENSITIZATION, DERMATITIS.

Signs & Symptoms of Overexposure:

INHALATION: HIGH VAPOR CONCENTRATIONS MAY PRODUCE NAUSEA, VOMITING, HEADACHE DIZZINESS AND IRREGULAR EYE MOVEMENTS. INGESTED: ABDOMINAL DISCOMFORT/PAIN, A BITTER TASTE, NAUSEA, VOMITING, DIZZINESS, DROWSINESS, MALAISE, BLURRING VISION, BACK PAIN. EYE CONTACT: REDNESS, CONJUNCTIVA, DISCOMFORT.

Medical Conditions Aggravated by Exposure:

THE AVAILABLE TOXICOLOGICAL INFORMATION AND A KNOWLEDGE OF THE PHYSICAL AND CHEMICAL PROPERTIES OF THE MATERIAL SUGGEST THAT OVEREXPOSURE IS UNLIKELY TO AGGRAVATE EXISTING MEDICAL CONDITIONS.

LD50 LC50 Mixture: LD50 (ORAL, RAT) 4700 MG/KG**Route of Entry Indicators:****Inhalation:** N/P**Skin:** N/P**Ingestion:** N/P**Carcinogenicity Indicators****NTP:** NO**IARC:** NO**OSHA:** NO

Carcinogenicity Explanation: NONE OF THE COMPONENTS IN THESE PRODUCTS IS LISTED AS A CARCINOGEN OR SUSPECTED CARCINOGEN BY IARC, NTP OR OSHA.

Section 4 - First Aid Measures
PRESTONE ANTIFREEZE/COOLANT

First Aid:

INHALATION: REMOVE VICTIM TO FRESH AIR. IF BREATHING HAS STOPPED, ADMINISTER ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, HAVE MEDICAL PERSONNEL ADMINISTER OXYGEN. GET MEDICAL ATTENTION. SKIN: IMMEDIATELY WASH CONTACTED AREA THOROUGHLY WITH SOAP AND WATER. IF IRRITATION PERSISTS, GET MEDICAL ATTENTION. EYES: IMMEDIATELY FLUSH WITH LARGE AMOUNT OF WATER FOR 15 MINUTES. GET MEDICAL ATTENTION IF IRRITATION PERSISTS. INGESTION: SEEK IMMEDIATE MEDICAL ATTENTION. CALL POISON CONTROL CENTER. NEVER GIVE ANYTHING BY MOUTH TO OR INDUCE VOMITING IN AN UNCONSCIOUS OR DROWSY PERSON.

Section 5 - Fire Fighting Measures
PRESTONE ANTIFREEZE/COOLANT

Fire Fighting Procedures:

DO NOT SPRAY POOL FIRES DIRECTLY. COOL FIRE EXPOSED CONTAINERS WITH WATER. FIREFIGHTERS SHOULD WEAR POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING FOR FIRES IN AREAS WHERE CHEMICALS ARE USED OR STORED.

Unusual Fire or Explosion Hazard:

A SOLID STREAM OF WATER OR FOAM DIRECTED INTO HOT, BURNING LIQUID CAN CAUSE FROTHING.

Extinguishing Media:

FOR LARGE FIRES, USE ALCOHOL TYPE OR ALL-PURPOSE FOAMS. FOR SMALL FIRES, USE WATER SPRAY, CARBON DIOXIDE OR DRY CHEMICAL.

Flash Point: =104.4C, 220.F **Flash Point Text:**

Autoignition Temperature:

Autoignition Temperature Text: N/D

Lower Limit(s): 3.2

Upper Limit(s): 15.3

Section 6 - Accidental Release Measures
PRESTONE ANTIFREEZE/COOLANT

Spill Release Procedures:

WEAR APPROPRIATE PROTECTIVE CLOTHING AND EQUIPMENT. COLLECT WITH ABSORBENT MATERIAL AND PLACE IN APPROPRIATE, LABELED CONTAINER FOR DISPOSAL OR, IF PERMITTED FLUSH SPILL AREA WITH WATER.

Section 7 - Handling and Storage
PRESTONE ANTIFREEZE/COOLANT

Handling and Storage Precautions:**Other Precautions:**

Section 8 - Exposure Controls & Personal Protection

PRESTONE ANTIFREEZE/COOLANT

Respiratory Protection:

IF THE TLV IS EXCEEDED A NIOSH APPROVED RESPIRATOR WITH ORGANIC VAPOR CARTRIDGE AND DUST/MIST PREFILTERS OR SUPPLIED AIR RESPIRATOR IS RECOMMENDED. EQUIPMENT SELECTION DEPENDS ON CONTAMINANT TYPE AND CONCENTRATION. SELECT AND USE IN ACCORDANCE WITH 29 CFR 1910.134 AND GOOD INDUSTRIAL HYGIENE PRACTICE. FOR FIREFIGHTING, USE SELF-CONTAINED BREATHING APPARATUS.

Ventilation:

USE GENERAL VENTILATION OR LOCAL EXHAUST AS REQUIRED TO MAINTAIN EXPOSURES BELOW THE OCCUPATIONAL EXPOSURE LIMITS.

Protective Gloves:

CHEMICAL RESISTANT GLOVES SUCH AS NEOPRENE OR PVC WHERE CONTACT IS POSSIBLE.

Eye Protection: SPLASH-PROOF GOGGLES.

Other Protective Equipment: APPROPRIATE PROTECTIVE CLOTHING AS NEEDED TO MINIMIZE SKIN CONTACT. SUITABLE WASHING AND EYE FLUSHING FACILITIES SHOULD BE AVAILABLE IN THE WORK AREA.

Work Hygienic Practices: CONTAMINATED CLOTHING SHOULD BE REMOVED AND LAUNDERED BEFORE RE-USE.

Supplemental Health & Safety Information: P/N FOR ICCI: PRESTONE ADVANCED FORMULA. PART NUMBER OF PRESTONE: AF777.

Section 9 - Physical & Chemical Properties

PRESTONE ANTIFREEZE/COOLANT

HCC: V5

NRC/State License Number: N/R

Net Property Weight for Ammo: N/R

Boiling Point: =167.8C, 334.F **Boiling Point Text:**

Melting/Freezing Point: =-22.2C, -8.F **Melting/Freezing Text:**

Decomposition Point: **Decomposition Text:** N/P

Vapor Pressure: <0.1 **Vapor Density:** 2.1

Percent Volatile Organic Content:

Specific Gravity: 1.12

Volatile Organic Content Pounds per Gallon:

pH: NOT DETERMINED

Volatile Organic Content Grams per Liter:

Viscosity: NOT DETERMINED.

Evaporation Weight and Reference: <1 (NO METHOD GIVEN)

Solubility in Water: COMPLETE (100%)

Appearance and Odor: YELLOW LIQUID WITH A MILD ODOR.

Percent Volatiles by Volume: NONE

Corrosion Rate: N/P

Section 10 - Stability & Reactivity Data

PRESTONE ANTIFREEZE/COOLANT

Stability Indicator: YES

Materials to Avoid:

NORMALLY UNREACTIVE. HOWEVER, AVOID STRONG BASES AT HIGH TEMPERATURES, STRONG ACIDS, STRONG OXIDIZING AGENTS AND MATERIALS REACTIVE WITH HYDROXYL COMPOUNDS.

Stability Condition to Avoid:

NONE KNOWN.

Hazardous Decomposition Products:

BURNING MAY PRODUCE CARBON MONOXIDE AND CARBON DIOXIDE.

Hazardous Polymerization Indicator: NO**Conditions to Avoid Polymerization:**

NONE.

Section 11 - Toxicological Information
PRESTONE ANTIFREEZE/COOLANT

Toxicological Information:

ETHYLENE GLYCOL LD50 SKIN RABBIT: 9530 MG/KG. DIETHYLENE GLYCOL: LD50 ORAL RAT: 12,565 MG/KG AND LD50 SKIN RABBIT: 11890 MG/KG. ETHYLENE GLYCOL HAS BEEN SHOWN TO PRODUCE DOSE-RELATED TERATOGENIC EFFECTS IN RATS AND MICE WHEN GIVEN IN DRINKING WATER AT HIGH CONCENTRATIONS OR DOSES.

Section 12 - Ecological Information
PRESTONE ANTIFREEZE/COOLANT

Ecological Information:

ETHYLENE GLYCOL: LC50 GOLDFISH: 5,000 MG/L/24 HR, AT 20C STATIC CONDITIONS. TOXICITY THRESHOLD: BACTERIAL (PSEUDOMONAS PUTIDA): 10,000 MG/L; PROTOZOA: >10,000 MG/L; ALGAE: 2,000 MG/L; GREEN ALGAE: >10,000 MG/L.

Section 13 - Disposal Considerations
PRESTONE ANTIFREEZE/COOLANT

Waste Disposal Methods:

DISPOSE OF PRODUCT IN ACCORDANCE WITH ALL LOCAL, STATE/PROVINCIAL AND FEDERAL REGULATIONS.

Section 14 - MSDS Transport Information
PRESTONE ANTIFREEZE/COOLANT

Transport Information:

DOT HAZARD CLASSIFICATION: NONE. IMDG: NOT REGULATED. NOTE IF BULK SHIPMENT IS INVOLVED, THE FOLLOWING INFORMATION APPLIES: US DOT PROPER SHIPPING NAME: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N. O.S. (ETHYLENE GLYCOL), 9, UN3082.

Section 15 - Regulatory Information
PRESTONE ANTIFREEZE/COOLANT

SARA Title III Information:

EPA SARA 311/312: HAZARD CLASSIFICATION: ACUTE HEALTH AND CHRONIC HEALTH. EPA SARA 313: THIS PRODUCT CONTAINS THE FOLLOWING CHEMICALS SUBJECT TO ANNUAL RELEASE REPORTING REQUIREMENTS UNDER SARA TITLE III, SECTION 313 (40

CFR 372): ETHYLENE GLYCOL, CAS# 107-21-1, 80-96%. CERCLA SECTION 103: SPILLS OF THIS PRODUCT OVER THE RQ (REPORTABLE QUANTITY) MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER. THE RQ FOR THIS PRODUCT, BASED ON THE RQ FOR ETHYLENE GLYCOL (96% MAXIMUM) OF 5,000 LBS, IS 5,208 LBS. MANY STATES HAVE MORE STRINGENT RELEASE REPORTING REQUIREMENTS. REPORT SPILLS REQUIRED UNDER FEDERAL, STATE, AND LOCAL REGULATIONS.

Federal Regulatory Information:

EPA TSCA INVENTORY: ALL OF THE COMPONENTS OF THIS MATERIAL ARE LISTED ON THE TOXIC SUBSTANCE CONTROL ACT (TSCA) CHEMICAL SUBSTANCES INVENTORY.

State Regulatory Information:

CALIFORNIA PROPOSITION 65: THIS PRODUCT MAY CONTAIN THE FOLLOWING SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR REPRODUCTIVE HARM: 1,4-DIOXANE (TRACE AMOUNT).

Section 16 - Other Information
PRESTONE ANTIFREEZE/COOLANT

Other Information:

NOTE TO PHYSICIAN: THE PRINCIPAL TOXIC EFFECTS OF ETHYLENE GLYCOL, WHEN SWALLOWED, ARE KIDNEY DAMAGE AND METABOLIC ACIDOSIS. ETHANOL IS ANTIDOTAL AND ITS EARLY ADMINISTRATION MAY BLOCK FORMATION OF NEPHROTOXIC METABOLITES OF ETHYLENE GLYCOL IN THE LIVER. THE OBJECTIVE IS TO RAPIDLY ACHIEVE AND MAINTAIN A BLOOD ETHANOL LEVEL OF 100 MG/DL (IV). HEMODIALYSIS MAY BE REQUIRED. 4-METHYLPYRAZOLE, A POTENT INHIBITOR OF ALCOHOL DEHYDROGENASE, HAS BEEN USED THERAPEUTICALLY. ADDITIONAL THERAPEUTIC MODALITIES WHICH MAY DECREASE ADVERSE EFFECTS ARE ADMINISTRATION OF BOTH THIAMINE AND PYRIDOXINE.

HMIS Transportation Information

Product Identification: PRESTONE ANTIFREEZE/COOLANT

Transportation ID Number: 151809

Responsible Party CAGE: 0CXZ7

Date MSDS Prepared: 10/18/1999

Date MSDS Reviewed: 03/05/2000

MFN: 03/05/2000

Submitter: DDG

Status Code: A

Container Information

Unit of Issue: CO

Container Quantity: 0

Type of Container: CAN

Net Unit Weight: 47.0 LBS

Article without MSDS: N

Technical Entry NOS Shipping Number:

Radioactivity:

Form:

Net Explosive Weight: N/R

Coast Guard Ammunition Code: N/R

Magnetism: N/R

AF MMAC Code:

DOD Exemption Number: N/A
Limited Quantity Indicator: N
Multiple Kit Number: 0
Kit Indicator: N
Kit Part Indicator: N
Review Indicator: N
Additional Data:
NOT REGULATED FOR TRANSPORTATION, PER MSDS.

Department of Transportation Information

DOT Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION
DOT PSN Code: ZZZ
Symbols: N/R
DOT PSN Modifier:
Hazard Class: N/R
UN ID Number: N/R
DOT Packaging Group: N/R
Label: N/R
Special Provision(s): N/R
Packaging Exception: N/R
Non Bulk Packaging: N/R
Bulk Packaging: N/R
Maximum Quantity in Passenger Area: N/R
Maximum Quantity in Cargo Area: N/R
Stow in Vessel Requirements: N/R
Requirements Water/Sp/Other: N/R

IMO Detail Information

IMO Proper Shipping Name: NOT REGULATED FOR THIS MODE OF TRANSPORTATION
IMO PSN Code: ZZZ
IMO PSN Modifier:
IMDG Page Number: N/R
UN Number: N/R
UN Hazard Class: N/R
IMO Packaging Group: N/R
Subsidiary Risk Label: N/R
EMS Number: N/R
Medical First Aid Guide Number: N/R

IATA Detail Information

IATA Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION
IATA PSN Code: ZZZ
IATA PSN Modifier:
IATA UN Id Number: N/R
IATA UN Class: N/R
Subsidiary Risk Class: N/R
UN Packaging Group: N/R
IATA Label: N/R
Packaging Note for Passengers: N/R
Maximum Quantity for Passengers: N/R
Packaging Note for Cargo: N/R
Maximum Quantity for Cargo: N/R
Exceptions: N/R

AFI Detail Information**AFI Proper Shipping Name:** NOT REGULATED BY THIS MODE OF TRANSPORTATION**AFI Symbols:****AFI PSN Code:** ZZZ**AFI PSN Modifier:****AFI UN Id Number:** N/R**AFI Hazard Class:** N/R**AFI Packing Group:** N/R**AFI Label:** N/R**Special Provisions:** N/A**Back Pack Reference:** N/A**HAZCOM Label Information****Product Identification:** PRESTONE ANTIFREEZE/COOLANT**CAGE:** 0CXZ7**Assigned Individual:** N**Company Name:** PRESTONE PRODUCTS CORP**Company PO Box:****Company Street Address1:** 39 OLD RIDGEBURY RD**Company Street Address2:** DANBURY, CT 06810-5109 US**Health Emergency Telephone:** (800)424-9300**Label Required Indicator:** Y**Date Label Reviewed:** 08/16/2000**Status Code:** C**Manufacturer's Label Number:** NOT PROVIDED**Date of Label:** 10/18/1999**Year Procured:** 2000**Organization Code:** M**Chronic Hazard Indicator:** Y**Eye Protection Indicator:** YES**Skin Protection Indicator:** NO**Respiratory Protection Indicator:** NO**Signal Word:** CAUTION**Health Hazard:** Slight**Contact Hazard:** Slight**Fire Hazard:** Slight**Reactivity Hazard:** None

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Praxair Material Safety Data Sheet

1. Chemical Product and Company Identification

Product Name: Butane	Trade Name: Butane
Product Use: Many	
Chemical Name: n-Butane	Synonym: Methylethylmethane, Diethyl, n-Butane, Butyl hydride.
Chemical Formula: C ₄ H ₁₀	Chemical Family: Alkanes
Telephone: Emergencies: * 1-800-363-0042	Supplier /Manufacture: Praxair Canada Inc. 1 City Centre Drive Suite 1200 Mississauga, ON L5B 1M2
	Phone: 905-803-1600
	Fax: 905-803-1682

**Call emergency numbers 24 hours a day only for spills, leaks, fire, exposure, or accidents involving this product. For routine information, contact your supplier or Praxair sales representative.*

2. Composition and Information on Ingredients

INGREDIENTS	% (VOL)	CAS NUMBER	LD ₅₀ (Species & Routes)	LC ₅₀ (Rat, 4 hrs.)	TLV-TWA (ACGIH)
Butane	100	106-97-8	Not available.	658 g/m ³	800 ppm

3. Hazards Identification

Emergency Overview

DANGER! Flammable liquid and gas under pressure. Can form explosive mixtures with air. May cause frostbite. Can cause rapid suffocation. May cause dizziness and drowsiness. Self-contained breathing apparatus may be required by rescue workers.

ROUTES OF EXPOSURE: Inhalation. Skin contact. Swallowing. Eye contact.

THRESHOLD LIMIT VALUE: TLV-TWA Data from 2004 Guide to Occupational Exposure Values (ACGIH). TLV-TWAs should be used as a guide in the control of health hazards and not as fine lines between safe and dangerous concentrations.

EFFECTS OF A SINGLE (ACUTE) OVEREXPOSURE:

INHALATION: Asphyxiant. Effects are due to lack of oxygen. Moderate concentrations may cause headaches, drowsiness, dizziness, excitation, excess salivation, vomiting, and unconsciousness. Lack of oxygen can kill.

SKIN CONTACT: Liquid may cause frostbite.

SKIN ABSORPTION: No harm expected.

SWALLOWING:

This product is a gas at normal temperature and pressure, but frostbite of the lips and mouth may result from contact with the liquid.

EYE CONTACT:

Relatively non-irritating, but may cause frostbite.

EFFECTS OF REPEATED (CHRONIC) OVEREXPOSURE:

Not available.

OTHER EFFECTS OF OVEREXPOSURE:

None known.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

The skin irritating properties of the material may aggravate an existing dermatitis.

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH HAZARD EVALUATION:

None.

CARCINOGENICITY:

Not listed as carcinogen by OSHA, NTP or IARC.

4. First Aid Measures

INHALATION:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

SKIN CONTACT:

For exposure to liquid, immediately warm frostbite area with warm water not to exceed 41C. In case of massive exposure, remove contaminated clothing while showering with warm water. Call a physician.

SWALLOWING:

This product is a gas at normal temperature and pressure.

EYE CONTACT:

For contact with the liquid, immediately flush eyes thoroughly with warm water for at least 15 minutes. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. See a physician, preferably an ophthalmologist, immediately.

NOTES TO PHYSICIAN:

This material may be a cardiac sensitizer; avoid the use of epinephrine. There is no specific antidote, and treatment of overexposure should be directed at the control of symptoms and the clinical condition.

5. Fire Fighting Measures

FLAMMABLE : Yes.

IF YES, UNDER WHAT CONDITIONS?

See Unusual Fire and Explosion Hazards.

FLASH POINT (test method) CLOSED CUP: -60°C (-76°F). (Tag)

AUTOIGNITION TEMPERATURE 405°C (761°F)

FLAMMABLE LIMITS IN AIR, % by volume:

LOWER: 1.8

UPPER: 8.5

EXTINGUISHING MEDIA:

CO2, dry chemical, water spray or fog.

SPECIAL FIRE FIGHTING PROCEDURES:

DANGER! Evacuate all personnel from danger area. Immediately cool cylinders with water spray from maximum distance taking care not to extinguish flames. Remove ignition source if without risk. If flames are accidentally extinguished, explosive re-ignition may occur; therefore, appropriate measures should be taken; e.g., total evacuation. Reapproach with extreme caution. Use self-contained breathing apparatus. Stop flow of gas if without risk while continuing cooling water spray. Remove all containers from area if without risk. Allow fire to burn out.

UNUSUAL FIRE AND EXPLOSION HAZARD:

Flammable gas. Forms explosive mixtures with air and oxidizing agents. Container may rupture due to heat of fire. Do not extinguish flames due to possibility of explosive re-ignition. Vapours form from this product and may travel or be moved by air currents an ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharges, or other ignition sources at locations distant from product handling point. Explosive atmospheres may linger. Before entering area, especially confined areas, check atmosphere with approved device. No part of a container should be subjected to temperature higher than 52 C (approximately 125 F). Most containers are provided with a pressure relief device designed to vent contents when they are exposed to elevated temperature.

HAZARDOUS COMBUSTION PRODUCTS:

These products are carbon oxides (CO, CO₂).

SENSITIVITY TO IMPACT:

Avoid impact against container.

SENSITIVITY TO STATIC DISCHARGE:

Possible, ground all equipment before use.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

DANGER! **Flammable, high-pressure gas.** Forms explosive mixtures with air. Immediately evacuate all personnel from danger area. Use self-contained breathing apparatus where needed. Remove all sources of ignition if without risk. Reduce gas with fog or fine water spray. Shut off flow if without risk. Ventilate area or move cylinder to a well-ventilated area. Flammable gas may spread from leak. Before entering area, especially confined areas, check atmosphere with an appropriate device.

WASTE DISPOSAL METHOD:

Prevent waste from contaminating the surrounding environment. Keep personnel away. Discard any product, residue, disposable container, or liner in an environmentally acceptable manner, in full compliance with federal, provincial, and local regulations. If necessary, call your local supplier for assistance.

7. Handling and Storage

PRECAUTIONS TO BE TAKEN IN STORAGE:

Store and use with adequate ventilation. Separate flammable cylinders from oxygen, chlorine, and other oxidizers by at least 6 m or use a barricade of non-combustible material. This barricade should be at least 1.5 m high and have a fire resistance rating of at least ½ hour. Firmly secure cylinders upright to keep them from falling or being knocked over. Screw valve protection cap firmly in place by hand. Post "No Smoking or Open Flames" signs in storage and use areas. There must be no sources of ignition. All electrical equipment in storage areas must be explosion-proof. Storage areas must meet national electric codes for Class 1 hazardous areas. Store only where temperature will not exceed 52 C. Store full and empty cylinders separately. Use a first-in, first-out inventory system to prevent storing full cylinders for long periods.

PRECAUTIONS TO BE TAKEN IN HANDLING:

Protect cylinders from damage. Use a suitable hand truck to move cylinders; do not drag, roll, slide, or drop. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. Never insert an object (e.g., wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Open valve slowly. If valve is hard to open, discontinue use and contact your supplier. For other precautions, see Section 16.

For additional information on storage and handling, refer to Compressed Gas Association (CGA) pamphlet P-1, *Safe Handling of Compressed Gases in Containers*, available from the CGA. Refer to Section 16 for the address and phone number along with a list of other available publications.

OTHER HAZARDOUS CONDITIONS OF HANDLING, STORAGE, AND USE:

Flammable liquid and gas under pressure. Do not get liquid or vapours in eyes, on skin, or clothing. Safety showers and eyewash fountains should be immediately available. Use only in a closed system. Use piping and equipment adequately designed to withstand pressures to be encountered. Use only spark-proof tools and explosion-proof equipment. Keep away from heat, sparks, and open flame. **May form explosive mixtures with air.** Ground all equipment. Store and use with adequate ventilation at all times. Close valve after each use; keep closed even when empty. **Prevent reverse flow.** Reverse flow into cylinder may cause rupture. Use a check valve or other protective device in any line or piping from the cylinder. **When returning cylinder to supplier, be sure valve is closed, then install valve outlet plug tightly. Never work on a pressurized system.** If there is a leak, close the cylinder valve. Vent the system down in a safe and environmentally sound manner in compliance with all federal, provincial, and local laws; then repair the leak. **Never place a compressed gas cylinder where it may become part of an electrical circuit.**

8. Exposure Controls/Personal Protection

VENTILATION/ENGINEERING CONTROLS:

LOCAL EXHAUST: An explosion-proof local exhaust system is acceptable. See SPECIAL.

MECHANICAL (general): See SPECIAL.

SPECIAL: Use only in a closed system.

OTHER: See SPECIAL.

PERSONAL PROTECTION:

RESPIRATORY PROTECTION: Use respirable fume respirator or air supplied respirator when working in confined space or where local exhaust or ventilation does not keep exposure below TLV. Select in accordance with the provincial regulations or guidelines. Selection should also be based on the current CSA standards Z94.4, "Selection, care and use of respirators". Respirators should be approved by NIOSH and MSHA.

SKIN PROTECTION: Neoprene gloves.

EYE PROTECTION: Wear safety glasses when handling cylinders.

Select in accordance with the current CSA standard Z94.3, "Industrial Eye and Face Protection", and any provincial regulations, local bylaws or guidelines.

OTHER PROTECTIVE EQUIPMENT: Metatarsal shoes for cylinder handling. Protective clothing where needed. Cuffless trousers should be worn outside the shoes. Select in accordance with the current CSA standard Z195, "Protective Foot Wear", and any provincial regulations, local bylaws or guidelines.

9. Physical and Chemical Properties

PHYSICAL STATE: Gas. (Compressed Gas)	FREEZING POINT: -138.36°C (-217°F)	pH: Not applicable.
BOILING POINT -0.51°C (31.1°F)	VAPOUR PRESSURE 114 kPa (@ 20°C)	MOLECULAR WEIGHT: 58.124 g/mole
SPECIFIC GRAVITY: LIQUID (Water = 1) 0.57 @ 20/4 C	SOLUBILITY IN WATER, Very slightly soluble in cold water.	
SPECIFIC GRAVITY: VAPOUR (air = 1) 2.11	EVAPORATION RATE (Butyl Acetate=1): >1 compared to (Butyl Acetate=1)	COEFFICIENT OF WATER/OIL DISTRIBUTION: Not applicable.
VAPOUR DENSITY: 0.00254 g/ml	% VOLATILES BY VOLUME: 100% (v/v).	ODOUR THRESHOLD: Not available.

APPEARANCE & ODOUR: Colourless.

Odour: Disagreeable. (Slight.)

10. Stability and Reactivity

STABILITY:	The product is stable.
CONDITIONS OF CHEMICAL INSTABILITY:	Elevated temperatures > 435 C.
INCOMPATIBILITY (materials to avoid):	Oxidizing agents. Nickel carbonyl and oxygen mixtures.
HAZARDOUS DECOMPOSITION PRODUCTS:	Thermal decomposition or burning may produce carbon monoxide/carbon dioxide.
HAZARDOUS POLYMERIZATION:	Will not occur.
CONDITIONS OF REACTIVITY:	None known.

11. Toxicological Information

See section 3.

12. Ecological Information

No adverse ecological effects expected. This product does not contain any Class I or Class II ozone-depleting chemicals. The components of this mixture are not listed as marine pollutants by TDG Regulations.

13. Disposal Considerations

WASTE DISPOSAL METHOD: Do not attempt to dispose of residual or unused quantities. Return cylinder to supplier.

14. Transport Information

TDG/IMO SHIPPING NAME: Butane (n-Butane)

HAZARD CLASS: CLASS 2.1 : Flammable gas.	IDENTIFICATION #: UN1011	PRODUCT RQ: 100 L
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SHIPPING LABEL(s): Flammable gas

PLACARD (when required): Flammable gas

SPECIAL SHIPPING INFORMATION:

Cylinders should be transported in a secure position, in a well-ventilated vehicle. Cylinders transported in an enclosed, nonventilated compartment of vehicle can present serious safety hazards.

15. Regulatory Information

The following selected regulatory requirements may apply to this product. Not all such requirements are identified. Users of this product are solely responsible for compliance with all applicable federal, provincial, and local regulations.

WHMIS (Canada) CLASS A: Compressed gas.
CLASS B-1: Flammable gas.

International Regulations

- EINECS Not available.
- DSCL (EEC) This product is not classified according to the EU regulations.
- International Lists No products were found.

16. Other Information

MIXTURES:

When two or more gases, or liquefied gases are mixed, their hazardous properties may combine to create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an Industrial Hygienist, or other trained person when you make your safety evaluation of the end product. Remember, gases and liquids have properties which can cause serious injury or death.

HAZARD RATING SYSTEM:

HMIS RATINGS:

- HEALTH 0
- FLAMMABILITY 4
- PHYSICAL HAZARD 0

STANDARD VALVE CONNECTIONS FOR U.S. AND CANADA:

- THREADED: CGA-510
- PIN-INDEXED YOKE: Not available.
- ULTRA-HIGH-INTEGRITY CONNECTION: Not available.

Use the proper CGA connections. **DO NOT USE ADAPTERS.** Additional limited-standard connections may apply. See CGA pamphlets V-1 and V-7 listed below.

Ask your supplier about free Praxair safety literature as referred to in this MSDS and on the label for this product. Further information about this product can be found in the following pamphlets published by the Compressed Gas Association, Inc. (CGA), 4221 Walney Road, 5th Floor, Chantilly, VA 20151-2923, Telephone (703) 788-2700, Fax (703) 961-1831, website: www.cganet.com.

Product Name: Butane

MSDS# E-4572-G

Date: 10/15/2004

- AV-1 Safe Handling and Storage of Compressed Gas
- P-1 Safe Handling of Compressed Gases in Containers
- P-14 Accident Prevention in Oxygen-Rich, Oxygen-Deficient Atmospheres
- SB-2 Oxygen-Deficient Atmospheres
- SB-8 Use of Oxy-Fuel Gas Welding and Cutting Apparatus
- V-1 Compressed Gas Cylinder Valve Inlet and Outlet Connections
- V-7 Standard Method of Determining Cylinder Valve Outlet Connections for Industrial Gas Mixtures
- Handbook of Compressed Gases, Fourth Edition

PREPARATION INFORMATION:

DATE: 10/15/2004
DEPARTMENT: Safety and Environmental Services
TELEPHONE: 905-803-1600

The opinions expressed herein are those of qualified experts within Praxair Canada Inc. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and the conditions of use of the product are not within the control of Praxair Canada Inc., it is the user's obligation to determine the conditions of safe use of the product.

Praxair Canada Inc. requests the users of this product to study this Material Data Sheet (MSDS) and become aware of product hazards and safety information. To promote safe use of this product, a user should (1) notify its employees, agents and contractors of the information on this MSDS and any product hazards and safety information, (2) furnish this same information to each of its customers for the product, and (3) request such customers to notify their employees and customers for the product of the same product hazards and safety information.

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1 City Centre Drive
Suite 1200
Mississauga, ON L5B 1M2

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MATERIAL SAFETY DATA SHEET



SECTION 1 - PRODUCT AND COMPANY INFORMATION

Refinish Products
 19699 Progress Drive
 Strongsville, OH 44149

EMERGENCY PHONE NUMBERS (412) 434-4515 (U.S.)
 (24 hours/day):

(514) 645-1320 (Canada)
 01-800-00-21-400 (Mexico)
 0532-83889090 (China)

TECHNICAL INFORMATION: 1-800-245-2590 (CLEVELAND, OH) 8:00 a.m. - 5:00 p.m. EST
 PRODUCT SAFETY/MSDS INFORMATION: (412) 492-5555 7:00 a.m. - 4:30 p.m. EST
 Product ID: DT870 (0808)
 PRODUCT NAME: REDUCER
 SYNONYMS: None
 ISSUE DATE: 06/22/2007
 EDITION NO.: 5
 CHEMICAL FAMILY: SOLVENT BLEND

EMERGENCY OVERVIEW:

Flammable. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone. CAUSES SEVERE EYE IRRITATION. MAY CAUSE MODERATE SKIN IRRITATION. MAY BE ABSORBED THROUGH THE SKIN. VAPOR AND/OR SPRAY MIST MAY BE HARMFUL IF INHALED. VAPOR IRRITATES EYES, NOSE, AND THROAT. HARMFUL IF SWALLOWED.

SECTION 2 - COMPOSITION INFORMATION

The following ingredient(s) marked with an "x" are considered hazardous under applicable U.S. OSHA and/or Canadian WHMIS regulations. If no ingredients are listed, then there are no U.S. OSHA and/or Canadian WHMIS hazardous ingredients in this product.

Material/ CAS Number	Percent	Hazardous	
METHYL ETHYL KETONE 78-93-3	15 - 40	X	
1-METHOXY-2-PROPYL ACETATE 108-65-6	10 - 30	X	
TOLUENE 108-88-3	10 - 30	X	
V.M. AND P. NAPHTHA 8032-32-4	10 - 30	X	
NAPHTHA 64742-89-8	1 - 5	X	
N-HEPTANE 142-82-5	1 - 5	X	
METHYLCYCLOHEXANE 108-87-2	1 - 5	X	
2-METHOXY-1-PROPYL ACETATE 70657-70-4	0.1-1.0	X	
(As Rubber solvent (Naphtha)) 8032-32-4	*	X	See Sections 8 and 15 for information.

SECTION 3 - HAZARDS IDENTIFICATION

ACUTE OVEREXPOSURE EFFECTS

EYE CONTACT:

Causes severe eye irritation. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact.

SKIN CONTACT:

May cause moderate skin irritation. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

SKIN ABSORPTION:

May be absorbed through the skin.

INHALATION:

Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat.

INGESTION:

Harmful if swallowed.

SIGNS & SYMPTOMS OF OVEREXPOSURE:

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

CHRONIC OVEREXPOSURE EFFECTS

Avoid long-term and repeated contact.

Repeated exposure to vapors above recommended exposure limits (see Section 8) may cause irritation of the respiratory system and permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. This product contains toluene. Toluene inhalation in animals (greater than 1500 ppm) and intentional inhalation of toluene-containing products by humans (e.g. glue) has caused adverse fetal development effects. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone.

The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures. See Section 11, of this MSDS for a detailed list of chronic health effects information available on individual ingredients in this product.

SECTION 4 - FIRST AID MEASURES

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available.

EYE CONTACT:

Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.

SKIN CONTACT:

Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.

INHALATION:

Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

INGESTION:

Gently wipe or rinse the inside of the mouth with water. Sips of water may be given. Never give anything by mouth to an unconscious person. Contact a poison control center, emergency room or physician right away as further treatment may be necessary.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASHPOINT: 23 Degrees F (-5 Degrees C)

FLASHPOINT TEST METHOD:

Pensky-Martens Closed Cup

UEL: Not Available.

LEL: 1.5

AUTOIGNITION TEMPERATURE:

Not Available.

EXTINGUISHING MEDIA:

Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IB flammable liquid fires. Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

PROTECTION OF FIREFIGHTERS:

Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat. May produce hazardous decomposition products when exposed to extreme heat. Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 6 - ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:

Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

STORAGE:

Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class IB flammable liquids.

SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 8 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

PERSONAL PROTECTIVE EQUIPMENT

EYES:

Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.
SKIN/GLOVES:

Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: butyl, neoprene, or nitrile rubber. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment. Clean contaminated clothing and shoes.

RESPIRATOR:

Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used. Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

GENERAL HYGIENE - ESTABLISHED EXPOSURE LIMITS

If Threshold Limit Values (TLVs) have been established by ACGIH, OSHA, Ontario or PPG, they will be listed below. These limits are intended for use in the practice of industrial hygiene as guidelines or recommendations in the control of potential workplace health hazards. These limits are not a relative index of toxicity and should not be used by anyone without industrial hygiene training.

Material/ CAS Number	Percent	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
METHYL ETHYL KETONE 78-93-3	15 - 40	200 ppm	300 ppm	200 ppm	300 ppm
TOLUENE 108-88-3	10 - 30	S- 50 ppm	Not established	100 ppm	150 ppm
V.M. AND P. NAPHTHA 8032-32-4	10 - 30	300 ppm	Not established	300 ppm	400 ppm
N-HEPTANE 142-82-5	1 - 5	400 ppm	500 ppm	400 ppm	500 ppm
METHYLCYCLOHE XANE 108-87-2	1 - 5	400 ppm	Not established	400 ppm	Not established

Material/ CAS Number	Percent	Ontario TWA	Ontario STEL	PPG IPEL	PPG STEL
METHYL ETHYL KETONE 78-93-3	15 - 40	200 ppm	300 ppm	Not established	Not established
1-METHOXY-2- PROPYL ACETATE 108-65-6	10 - 30	50 PPM	Not established	50 PPM	Not established
TOLUENE 108-88-3	10 - 30	50 PPM	Not established	Not established	Not established
V.M. AND P. NAPHTHA 8032-32-4	10 - 30	1350 MG/m ³	Not established	Not established	Not established
N-HEPTANE 142-82-5	1 - 5	400 ppm	500 ppm	Not established	Not established
METHYLCYCLOHE XANE 108-87-2	1 - 5	400 ppm	Not established	Not established	Not established
[As Rubber solvent (Naphtha)] 8032-32-4	*	400 PPM	Not established	Not established	Not established

Key: ACGIH=American Conference of Governmental Industrial Hygienists; OSHA=Occupational Safety and Health Administration; TLV=Threshold Limit Value; TWA=Time Weighted Average; PEL=Permissible Exposure Limit (1989 Vacated values); IPEL=Internal Permissible Exposure Limit; Ceiling=TLV or PEL Ceiling Limit; STEL=TLV or PEL Short-Term Exposure Limit; Skin= Skin Absorption Designation. [C- Ceiling Limit; S-Potential Skin Absorption; R-Respirable Dust]
Additional Information Not applicable.

Mutagenicity Toxicity:
This has not been tested for this product.
Reproductive Toxicity:
This has not been tested for this product.

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES
(FORMULA VALUES, NOT SALES SPECIFICATIONS)

SPECIFIC GRAVITY: .829
PHYSICAL STATE: Liquid
Percent Solids: .00
Percent Volatile by Volume: 100.000
pH: Not available.
ODOR THRESHOLD: Not available.
Vapour Pressure: 41.4 mmHg
ODOR/APPEARANCE: Non-viscous liquid with an odor characteristic of the ingredients listed in Section 2.
HEAVIER THAN AIR
VAPOR DENSITY: 346
Evaporation Rate: 172- 302Degrees F
BOILING POINT OR RANGE: Not Applicable.
Freezing Point or Range: Not Applicable.
Melting Point or Range(°C): Not Applicable.
Partition coefficient (n-octanol/water): Not Applicable.
WEIGHT PER GALLON: 6.91 (U.S.)/ 8.2 (IMPERIAL)

SUPPLEMENTAL HEALTH INFORMATION:

Material/ CAS Number	Percent	Ingredient Specific Animal Data:
METHYL ETHYL KETONE 78-93-3	15 - 40	This product contains methyl ethyl ketone (MEK). MEK has been shown to cause minor embryotoxic/fetotoxic effects in laboratory animals exposed for prolonged periods at high concentrations via inhalation. The potential for human exposure to high concentrations is expected to be low due to the irritating effects of MEK at low concentrations.
2-METHOXY-1-PROPYL ACETATE 70657-70-4	0.1-1.0	Possible reproductive hazard. An ingredient(s) in this product has adversely affected reproductive tissues and fetal development in test animals.

SECTION 10 - STABILITY AND REACTIVITY

STABILITY:
This product is normally stable and will not undergo hazardous reactions.
CONDITIONS TO AVOID:
None Known.
INCOMPATIBLE MATERIALS:
Avoid contact with strong alkalis, strong mineral acids, or strong oxidizing agents.
HAZARDOUS POLYMERIZATION:
None Known.
HAZARDOUS DECOMPOSITION PRODUCTS:
- Carbon monoxide - Carbon dioxide

SECTION 12 - ECOLOGICAL INFORMATION

POTENTIAL ENVIRONMENTAL EFFECTS
Ecotoxicity: No Information Available.
ENVIRONMENTAL FATE
Mobility: No information available.
Biodegradation: No information available.
Bioaccumulation: No Information Available.

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Material/ CAS Number	Percent	ORAL LD50 (g/kg)	DERMAL LD50 (g/kg)	INHALATION LC50 (mg/l)
METHYL ETHYL KETONE 78-93-3	15 - 40	2.74 g/kg	13.00 g/kg	Not Available
1-METHOXY-2-PROPYL ACETATE 108-65-6	10 - 30	8.53 g/kg	5.00 g/kg	Not Available
TOLUENE 108-88-3	10 - 30	.64 g/kg	8.39 g/kg	12.50 mg/l 4 hr
METHYLCYCLOHEXANE 108-87-2	1 - 5	4.00 g/kg	Not Available	Not Available

CHRONIC TOXICITY

Ingredient Target Organ/Chronic Effects:
- Ear - Reproductive - Embryotoxin - Teratogen - Brain - Central nervous system - Lung

PHYSICAL/CHEMICAL

Hydrolysis: No information available.
Photolysis: No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Provide maximum ventilation, only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Take up spilled material with sawdust, vermiculite, or other absorbent material and place in containers for disposal.
Waste material must be disposed of in accordance with federal, state, provincial and local environmental control regulations. Empty containers should be recycled by an appropriately licensed reconditioner/salvager or disposed of through a permitted waste management facility. Additional disposal information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name: Paint Related Material
NOS Technical Name: None
Hazard Class: 3
Subsidiary Class(es): None
UN Number: UN1263
Packing Group: II

USA - RQ Hazardous Substances: Toluene, Methyl Ethyl Ketone
USA-RQ Hazardous Substance Toluene>5263.21 Pounds, Methyl
Threshold Ship Weight: Ethyl Ketone>15398.85 Pounds
Marine Pollutant Name: None
USA Shipments Only - RQ Threshold Ship Weight: This is the total weight of this product that must be shipped to exceed the RQ quantity.

SECTION 15 - REGULATORY INFORMATION

INVENTORY STATUS

U.S. TSCA: This product and/or all of its components are listed on the U.S. TSCA Inventory or is otherwise exempt from TSCA Inventory reporting requirements.

FEDERAL REGULATIONS

US Regulations

Material/ CAS Number	Percent	CERCLA HS - RQ (LBS)	SARA EHS- TPQ (LBS)	SARA 313
METHYL ETHYL KETONE 78-93-3	15 - 40	5000 lbs	Not Listed	Not Listed
1-METHOXY-2- PROPYL ACETATE 108-65-6	10 - 30	Not Listed	Not Listed	Not Listed
TOLUENE 108-88-3	10 - 30	1000 lbs	Not Listed	Listed
V.M. AND P. NAPHTHA 8032-32-4	10 - 30	Not Listed	Not Listed	Not Listed
NAPHTHA 64742-89-8	1 - 5	Not Listed	Not Listed	Not Listed
N-HEPTANE 142-82-5	1 - 5	Not Listed	Not Listed	Not Listed
METHYLCYCLOHE XANE 108-87-2	1 - 5	Not Listed	Not Listed	Not Listed
2-METHOXY-1- PROPYL ACETATE 70657-70-4	0.1-1.0	Not Listed	Not Listed	Not Listed

SARA 311/312

Health (acute): Yes
Health (chronic): Yes
Fire (flammable): Yes
Pressure: No
Reactivity: No

WHMIS HAZARD CLASS: - Class B, Division 2 - Class D, Division 2, Subdivision A - Class D, Division 2, Subdivision B

STATE/PROVINCIAL REGULATIONS

CALIFORNIA PROP. 65: WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Additional Information

Key: IARC- International Agency on the Research of Cancer; ACGIH- American Conference of Governmental Industrial Hygienists; NTP- National Toxicology Program *Denotes chemical as NTP Known Carcinogen; + Denotes NTP Possible Carcinogen; OSHA- Occupational Safety and Health Administration.

SECTION 16 - OTHER INFORMATION

Hazard Rating Systems

NFPA Rating: 2 30
HMIS Rating: 2 30

Rating System: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

HMIS=Hazardous Materials Identification System; NFPA=National Fire Protection Association;

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

PREPARED BY: Product Safety Department

REASON FOR REVISION: Section 11 has been updated. Section 1 has been updated. Section 3 has been updated. Date. Edition. Updated MSDS format.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200), the supplier notification requirements of SARA Title III, Section 313 and other applicable right-to-know regulations. Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.
DT870 000003 (00469196.001)(06/21/07)
070620, 000, 0808

*** END OF MSDS ***

MATERIAL SAFETY DATA SHEET

QuietCar, QuietCoat, QuietAir, QuietRail, QuietBoat, QuietShip, QuietTruck

1. Product And Company Identification			
<p>Supplier Quiet Solution, Inc. 522 Almanor Ave. Sunnyvale, CA 94085</p> <p>Company Contact: Kevin Surace Telephone Number: 408-523-4000 FAX Number: 408-715-2560 E-Mail: info@quietsolution.com Web Site: www.quietsolution.com</p>	<p>Manufacturer Quiet Solution, Inc. 522 Almanor Ave. Sunnyvale CA 94085</p> <p>Company Contact: Kevin Surace Telephone Number: 408-523-4000 FAX Number: 408-715-2560 E-Mail: info@quietsolution.com Web Site: www.quietsolution.com</p>		
<p>Supplier Emergency Contacts & Phone Number None Given</p>	<p>Manufacturer Emergency Contacts & Phone Number None Given</p>		
<p>Issue Date: 1/6/2003</p> <p>Product Name: QuietCar, QuietCoat, QuietAir, QuietRail, QuietBoat, QuietShip, QuietTruck, NK-118</p> <p>CAS Number: NE</p> <p>Chemical Family: latex paint</p> <p>MSDS Number: 754</p> <p>Product/Material Uses - Sprayable Sound Damping Compound for Machinery, Appliances and Miscellaneous Construction.</p>			
2. Composition/Information On Ingredients			
	Ingredient Name	CAS Number	Percent Of Total Weight
	modified acrylic latex resin	NE	
	aluminum silicate	1335-30-4	
	calcium carbonate	471-34-1	
	mica	12001-26-2	
EMERGENCY OVERVIEW			
CAUTION: May cause irritation of the upper respiratory tract and eyes.			
3. Hazards Identification			
<p>Eye Hazards - Contact may cause discomfort to the eyes resulting in irritation, redness and swelling.</p> <p>Skin Hazards - Not expected to be irritating from brief contact. Prolonged contact with material may cause mechanical irritation and discomfort.</p> <p>Ingestion Hazards - None known. Ingestion of large enough amounts to cause significant health hazards is considered unlikely.</p> <p>Inhalation Hazards - May cause irritation of the respiratory tract resulting in sneezing, coughing and nausea.</p> <p>Note: May contain trace amounts of silica. Avoid excessive or prolonged inhalation.</p>			
4. First Aid Measures			
<p>Eye - DO NOT let the victim rub his eye(s). In case of contact, hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes.</p> <p>Skin - Wash with soap and water. Get medical attention if irritation (redness, rash, swelling) develops.</p> <p>Ingestion - If swallowed, seek medical attention. If victim is fully conscious, give one or two cups of water or milk to drink. Unless advised otherwise by the poison control center or physician, induce vomiting by giving 2 tablespoons of syrup of ipecac (adult dose) followed by a cup of water. Never give anything by mouth to an unconscious victim.</p>			

MATERIAL SAFETY DATA SHEET

QuietCar, QuietCoat, QuietAir, QuietRail, QuietBoat, QuietShip, QuietTruck

4. First Aid Measures - Continued

Inhalation - If adverse effects occur, remove to an uncontaminated area. Keep the victim warm and quiet. Seek medical attention. If breathing has stopped, give artificial respiration.

5. Fire Fighting Measures

Flammability Class: Non-Flammable

Fire And Explosion Hazards - None. Non-flammable. Material can splash and splatter above 212 deg F. Closed containers may rupture and explode when exposed to extreme heat.

Extinguishing Media - Use the appropriate extinguishing media for the surrounding fire.

Fire Fighting Instructions - Water can be used to cool and protect exposed material.

6. Accidental Release Measures

Contain and/or absorb spill with inert material (e.g. paper towel, sand, vermiculite). Pick up released product with appropriate implements and place in container for disposal.

Handling & Storage (Pictograms)



7. Handling And Storage

Handling And Storage Precautions - Keep containers tightly closed. Wash thoroughly after handling.

Keep from freezing. Store between 5 and 40 deg C. Apply between 45 to 100 deg F (7 to 38 deg C).

Protective Clothing (Pictograms)



8. Exposure Controls/Personal Protection

Engineering Controls - Use with adequate general and local exhaust ventilation. Use with local exhaust ventilation if needed to control mists and vapors.

Eye/Face Protection - Safety glasses with side shields or goggles recommended.

Skin Protection - Chemical-resistant gloves made of polyvinyl chloride (PVC) recommended.

Respiratory Protection - General room ventilation is normally adequate. In case of inadequate ventilation, use a NIOSH-approved respirator for particulates (e.g., N95).

Ingredient(s) - Exposure Limits

calcium carbonate

ACGIH TLV-TWA: 10 mg/m³ ; OSHA PEL-TWA: 15 mg/m³ (total dust) ; OSHA PEL-TWA: 5 mg/m³ (respirable dust)

mica

ACGIH TLV-TWA: 3 mg/m³ ; OSHA PEL-TWA: 20 mppcf

9. Physical And Chemical Properties

Appearance - Gray liquid

Odor - May have a characteristic latex odor during application. Odorless after curing.

Chemical Type: Mixture

Physical State: Liquid

MATERIAL SAFETY DATA SHEET

QuietCar, QuietCoat, QuietAir, QuietRail, QuietBoat, QuietShip, QuietTruck

9. Physical And Chemical Properties - Continued

Specific Gravity: 1650 kg/m³
Percent VOCs: <30g/l Fully Compliant with all state regulations
Solubility: soluble
Viscosity: 400,000 cp

10. Stability And Reactivity

Stability: Stable
Hazardous Polymerization: Will Not Occur

Incompatible Materials - None known
Hazardous Decomposition Products - None known.

11. Toxicological Information

Chronic/Carcinogenicity - May contain trace quantities of silica and formaldehyde. Overexposure to these substances is not expected under normal conditions of use.

12. Ecological Information

Ecotoxicological Information - Believed to be non-toxic to fish and plants.

13. Disposal Considerations

Dispose in accordance with applicable federal, state and local government regulations. Dispose of material in an approved landfill.
RCRA Information - Product is not a RCRA Hazardous Waste.

14. Transport Information

Proper Shipping Name - Not regulated

15. Regulatory Information

SARA Hazard Classes

Acute Health Hazard

SARA Section 313 Notification - This product does not contain any ingredients regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372.

Ingredient(s) - State Regulations

calcium carbonate

Pennsylvania - Workplace Hazard

mica

New Jersey - Workplace Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance

Canadian Regulatory Information - This product is not classified as hazardous under WHMIS.

Ingredient(s) - Canadian Regulatory Information

aluminum silicate

WHMIS - Ingredient Disclosure List

mica

WHMIS - Ingredient Disclosure List

MATERIAL SAFETY DATA SHEET

QuietCar, QuietCoat, QuietAir, QuietRail, QuietBoat, QuietShip, QuietTruck

15. Regulatory Information - Continued

European Union (EU) Regulatory Information -

European Union Risk Phrases -

none required

European Union Safety Phrases -

none required

16. Other Information

NFPA Rating

Health: 1

Fire: 0

Reactivity: 0

HMIS Rating

Health: 1

Fire: 0

Reactivity: 0

Personal Protection: B

Reference Documentation - The following were the primary references used in the creation of this MSDS:

- * Canadian Centre for Occupational Health & Safety (CCINFO) MSDS Database
- * Guide to Occupational Exposure Values, ACGIH 2002
- * U.S. National Library of Medicine Hazardous Substance Databank (HSDB)

Disclaimer

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purposes(s).

Quiet Solution, Inc.

Printed Using MSDS Generator™ 2000.

MSDS - Material Safety Data Sheet

Product Name: **LIQUID WRENCH SUPER LUBRICANT**

MSDS No.: L212

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY

Address: P.O. BOX 159, 600 RADIATOR ROAD

City, ST Zip: INDIAN TRAIL, NC 28079

Emergency Contact: Rocky Mountain Poison Control Center

Emergency Telephone Number: 303-623-5716

Contact: Robert Geer

Information Telephone Number: 704-688-3430

Last Update: 02/21/2003

Chemical State: Liquid Gas Solid

Chemical Type: Pure Mixture



2	Health
2	Flammability
0	Reactivity
C	Pers. Protection

II. Ingredients:

Trade Secret

CAS No.	Chemical Name	% Range	EHS		IARC		SARA 313	OSHA PEL	ACGIH TLV	Other Limits
			NTP	SUB Z	SUB Z	SUB Z				
95636	1,2,4-Trimethylbenzene	< 3				X		25 ppm	NJ, Pa.	
111-76-2	2-Butoxy-1-Ethanol	1-2				X	50 ppm	25 ppm		
8052-41-3	Aliphatic Hydrocarbon - Non Exempt.	40-60					100 ppm	100 ppm	NJ, Pa. R	
124389	Carbon dioxide	3-5					N/AV	5000 ppm		
64742525	Naphthenic Petroleum Distillate	40-60					5 mg/m ³	5 mg/m ³		

III. Hazardous Identification:

Hazard Category:

Acute Chronic Fire Pressure Reactive

Hazardous Identification Information:

Danger: Flammable. Harmful or fatal if swallowed. Eye and skin irritant. Contents under pressure.

Level 3 Aerosol

IV. First Aid Measures:

Route(s) of Entry:

Absorption, Inhalation, and Ingestion.

Health Hazards (Acute and Chronic):

See signs and symptoms below

Signs and Symptoms:

Eye Contact: Irritant. Prolonged contact may cause conjunctivitis.

Skin Contact: Irritant. Defatting of tissue, dermatitis may occur.

Inhalation: Irritant to mucous membranes. Repeated exposure may cause narcosis, dizziness, respiratory or lung irritation.

Ingestion: HARMFUL OR FATAL IF SWALLOWED. May cause burns to mouth, throat & stomach.

MSDS - Material Safety Data Sheet

Product Name: LIQUID WRENCH SUPER LUBRICANT

MSDS No.: L212

Medical Conditions Generally Aggravated by Exposure:

None Known

Emergency and First Aid Procedures:

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.

Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing before reuse.

Inhalation: Remove to fresh air. If breathing becomes difficult give oxygen and get prompt medical attention. If breathing stops, give artificial respiration and get prompt medical attention.

Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately.

Aspiration of vomitus into the lungs can cause pneumonitis, which can be fatal.

Other Health Warnings:

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

V. Fire Fighting Measures:

Flash Point: 132F

Lower Explosive Limit: 0.7%

Upper Explosive Limit: 5%

F.P. Method: TCC

Fire Extinguishing Media: Water Fog, Foam, Carbon Dioxide, Dry Chemical

Special Fire Fighting Procedures:

Wear self-contained positive pressure breathing apparatus and protective clothes. Cool containers with a water fog. Do not use forced water stream as this could cause the fire to spread. Use equipment or shielding to protect personnel against venting, rupturing, or bursting containers.

Unusual Fire and Explosion:

Contents under pressure. At elevated temperatures, container may vent, rupture, or burst violently.

VI. Accidental Release Measures:

Steps to be Taken in Case Material is Released or Spilled:

Eliminate all ignition sources. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc). Place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material. Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred.

VII. Handling and Storage:

Precautions to be Taken:

Use with adequate ventilation and proper protective equipment.

Do not use or store near fire, sparks, or open flame. Do not puncture or incinerate container. Exposure to temperatures above 120° may cause container to vent, rupture, or burst.

Other Precautions:

MSDS - Material Safety Data Sheet

Product Name: LIQUID WRENCH SUPER LUBRICANT

MSDS No.: L212

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye.
KEEP AWAY FROM CHILDREN AND ANIMALS! Danger: Flammable.

VIII. Exposure Controls/Personal Protection:

Ventilation Requirements:

Use with adequate ventilation. If TLV is exceeded, wear NIOSH approved respirator.

Personal Protective Equipment:

See Section 2 for applicable exposure limits. For prolonged exposure wear protective safety glasses, gloves, and apron.

IX. Physical and Chemical Properties:

Boiling Point: 320 F

Melting Point: N/A

Evaporation Rate (Butyl Acetate = 1): N/A

Vapor Pressure (mm Hg.): N/A

Specific Gravity (H₂O = 1): 0.80500

Vapor Density (AIR = 1): N/A

Solubility In Water: Insoluble

Appearance and Odor: Clear light yellow with sweet vanilla odor

Other Information: N/D

X. Stability and Reactivity:

Stability:

Product is stable

Incompatibility (Materials to Avoid):

Avoid contact with strong oxidizers

Decomposition/By Products:

Normal products of combustion, smoke, carbon dioxide, carbon monoxide, and sulfur trioxides.

Hazardous Polymerization:

Will not occur

XI. Toxicological Information:

N/D

XII. Ecological Information:

N/D

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in aerosol recycling centers when empty. Before offering for recycling, empty the can by using the product according to the label. DO NOT PUNCTURE! If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations.

XIV. Transport Information:

DOT Hazard Class: ORM-D

Shipping Name: Consumer Commodity

MSDS - Material Safety Data Sheet

Product Name: LIQUID WRENCH SUPER LUBRICANT

MSDS No.: L212

XV. Regulatory Information:

See Section 2 for SARA Reportable Chemicals.

USA TSCA: All components of this material are listed on the US TSCA Inventory.

Warning: This product contains a chemical(s) known to the State of California to cause cancer or birth defects or other reproductive harm.

XVI. Other Information:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye.
KEEP AWAY FROM CHILDREN AND ANIMALS!

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.

SECTION 1 - PRODUCT IDENTIFICATION	
Product Name/Class	AWS A5.10, ER: 4043, 5356 Aluminum Welding Wire
Product Number	004020
Manufacturer	Radnor Welding Products, 259 N. Radnor-Chester Road, Suite 100, Radnor, PA 19087-5283

SECTION 2 - HAZARDOUS INGREDIENTS			
Ingredient	CAS Number	Percent	Exposure Limits
Aluminum wire		100	TLV PEL 10*
Aluminum***	7429-90-5	87-100	10 10
Magnesium (5356 only)	7439-95-4	<5	10* 10*
Silicon (4043 only)	7440-21-3	5-13	10* 10*

Supplemental Information: (*) Not listed. Nuisance value maximum is 10 mg/m³ per cubic meter. PEL value for iron oxide is 10 mg/m³.

SECTION 3 - PHYSICAL CHARACTERISTICS

Boiling Point:	Specific Gravity (H ₂ O = 1):
N/A	N/A
Vapor Pressure (mm Hg):	Melting Point:
N/A	N/A
Vapor Density (Air = 1):	Evaporation Rate (Butyl Acetate=1):
N/A	N/A

Appearance and Odor: Metallic wire with no odor.

SECTION 4 - FIRE and EXPLOSION HAZARD DATA

Flash Point (Method Used):	Flammable Limits:
N/A	LEL: N/A UEL: N/A

Extinguishing Media: N/A
 Special Fire Fighting Procedures: Welding arc and sparks can ignite combustibles and flammables. Refer to American National Standard Z49.1 for fire prevention during the use of welding and allied procedures.
 Unusual Fire and Explosion Hazards: N/A

SECTION 5 - REACTIVITY DATA

azardous Decomposition Products: Welding fumes and gases cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, procedures, and electrodes used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coatings on the metal being welded (such as paint, latex, or galvanizing), the number of welders and the volume of the work area, the quality and amount of ventilation, the position of the welder's head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning and degreasing activities). When the electrode is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section 2. Decomposition products of normal operation include those originating from the volatilization, reaction, or oxidation of the materials shown in Section 2, plus those from the base metal and coating, etc., as noted above. It is understood, however, that elements and/or oxides to be mentioned are virtually always present as complex oxides and not as metals. (Characterization of Arc Welding Fume: American Welding Society). The elements or oxides listed below correspond to the ACGIH categories located in (TLV) Threshold Limit Values for Chemical Substances and Physical Agents in the Workroom Environment). Reasonably expected constituents of the fume would include: primarily iron oxide and fluorides; secondarily complex oxides of aluminum, titanium, chromium, magnesium, manganese, nickel, potassium, silicon, sodium and zirconium when used with recommended fluxes. Primarily iron oxide, manganese oxide, and complex chromium oxides; secondarily complex oxides of molybdenum and nickel when used with gas shielding.

Stability	Unstable <input type="checkbox"/>	Conditions to Avoid: Avoid breathing fumes created by the welding process.
	Stable <input checked="" type="checkbox"/>	

Compatibility (Materials to Avoid): N/A
 Hazardous Decomposition or Byproducts: Welding fumes and gases cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, procedure and electrodes used.

Hazards	May Occur <input type="checkbox"/>	Conditions to Avoid: N/A
Polymerization	Will Not Occur <input checked="" type="checkbox"/>	

SECTION 6 - HEALTH HAZARD DATA

Threshold Limit Value: The exposure level for welding fume has been established at 5 mg/m³ with OSHA's PEL and ACGIH's TLV. TLV-TWAs should be used as a guide in the control of health hazards and not as fine lines between safe and excessive concentrations. Effects of Overexposure: Electric arc welding may create one or more of the following health hazards: Fumes and Gases can be dangerous to your health. Common entry is by inhalation. Other possible routes are skin contact and ingestion. Short-Term (Acute) Overexposure to welding fumes may result in discomfort such as metal fume fever, dizziness, nausea, or dryness or irritation of nose, throat or eyes. May aggravate pre-existing respiratory problems (e.g. asthma, emphysema). Chromates present in the fume have been known to cause severe irritation of the bronchial tubes and lungs. Asthma has been reported. Exposure to extremely high levels of fluorides can cause abdominal pain, diarrhea, muscular weakness and convulsions. In extreme cases it can cause loss of consciousness and death. Long-Term (Chronic) Overexposure may lead to siderosis (iron deposits in lungs) and is believed by some investigators to affect pulmonary functions. Manganese overexposure can affect the central nervous system, resulting in impaired speech and movement. Bronchitis and some lung fibrosis have been reported. Chromates may cause ulceration and perforation of the nasal septum. Liver damage and allergic reactions, including skin rash, have been reported. Repeated exposure to fluorides may cause excessive calcification of the bone and calcification of ligaments of the ribs, pelvis, and spinal column. May cause skin rash. Chromium and nickel and their compounds are on the IARC (International Agency for Research on Cancer) and NTP (National Toxicology Program) lists as posing a carcinogenic risk to humans. Rays can injure eyes and burn skin. Electric Shock can kill. Emergency and First Aid Procedures. Call for medical aid. Employ first aid techniques recommended by the American Red Cross. Eyes & Skin: If irritation or flash burns develop after exposure, consult a physician. Carcinogenicity: The composition of welding fumes may contain carcinogens, depending on several factors that are unknown and unknowable to the product manufacturer (see Section 5). Always assume that welding fumes may contain toxic and/or carcinogenic materials, and follow sound Work/Hygiene practices as recommended by ANSI Z49.1.

HMS Rating	HMS Scale	NFPA Rating	NFPA Scale
Health = 2 Flammability = 0 Reactivity = 0	4 = Severe Hazard 3 = Serious Hazard 2 = Moderate Hazard 1 = Slight Hazard 0 = Minimal Hazard	Health = 1 Flammability = 0 Reactivity = 0 Other = 0	4 = Severe Hazard 3 = Serious Hazard 2 = Moderate Hazard 1 = Slight Hazard 0 = Minimal Hazard

SECTION 7 - PRECAUTIONS for SAFE HANDLING and USE

Read and understand the manufacturer's instructions and precautionary label on the product. See American National Standard Z49.1, "Safety in Welding and Cutting", published by the American Welding Society, P.O. Box 351040, Miami, FL 33135 and OSHA Publication 2206 (29CFR1910), U.S. Government Printing Office, Washington, D.C. 20402 for more details on many of the following:

Steps to Be Taken in Case Material Is Released or Spilled: N/A

Waste Disposal Method: Discard any product, residue, disposable container, or liner as ordinary waste in an environmentally acceptable manner according to Federal, State and Local Regulations unless otherwise noted.

SECTION 8 - CONTROL MEASURES

Respiratory Protection (Specify Type): Use respirable fume respirator or air supplied respirator when welding in confined space or general work area when local exhaust or ventilation does not keep exposure below TLV. Ventilation: Use enough ventilation, local exhaust at the arc, or both to keep the fumes and gases from the worker's breathing zone; and the general area. Train the welder to keep his head out of the fumes. Keep exposure as low as possible.

Eye Protection: Wear helmet or use face shield with filter lens shade number 12* or darker. Shield others by providing screens and flash goggles. (*) No specific recommendation for submerged arc.

Other Protective Clothing or Equipment: Wear hand, head, and body protection which help to prevent injury from radiation, sparks and electrical shock. See Z49.1. At a minimum this includes welder's gloves and a protective face shield, and may include arm protectors, aprons, hats, shoulder protection, as well as dark substantial clothing. Train the welder not to permit electrically live parts or electrodes to contact skin or clothing or gloves if they are wet. Insulate from work and ground.

Work/Hygiene Practices: Maintain exposure below the PEL/TLV. Use industrial hygiene monitoring to ensure that your use of this material does not create exposures which exceed PEL/TLV. Always use exhaust ventilation. Refer to the following sources for important additional information: ANSI Z49.1 The American Welding Society, P.O. Box 351040, Miami, FL 33135 - OSHA (29CFR1910) U.S. Dept. of Labor, Washington, D.C. 20210.

OTHER INFORMATION REQUIRED BY STATE OR FEDERAL LAW

California Proposition 65 Information: Warning: This product contains a chemical known to the State of California to cause cancer.
 New Jersey Right-To-Know Information: 5 most predominant ingredients/hazardous and non-hazardous
 1. Aluminum; 2. Silicon; 3. Magnesium
 SARA Title III Notification Information: All chemical compounds marked with an asterisk (*) are toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Super Fund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.
 Disclaimer of Expressed and Implied Warranties: The information in this document is believed to be correct as of the date issued. However, no warranty of merchantability, fitness for any particular purpose, or any other warranty is expressed or is to be implied regarding the accuracy or completeness of this information, the results to be obtained from the use of this information or the product, the safety of this product, or the hazards related to its use.

MATERIAL SAFETY DATA SHEET
 This Material Safety Data Sheet (MSDS) complies with the requirements of OSHA's Hazard Communication Standard.
 For a MSDS in ANSI Z400.1 format, please call 888-838-0615 or visit the Airgas Web site at www.airgas.com



ANTI-SPATTER AEROSOL SPRAY

Emergency Phone Number:
 800-949-9737

Product Information Number: 888-838-0615

SECTION 1 - PRODUCT IDENTIFICATION

Product Name/Class	Anti-Spatter Aerosol Spray; 1620A Anti-Spatter
Product Number	004001
Manufacturer	Radnor Welding Products 259 N. Radnor-Chester Road Suite 100 Radnor, PA 19087-5283

SECTION 2 - HAZARDOUS INGREDIENTS

Ingredient	CAS Number	Percent	Exposure Limits	
			TLV	PEL
*Methylene Chloride	75-09-2	73-84	50ppm (8 hr TWA)	25ppm (8 hr TWA)
Carbon Dioxide	124-38-9	17	5000ppm	5000ppm

SECTION 3 - PHYSICAL CHARACTERISTICS

Boiling Point:	Specific Gravity (H ₂ O = 1):
104°F	1.32
Vapor Pressure (mm Hg):	% Volatile:
390	100
Vapor Density (Air = 1):	Appearance and Odor:
2.9	Clear, colorless liquid with a chloroform-like odor.

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used):	Flammable Limits:
None to boiling	LEL: N/A
Extinguishing Media:	UEL: N/A
Carbon dioxide, dry chemical or foam.	
Special Fire Fighting Procedures:	
Pressure-demand, self-contained protection should be provided for protection. Storage containers exposed to fire should be kept cool with water.	
Unusual Fire and Explosion Hazards:	
At high temperatures, over-pressurization of containers can result.	

SECTION 5 - REACTIVITY DATA

Stability	Unstable <input type="checkbox"/>	Conditions to Avoid:
	Stable <input checked="" type="checkbox"/>	Systems. Open flames & electrical arcs.
Incompatibility (Materials to Avoid):		
reactive metals (i.e. aluminum, potassium, sodium, etc.)		
Hazardous Decomposition or Byproducts:		
Combustion prior to evaporation of methylene chloride may yield carbon monoxide, carbon dioxide, hydrogen chloride and traces of phosgene.		
Hazards	May Occur <input type="checkbox"/>	Conditions to Avoid: N/A
Polymerization	Will Not Occur <input checked="" type="checkbox"/>	

SECTION 6 - HEALTH HAZARD DATA

Routes of Entry:	<input checked="" type="checkbox"/> Inhalation	<input checked="" type="checkbox"/> Skin	<input checked="" type="checkbox"/> Ingestion
Health Hazards (Acute and Chronic):	INHALATION: In confined or poorly ventilated areas, vapors can readily accumulate and can cause unconsciousness and death. Minimal anesthetic or narcotic effects may be seen in 500-1000 ppm range. Progressively higher levels over 1000 ppm can cause dizziness, drunkenness, concentrations as low as 10000 ppm can cause unconsciousness and death. These high levels may also cause cardiac arrhythmias. Excessive exposure may cause irritation to upper respiratory tract. Excessive exposure may cause carboxyhaemoglobinemia.		
Carcinogenicity: **	NTP: Yes IARC: Yes OSHA Regulated: Yes		

**Comments: An evaluation of the metabolism of methylene chloride in mice indicates that tumor formation in mice is the result of their metabolism by a particular pathway at exposure concentrations greater than 500 ppm. This pathway does not play a significant role in metabolism by mice at exposure levels less than 500 ppm. The metabolic pathway associated with carcinogenicity is less active in rats and appears to play a negligible role in metabolism by hamsters and humans. Inhalation of methylene chloride produced limited evidence of liver damage in laboratory animals. The relevance of these findings to humans is uncertain. Pre-existing liver and blood disorders may be aggravated by exposure to this material. Persons with pre-existing heart disorders may be more susceptible to irregular heartbeats (arrhythmias) if exposed to high concentrations of this material. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage (painters' syndrome). Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal.

***Mutagenicity (effects on genetic material): Negative or equivocal results have been obtained in mutagenicity tests using mammalian cells or animals. This is consistent with the lack of interaction with DNA in rats and hamsters. Although results of Ames bacterial tests have generally been positive, overall the data suggest that genotoxic potential does not appear to be a significant factor in the toxicity of methylene chloride.

Signs and Symptoms of Exposure: Light-headedness & nausea. Irritating to the eyes and the skin.

Medical Conditions Generally Aggravated by Exposure: Prolonged contact with high concentrations can lead to serious kidney and liver damage.

Emergency and First Aid Procedures: Eyes - flush with water for 15 minutes. Skin - wash area with soap & water. Ingestion - drink water, DO NOT INDUCE VOMITING. Inhalation - remove to fresh air. If breathing has stopped, start CPR.

HMIS Rating	HMIS Scale	NFPA Rating	NFPA Scale
Health = 3	4 = Severe Hazard	Health = 2	4 = Severe Hazard
Flammability = 1	3 = Serious Hazard	Flammability = 1	3 = Serious Hazard
Reactivity = 0	2 = Moderate Hazard	Reactivity = 0	2 = Moderate Hazard
	1 = Slight Hazard	Other = None	1 = Slight Hazard
	0 = Minimal Hazard		0 = Minimal Hazard

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to Be Taken in Case Material Is Released or Spilled: Spills should be soaked up with absorbent. Area should then be flushed with water. All rinsate should be containerized & labeled. Spills on areas that are not on pavement can be handled by removing the affected soils.

Waste Disposal Method: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations.

Precautions to Be Taken in Handling and Storing: Use and store this material in cool, dry, well ventilated areas away from heat and all sources of ignition. Keep containers closed. Keep away from incompatible materials (Section 5). Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276. The use of respiratory protection is advised when concentrations exceed the established exposure limits. Wash thoroughly after handling. Do not wear contaminated clothing or shoes. Use good personal hygiene practices. Empty containers retain residue and can be dangerous. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Do not spray into electric arc or through open flame. Wait 5 to 10 seconds after spraying before welding. Evaporation of methylene chloride occurs almost immediately if the correct amount of spray is used. Do not breathe the welding fumes.

SECTION 8 - CONTROL MEASURES

Respiratory Protection (Specify Type):	None, during normal use.	
Ventilation	Local Exhaust: Sufficient to maintain TLV.	Special: N/A
	Mechanical: General	Other: N/A
Protective Gloves:	Polyfluorinated polyethylene	Eye Protection: Face shield and goggles should be worn.
Other Protective Clothing or Equipment:	Leather welding gloves while welding.	
Work/Hygiene Practices:	Avoid getting this product on you or in you. Wash thoroughly after handling this product. Do not eat, drink, smoke, apply cosmetics or contact lenses while handling this product. Avoid breathing vapors or mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately. Read and comply with the requirements of 29 CFR §1910.1052.	

OTHER INFORMATION REQUIRED BY STATE OR FEDERAL LAW

California Proposition 65 Information: Methylene Chloride (the main component of this product) is on the California Proposition 65 lists. WARNING! This product contains a chemical known to the state of California to cause cancer and birth defects (or other reproductive harm).

New Jersey Right-To-Know Information: 5 most predominant ingredients/hazardous and non-hazardous

1. Methylene Chloride CAS #75-09-2;
2. Carbon Dioxide CAS #124-38-9;
3. Sova Lecithin CAS #8002-43-5

SARA Title III Notification Information: All chemical compounds marked with an asterisk (*) are toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Super Fund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Disclaimer of Expressed and Implied Warranties: The information in this document is believed to be correct as of the date issued. However, no warranty of merchantability, fitness for any particular purpose, or any other warranty is expressed or is to be implied regarding the accuracy or completeness of this information, the results to be obtained from the use of this information or the product, the safety of this product, or the hazards related to its use.

A-9 ALUMINUM CUTTING FLUID

		MATERIAL SAFETY DATA SHEET Meets requirements of 29 CFR 1910.1200 (Federal Hazard Communication Standard)	HMIS	
			Health	1
			Reactivity	1

 SECTION I

PRODUCT NAME OR NUMBER	A-9® ALUMINUM CUTTING FLUID		
MANUFACTURER'S NAME	Relton Corporation	EMERGENCY TELEPHONE NO	Chemtrec - (800) 424-9300
ADDRESS (Number, Street, City, State, and Zip Code)	317 Rolyn Place, Arcadia, CA 91007-2838	Non-Emergency Ph. No.	(323) 681-2551 (800) 423-1505
HAZARDOUS MATERIALS DESCRIPTION AND PROPER SHIPPING NAME (49 CFR 172.101)	NA	HAZARD CLASS (49 CFR 172.101)	NA
CHEMICAL FAMILY	Mixture: predominately hydrocarbon base with bland additives.	Formula	See Section II

 SECTION II - INGREDIENTS

	TLV	PEL	STEL	C.A.S. NO.	%
Mineral Oil	NE	NE	NE	64742-58-1	> 70
Bland Additive	NE	NE	NE	Trade secret	< 25
Bland Additive	NE	NE	NE	Trade secret	< 16
Perfume	NE	NE	NE	-- --	< 1
Green dye, Pharmacy Grade	NE	NE	NE	-- --	trace

(See Section V for Health data)

Data is based on testing mixture as a whole. Neither the mixture nor any of its ingredients is on the carcinogen or suspected-carcinogen list of the NTP, the IARC, or OSHA. Contains no Calif. Prop. 65 substance. Not reportable under SARA. All components are listed on the TSCA inventory.

 SECTION III - PHYSICAL DATA

BOILING POINT (X°F) (C°)	400° F	SPECIFIC GRAVITY (H ₂ O=1) @ 25° C	0.883	Freezing Point	-20° F
VAPOR PRESSURE (mm Hg)	100° F: .1 mm	PERCENT VOLATILE BY VOLUME (%)	NA	VOC	NA
VAPOR DENSITY (AIR=1)	NA	EVAPORATION RATE (WATER=1)	NA		
SOLUBILITY IN WATER	Negligible	pH=	NA		
APPEARANCE AND ODOR	light green oil with slight,fatty odor.		MATERIAL IS	LIQUID	SOLID
			GAS	PASTE	POWDER

 SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (method used)	266° F CCC	FLAMMABLE LIMITS	LFL	UFL
		Non-Flammable	NA	NA
EXTINGUISHING MEDIA	Use CO ₂ , dry chemicals , foam, water as a mist only.			
SPECIAL FIRE FIGHTING PROCEDURES	Prefer CO ₂ or sand as with oil fire.			
UNUSUAL FIRE AND EXPLOSION HAZARDS	No unusual hazards			
Exposing containers to intense heat could cause drums to rupture. Cool fire-exposed containers with water spray to prevent rupture.				

 SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE	Eyes and skin: may cause mild irritation. Inhalation: may cause mild upper respiratory irritation. Ingestion: possible nausea.
EMERGENCY AND FIRST AID PROCEDURES	Eyes: flush for 15 min. with water. Skin: wash with soap and water. Inhalation: remove to fresh air. Ingestion: do not induce vomiting; give lots of water to a conscious person. Call Doctor

NE=not established NF=not found NA=not applicable ND=not determined

A-9 ALUMINUM CUTTING FLUID **SECTION VI - REACTIVITY DATA**

STABILITY	UNSTABLE		CONDITIONS TO AVOID: Flame, heat, strong oxidizing agents
	STABLE	X	
INCOMPATIBILITY (materials to avoid): Swells natural rubber and some plastics. Slight etching of light metals on prolonged exposure may occur.			
HAZARDOUS DECOMPOSITION PRODUCTS. CO, CO ₂ , and acrolein when combusted			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID: NA
	WILL NOT OCCUR	X	

 SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED. Wear respirator and protective clothing. Treat as oil spill. Soak up on absorbent clay or sand and remove to containers.
WASTE DISPOSAL METHOD Transport in DOT-approved container to EPA-approved treatment, storage, and disposal facility. Follow local, State & Federal disposal regulations.

 SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type) Normally not needed. For oil-type mist, use NIOSH listed respirator.		
VENTILATION Local-mechanical to remove oil mist	LOCAL EXHAUST (Specify Rate) Adequate to avoid fumes and oil mists	SPECIAL Not required normally
	MECHANICAL (General) (Specify Rate) NA	OTHER
PROTECTIVE GLOVES Nitrile-type, oil resistant	EYE PROTECTION Chemical goggles or full faceshield.	
OTHER PROTECTIVE EQUIPMENT Clean clothes. Apron or chemical suit where splashing may occur.		

 SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Avoid production of oil mist. Avoid excessive heat. Avoid repeated or prolonged skin or eye contact.
OTHER PRECAUTIONS While there is no TLV established for this product, airborne mist should be kept below the nuisance TLV for oil mist: 5Mg/meter ³ .

ADDITIONAL INFORMATION

DOT: No hazardous substance UN or NA#: Not applicable
No hazard class Freight Classification: Petroleum oil, lubricating
No DOT ID# It# 155250 Class 65

SARA: Not considered to be subject to Title III

TSCA: All components required to be listed on the inventory are listed.

IARC-NTP-OSHA: Neither the mixture nor any component is listed as a carcinogen or suspected carcinogen.

California Prop. 65 Material: None.



317 ROLYN PLACE ARCADIA CALIFORNIA 91007-2838
Phone: (323) 681-2551 (800) 423-1505
Emerg: Chemtrec - (800) 424-9300

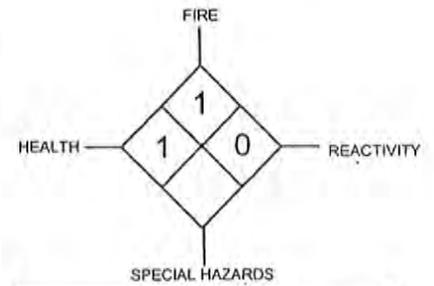
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Updated: 12-6-94 Updated: 02-29-00
Updated: 5-7-96 Updated: 03/10/03

by Dr. Robert E. Pratt,
consulting chemist

PRODUCT NAME: BLACK PIGMENT

SECTION 1 - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: Rhino Linings USA, Inc.
ADDRESS: 9151 Rehco Road, San Diego, CA, 92121
INFORMATION PHONE: 858-450-0441
EMERGENCY CONTACT: (CHEMTREC): 800-424-9300
DATE: April 16, 2001
SUPERSEDES: January 3, 1996



HMIS HAZARD RATING	
LEAST—0	SLIGHT— 1
MODERATE — 2	HIGH — 3
	EXTREME — 4

SECTION 2 - HAZARDOUS INGREDIENTS

None

SECTION 3 - PHYSICAL DATA

Appearance and Odor: Black liquid, mild odor.
Solubility in Water: Negligible.
Boiling Point: 410° F

Specific Gravity (H2O = 1): 1.15
Vapor Density (Air = 1): Greater than air.
Vapor Pressure (mm Hg): 68° F < 0

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: 380° F
Extinguishing Media: Water, spray, dry chemical, CO2 foam.
Unusual Fire and Explosion Hazards: Under fire conditions, fumes, smoke, carbon monoxide.
Special Fire Fighting Procedures: Use self-contained breathing apparatus & protective clothing.

Method: PMCC

SECTION 5 - HEALTH HAZARD DATA

Effects Of Overexposure: No harmful effects expected from reasonably foreseeable exposure.
Skin First Aid: Flush skin with water.
Eye First Aid: Flush eyes with water.
Inhalation Exposure: No problem at room temperature.
Inhalation First Aid: Smoke formed at high temperature. Smoke formed at high temperature. Will be mildly irritating with prompt relief on removal to fresh air.

SECTION 6 - REACTIVITY DATA

Stability: Stable.
Incompatible Materials: Oxidizing agents, nitric acid, and strong acids.
Hazardous Decomposition Products: None.
Hazardous Polymerization: Will not occur.
Conditions to Avoid: None.

SECTION 7 - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled: Contain with sand, earth or sawdust. Implement cleanup procedures. Use suitable absorbent.
Disposal Method: Incinerate in furnace or dispose as required under appropriate federal, state and local regulations.

SECTION 8 – SPECIAL PROTECTION INFORMATION

Respiratory Protection: None.
Ventilation: Mechanical.
Other Equipment: Eye bath and shower.

Eye Protection: Safety spectacles.
Protective Gloves: Advised.

SECTION 9 – SPECIAL PRECAUTIONS

Handling Precautions: Normal handling.

SECTION 10 - DISCLAIMER

Disclaimer: The data set forth in this sheet are based on information provided by the suppliers of the raw materials and chemicals used in the manufacture of the aforementioned product. Rhino Linings USA, Inc. makes no warranty with respect to the accuracy of the information provided by their suppliers, and disclaims all liability of reliance thereof.

PRODUCT NAME: CURED TUFF STUFF**SECTION 1 - MANUFACTURER IDENTIFICATION**

MANUFACTURER'S NAME: Rhino Linings USA, Inc.

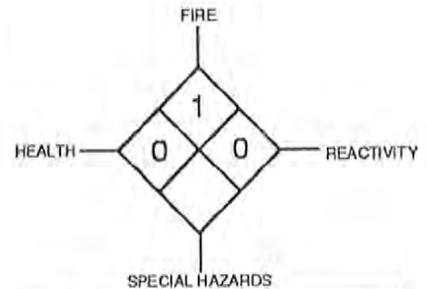
ADDRESS: 9151 Rehco Road, San Diego, CA, 92121

INFORMATION PHONE: 858-450-0441

EMERGENCY CONTACT: (CHEMTREC): 800-424-9300

DATE: April 13, 2001

SUPERSEDES: August 1996



HMIS HAZARD RATING	
LEAST--0	SLIGHT---1
MODERATE --2	HIGH -----3
	EXTREME ----4

SECTION 2 - HAZARDOUS INGREDIENTS

*** NO REPORTABLE QUANTITIES OF HAZARDOUS INGREDIENTS ARE PRESENT***
**No toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of 40 CFR 372.

SECTION 3 - PHYSICAL DATA

Boiling Point: N/A
Vapor Density: N/A
Solubility in Water: Insoluble
Specific Gravity (H₂O = 1): 1.1

Evaporation Rate: N/A
Appearance and Odor: Solid, no odor.
Coating V.O.C.: 0 GL (0 LB/GL)

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A
Flammable Limits in Air by Volume: Lower: N/A Upper: N/A
Extinguishing Media: Dry chemical, foam, carbon dioxide, halogenated agents. If water is used, use very large quantities. Non combustible.
Special Fire Fighting Procedures: Fire fighter should use self contained breathing equipment to protect against the product of combustion.
Unusual Fire and Explosion Hazards: None
Method Used: N/A

SECTION 5 - HEALTH HAZARD DATA

Skin Contact: This material is classified as "relatively nontoxic".
Eye Contact: N/A
Inhalation: N/A
Ingestion: N/A
Health Hazards: None.

First Aide Procedures

Eye Contact: N/A
Ingestion: N/A
Medical Conditions Generally Aggravated by Exposure: None.
Carcinogenicity: NTP: No IARC Monographs: No OSHA Regulated: No

SECTION 6 – REACTIVITY DATA

Stability: Stable under normal conditions.
Conditions to Avoid: Excessive heat, high temperatures and open flames.
Incompatibility (Materials to Avoid): N/A
Hazardous Decomposition Products: Organic vapors and other thermal decomposition products.
Hazardous Polymerization: N/A

SECTION 7 – SPILL OR LEAK PROCEDURES

Steps to be Taken if Spilled: N/A
Container Disposal: Dispose of in compliance.
Precautions to be Taken in Handling and Storage: Store in a cool, dry, well ventilated area.
Other Precautions: None.

SECTION 8 – SPECIAL PROTECTION INFORMATION

Ventilation: N/A
Eye Protection: N/A
Protective Clothing: N/A
Other Protective Equipment and Measures: N/A

SECTION 9 – REGULATORY INFORMATION

DOT Proper Shipping Name: Not regulated.
State Regulations: California: N/A

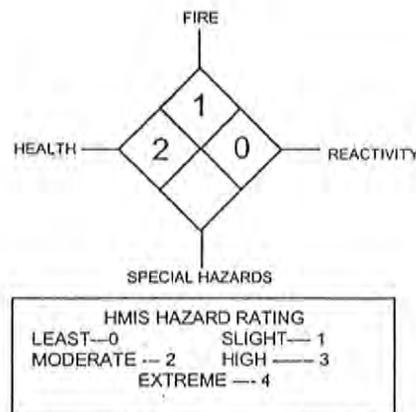
SECTION 10 - DISCLAIMER

Disclaimer: The data set forth in this sheet are based on information provided by the suppliers of the raw materials and chemicals used in the manufacture of the aforementioned product. Rhino Linings USA, Inc. makes no warranty with respect to the accuracy of the information provided by their suppliers, and disclaims all liability of reliance thereof.

PRODUCT NAME: EMERAL GREEN PIGMENT

SECTION 1 - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: Rhino Linings USA, Inc.
 ADDRESS: 9151 Rehco Road, San Diego, CA, 92121
 INFORMATION PHONE: 858-450-0441
 EMERGENCY CONTACT: (CHEMTREC): 800-424-9300
 DATE: April 16, 2001
 SUPERSEDES: March 12, 1999



SECTION 2 - HAZARDOUS INGREDIENTS

Hazardous Components	CAS #	TLV (ACGIH)	OSHA PEL	Weight %
Di(2-Ethylhexyl) Phthalate	000117-81-7	5 mg/m ³ TWA 10 mg/m ³ STEL	5 mg/m ³ TWA 10 mg/m ³ STEL	72

SECTION 3 - PHYSICAL DATA

Appearance and Odor: Green liquid, mild odor.
 Solubility in Water: Negligible.
 Boiling Point:

Specific Gravity (H₂O = 1): 1.11
 Vapor Density (Air = 1): Greater than air.
 % Volatile by Volume: NIL

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: 410° F Flammable Limits: N/A
 Extinguishing Media: CO₂, dry chemicals, foam.
 Unusual Fire and Explosion Hazards: Empty drums that contain residual material(s), which may decompose to emit toxic or irritating gasses if burned.
 Special Fire Fighting Procedures: Wear positive pressure self-contained breathing equipment.

SECTION 5 - HEALTH HAZARD DATA

Medical Conditions Aggravated by Exposure: Respiratory symptoms associated with pre-existing lung disorders.
 Skin: May cause mild skin irritation.
 Eye Contact: May cause slight eye irritation, stinging, tearing and redness.
 Inhalation: Exposure to vapor is unlikely. However, vapors or mists produced under certain conditions or use may cause irritation of the nose, throat and respiratory tract.
 Emergency and First Aid Procedures: Flush eyes with water for at least 15 minutes. Get medical attention if irritation develops or persists. Remove contaminated clothing and wash before reuse. If affected by vapors, remove patient to fresh air, get medical attention if necessary. If swallowed, do not induce vomiting. Get medical attention.
 Health Hazards (Acute and Chronic): None.
 Carcinogenicity: OSHA: Yes IARC: Yes

SECTION 6 - REACTIVITY DATA

Stability: Stable.
 Incompatibility: Strong oxidizing agents and alkalis.
 Hazardous Decomposition Products: Carbon monoxide (CO), carbon dioxide (CO₂).
 Hazardous Polymerization: Will not occur.

SECTION 7 – SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled: Contain spill & soak it up with an absorbent material. Place in containers for waste disposal.

Precautions to be Taken in Handling & Storage: Wash after handling. Store material indoors in closed containers when not in use. Use with adequate ventilation. Store at normal ambient temperature. Protect from moisture, heat and sun.

Waste Disposal Method: Dispose of waste materials in landfill in accordance with all federal, state and local regulations.

SECTION 8 – SPECIAL PROTECTION INFORMATION

Respiratory Protection: Provide effective ventilation to draw vapors or fumes away from workers in absence of proper ventilation. Use approved NIOSH/OSHA organic type respirator.

Ventilation: All thermoplastic materials will emit fumes and or vapors when heated. Use adequate exhaust to maintain exposure below limits.

Protective Gloves: Use natural rubber or neoprene gloves.

Eye Protection: Eye wash station should be available. Goggles are recommended for all industrial work areas.

Protective Clothing: Launder contaminated clothing before reuse.

SECTION 9 – SARA TITLE III REGULATORY INFORMATION

Chemical(s) subject to the reporting requirements of section 313 or Title III of the superfund amendments and reauthorization act (SARA) of 1986 and 40 CFR part 372: DI(2-Ethylexyl) Phthalate, copper compounds (less than 1% total copper), barium compounds (less than 1.5%).

- SARA (U.S.A.) section 311 and 312 hazard classification(s): Delayed (chronic) health hazard.
- California Proposition 65 (Safe Drinking Water and Toxic Enforcement act of 1986): Material(s) known to the state to cause cancer: DI (2-Ethylexyl) Phthalate.

HMS RATINGS

Health: 2

Flammability: 1

Reactivity: 1

0 = Minimal

1 = Slight

2 = Moderate

3 = Serious

4 = Severe

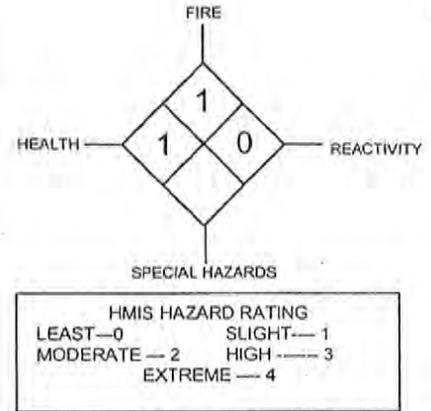
SECTION 11 - DISCLAIMER

Disclaimer: The data set forth in this sheet are based on information provided by the suppliers of the raw materials and chemicals used in the manufacture of the aforementioned product. Rhino Linings USA, Inc. makes no warranty with respect to the accuracy of the information provided by their suppliers, and disclaims all liability of reliance thereof.

PRODUCT NAME: INDIGO BLUE PIGMENT

SECTION 1 - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: Rhino Linings USA, Inc.
ADDRESS: 9151 Rehco Road, San Diego, CA, 92121
INFORMATION PHONE: 858-450-0441
EMERGENCY CONTACT: (CHEMTREC): 800-424-9300
DATE: April 16, 2001
SUPERSEDES: January 3, 1996



SECTION 2 - HAZARDOUS INGREDIENTS

Ingredients	CAS #	Concentration	OSHA	ACGIH	Toxicity Data
Barium Sulfate	7727-43-7	< 1.5%	Total dust 10 mg/m3	Total dust 10 mg/m3	None

SECTION 3 - PHYSICAL DATA

Appearance and Odor: Blue liquid, mild odor.
Solubility in Water: Negligible.
Boiling Point: 410° F

Specific Gravity (H2O = 1): 1.05
Vapor Density (Air = 1): Greater than air.
Vapor Pressure (mm Hg): 68° F < 0

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: 380° F **Method:** PMCC
Extinguishing Media: Water, spray, dry chemical, CO2 foam.
Unusual Fire and Explosion Hazards: Under fire conditions, fumes, smoke, carbon monoxide.
Special Fire Fighting Procedures: Use self-contained breathing apparatus & protective clothing.

SECTION 5 - HEALTH HAZARD DATA

Effects Of Overexposure: No harmful effects expected from reasonably foreseeable exposure.
Skin First Aid: Flush skin with water.
Eye First Aid: Flush eyes with water.
Inhalation Exposure: No problem at room temperature.
Inhalation First Aid: Smoke formed at high temperature. Smoke formed at high temperature. Will be mildly irritating with prompt relief on removal to fresh air.

SECTION 6 - REACTIVITY DATA

Stability: Stable.
Incompatible Materials: Oxidizing agents, nitric acid, and strong acids.
Hazardous Decomposition Products: None.
Hazardous Polymerization: Will not occur.
Conditions to Avoid: None.

SECTION 7 - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled: Contain with sand, earth or sawdust. Implement cleanup procedures. Use suitable absorbent.
Disposal Method: Incinerate in furnace or dispose as required under appropriate federal, state and local regulations.

SECTION 7 – SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled: Remove ignition sources. Cover the spill with absorbent material such as sawdust, sweeping compound, or diatomaceous earth. If spill is large, dike to contain. Collect and containerize absorbed material for recovery or disposal.

Disposal Method: Dispose of in accordance with federal, state, or local regulations regarding environmental control.

SECTION 8 – SPECIAL PROTECTION INFORMATION

Respiratory Protection: Not applicable.

Ventilation: Not applicable.

Eye Protection: Safety glasses or chemical goggles should be worn.

Protective Gloves: Solvent resistant gloves should be worn.

Other Equipment: Not applicable.

SECTION 9 – SPECIAL PRECAUTIONS

Handling Precautions: Handle in accordance with good industrial hygiene practices. Avoid unnecessary exposure.

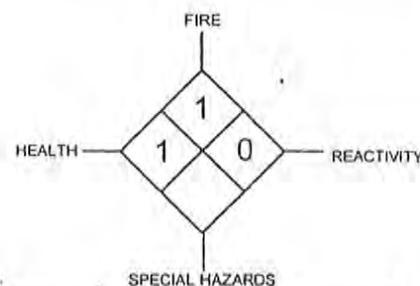
Storage Precautions: Store between 0° F and 120° F. If closed container of material is exposed to heat, pressure can build up.

SECTION 10 - DISCLAIMER

Disclaimer: The data set forth in this sheet are based on information provided by the suppliers of the raw materials and chemicals used in the manufacture of the aforementioned product. Rhino Linings USA, Inc. makes no warranty with respect to the accuracy of the information provided by their suppliers, and disclaims all liability of reliance thereof.

PRODUCT NAME: MOLY ORANGE PIGMENT
SECTION 1 - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: Rhino Linings USA, Inc.
ADDRESS: 9151 Rehco Road, San Diego, CA, 92121
INFORMATION PHONE: 858-450-0441
EMERGENCY CONTACT: (CHEMTREC): 800-424-9300
DATE: April 16, 2001
SUPERSEDES: January 3, 1996



HMIS HAZARD RATING
 LEAST—0 SLIGHT—1
 MODERATE—2 HIGH—3
 EXTREME—4

SECTION 2 - HAZARDOUS INGREDIENTS

Ingredients	CAS #	OSHA	ACGIH
C.I. Pigment Yellow # 34	1344-37-2	Not est.	0.05 mg/m3 (AS Pb)
Lead Chromate	7758-97-6	0.05 mg/m3 (AS Pb) TWA	0.012 mg/m3 (AS CR) TWA

SECTION 3 - PHYSICAL DATA

Appearance and Odor: Orange liquid, mild odor.
Solubility in Water: Negligible.
Boiling Point: 410° F

Specific Gravity (H2O = 1): 1.48
Vapor Density (Air = 1): Greater than air.
Vapor Pressure (mm Hg): 68° F < 0

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: 380° F **Method:** PMCC
Extinguishing Media: Water, spray, dry chemical, CO2 foam.
Unusual Fire and Explosion Hazards: Under fire conditions, fumes, smoke, carbon monoxide.
Special Fire Fighting Procedures: Use self-contained breathing apparatus & protective clothing.

SECTION 5 - HEALTH HAZARD DATA

Effects Of Overexposure: No harmful effects expected from reasonably foreseeable exposure.
Skin First Aid: Flush skin with water.
Eye First Aid: Flush eyes with water.
Inhalation Exposure: No problem at room temperature.
Inhalation First Aid: Smoke formed at high temperature. Smoke formed at high temperature. Will be mildly irritating with prompt relief on removal to fresh air.

SECTION 6 - REACTIVITY DATA

Stability: Stable.
Incompatible Materials: Oxidizing agents, nitric acid, and strong acids.
Hazardous Decomposition Products: None.
Hazardous Polymerization: Will not occur.
Conditions to Avoid: None.

SECTION 7 - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled: Contain with sand, earth or sawdust. Implement cleanup procedures. Use suitable absorbent.
Disposal Method: Incinerate in furnace or dispose as required under appropriate federal, state and local regulations.

SECTION 8 – SPECIAL PROTECTION INFORMATION

Respiratory Protection: None.
Ventilation: Mechanical.
Other Equipment: Eye bath and shower.

Eye Protection: Safety spectacles.
Protective Gloves: Advised.

SECTION 9 – SPECIAL PRECAUTIONS

Handling Precautions: Normal handling.

SECTION 10 – SARA TITLE III REGULATORY INFORMATION

Section 302: Extremely hazardous substances: None.
Section 311/312: Hazard Categories: Delayed health hazard.
Section 313: Toxic Chemicals:
Copper Compounds (less than 1% total copper)
Barium Compounds (less than 1.5%)

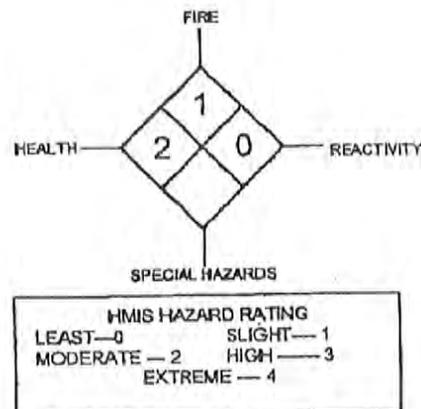
SECTION 11 - DISCLAIMER

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PRODUCT NAME: ORGANIC YELLOW G.S. PIGMENT

SECTION 1 - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: Rhino Linings USA, Inc.
ADDRESS: 9151 Rehco Road, San Diego, CA, 92121.
INFORMATION PHONE: 858-450-0441
EMERGENCY CONTACT: (CHEMTREC): 800-424-9300
DATE: January 14, 2000
SUPERSEDES: April 16, 2001



SECTION 2 - HAZARDOUS INGREDIENTS

Hazardous Components	CAS #	TLV (ACGIH)	OSHA PEL	Weight %
DI(2-Ethylhexyl) Phthalate	000117-81-7	5 mg/m3 TWA 10 mg/m3 STEL	5 mg/m3 TWA 10 mg/m3 STEL	72

SECTION 3 - PHYSICAL DATA

Appearance and Odor: Yellow liquid, mild odor.
Solubility in Water: Negligible.
% Volatile by Volume: NIL

Specific Gravity (H₂O = 1): 1.21
Vapor Density (Air = 1): Greater than air.

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: > 410° F
Extinguishing Media: CO₂, dry chemicals, foam.
Unusual Fire and Explosion Hazards: Empty drums that contain residual material which may decompose to emit toxic or irritating gasses if burned.
Special Fire Fighting Procedures: Wear positive pressure self-contained breathing equipment.

Flammable Limits: N/A

SECTION 5 - HEALTH HAZARD DATA

Inhalation Exposure: Exposure to vapor is unlikely. However, vapors or mists produced under certain conditions or use may cause irritation of the nose, throat and respiratory tract.
Skin Exposure: May cause mild skin irritation.
Eye Contact: May cause slight eye irritation, stinging, tearing and redness.
Health Hazards (Acute & Chronic): None
Carcinogenicity: OSHA: Yes IARC: Yes
Medical Conditions Aggravated by Exposure: Respiratory symptoms associated with pre-existing lung disorders.
Emergency & First Aid Procedures: Flush eyes with water for at least 15 minutes. Get medical attention if irritation develops or persists. Remove contaminated clothing and wash before re-use. If affected by vapors, remove patient to fresh air; get medical attention if necessary. If swallowed, do not induce vomiting. Get medical attention.

SECTION 6 - REACTIVITY DATA

Stability: Stable.
Incompatibility: Strong oxidizing agents and alkalis.
Hazardous Decomposition Products: Carbon Monoxide (CO), Carbon Dioxide (CO₂).
Hazardous Polymerization: Will not occur.

SECTION 7 - SPILL OR LEAK PROCEDURES

Steps to be Taken If Material Is Spilled: Contain spill & soak it up with an absorbent material. Place in containers for waste disposal.
Waste Disposal Method: Dispose of waste materials in landfill in accordance with all federal, state and local regulations.

SECTION 8 - SPECIAL PROTECTION INFORMATION

Respiratory Protection: Provide effective ventilation to draw vapors or fumes away from workers. In absence of proper ventilation, use approved NIOSH/OSHA organic type respirator.

Ventilation: All thermoplastic materials will emit fumes and/or vapors when heated. Use adequate exhaust to maintain exposure below limits.

Protective Gloves: Use natural rubber or neoprene gloves.

Eye Protection: Eye wash station should be available. Goggles are recommended for all industrial work areas.

Protective Clothing: Launder contaminated clothing before reuse.

SECTION 9 - SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storage: Wash after handling. Store material indoors in closed containers when not in use. Use with adequate ventilation. Store at normal ambient temperature. Protect from moisture, heat and sun.

SECTION 10 - REGULATORY INFORMATION

D.O.T. Labels Required (CFR172.101-102): None.

D.O.T. Placards Required (CFR172.504): None

SARA Title III Regulatory Information

- Chemical(s) subject to the reporting requirements of section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372: Di(2-Ethylhexyl) Phthalate.
- SARA (U.S.A.) Sections 311 and 312 Hazard Classification(s): Delayed (Chronic) Health Hazard.
- California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): Material(s) Known To The State California To Cause Cancer: Di(2-Ethylhexyl) Phthalate.
- California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): Material(s) Known To The State Of California To Cause Adverse Reproductive Effects: None.

SECTION 11 - DISCLAIMER

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TUFF STUFF A-SIDE

Material Safety Data Sheet

CHEMWATCH 4944-79

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Issue Date: Thu 18-Dec-2003 CD 2003/4

COMPANY DETAILS

COMPANY NAME:	RHINO LININGS AUSTRALASIA PTY LTD
COMPANY ADDRESS:	501 – 505 OLSEN AVENUE, MOLENDINAR QLD 4214
TELEPHONE:	+61 7 5597 2877
FACSIMILE:	+61 7 5539 6399

STATEMENT OF HAZARDOUS NATURE

Not classified as hazardous according to Worksafe Australia criteria.

IDENTIFICATION

PRODUCT NAME:	Tuff Stuff A-Side
SYNONYMS:	4,4'-diphenylmethane diisocyanate (MDI) MDI oligomer Tuffstuff Tough-stuff (misspelling)
PRODUCT CODE:	
U.N.NUMBER:	None
HAZCHEM CODE:	None
CAS RN No(s):	None
PACKING GROUP:	None
DANGEROUS GOODS CLASS & SUB RISK:	None
POISON SCHEDULE:	S6
USE:	Hardener component A of a polyurethane lining formulation. Always used in admixture with component B. Requires that the two parts be mixed by hand or mixer before use, in accordance with manufacturers directions. Mix only as much as is required. Do not return the mixed material to the original containers

PHYSICAL PROPERTIES/DESCRIPTION:

APPEARANCE:	Yellow or light straw coloured liquid; does not mix with water. Musty odour.
BOILING POINT:	Not available
MELTING POINT:	Not available
VAPOUR PRESSURE (kPa) (70°F):	Negligible
SPECIFIC GRAVITY:	1.192
FLASHPOINT / 0°:	>219
LOWER EXPLOSIVE LIMIT %:	Not applicable
UPPER EXPLOSIVE LIMIT %:	Not applicable
SOLUBILITY IN WATER %:	Immiscible
VISCOSITY:	180-250 cps @ 25 deg.C.

TUFF STUFF A-SIDE
Material Safety Data Sheet
 CHEMWATCH 4944-79

Page 2 of 7
 Date of Issue: Thu 17-Apr-2003

HEALTH HAZARD INFORMATION

Skin Contact:	Sensitisation may result in allergic dermatitis responses including rash, itching, hives or swelling of extremities. Sensitisation reactions may appear suddenly after repeated symptom free exposures Bare unprotected skin should not be exposed to this material Toxic effects may result from skin absorption The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.
Swallowed:	Considered an unlikely route of entry in commercial/industrial environments Ingestion may result in nausea, abdominal irritation, pain and vomiting
Eye Contact:	The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis
Inhalation:	The vapour/mist may be highly irritating to the upper respiratory tract and lungs; the response may be severe enough to produce bronchitis and pulmonary oedema. Possible neurological symptoms arising from isocyanate exposure include headache, insomnia, euphoria, ataxia, anxiety neurosis, depression and paranoia. Gastrointestinal disturbances are characterised by nausea and vomiting. Pulmonary sensitisation may produce asthmatic reactions ranging from minor breathing difficulties to severe allergic attacks; this may occur following a single acute exposure or may develop without warning for several hours after exposure. Sensitized people can react to very low doses, and should not be allowed to work in situations allowing exposure to this material. Continued exposure of sensitised persons may lead to possible long term respiratory impairment. Inhalation hazard is increased at higher temperatures. Inhalation of vapour may aggravate a pre-existing respiratory condition such as asthma, bronchitis, emphysema

CHRONIC HEALTH EFFECTS

Isocyanate vapours are irritating to the airways and can cause their inflammation, with wheezing, gasping, severe distress, even loss of consciousness and fluid in the lungs. Nervous system symptoms that may occur include headache, sleep disturbance, euphoria, inco-ordination, anxiety, depression and paranoia. Digestive effects include nausea and vomiting. Breathing difficulties may occur unpredictably after a period of tolerance and after skin contact. Allergic inflammation of the skin can occur, with rash, itching, blistering, and swelling of the hands and feet. Sensitive people can react to very low levels and should not be exposed to this material.

Respiratory sensitisation may result in allergic/asthma like responses; from coughing and minor breathing difficulties to bronchitis with wheezing, gasping. Sensitisation may give severe responses to very low levels of exposure, i.e. hypersensitivity. Sensitised persons should not be allowed to work in situations where exposure may occur.

FIRST AID

Skin Contact:	If solids or aerosol mists are deposited upon the skin: · Flush skin and hair with running water (and soap if available). · Remove any adhering solids with industrial skin cleansing cream. · DO NOT use solvents. · Seek medical attention in the event of irritation.
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TUFF STUFF A-SIDE

Material Safety Data Sheet

CHEMWATCH 4944-79

Page 3 of 7

Date of Issue: Thu 17-Apr-2003

FIRST AID cont.

Swallowed:	<p>If poisoning occurs, contact a doctor or Poisons Information Centre.</p> <ul style="list-style-type: none"> · IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY. · For advice, contact a Poisons Information Centre or a doctor. <p>Where Medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:</p> <ul style="list-style-type: none"> · Induce vomiting with fingers down the back of the of the throat, ONLY IF CONSCIOUS. · Lean patient forward or place on left side (head-down position if possible) to maintain open airway and prevent aspiration. <p>NOTE: Wear a protective glove when inducing vomiting by mechanical means.</p> <ul style="list-style-type: none"> · In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition. · If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the MSDS should be provided. Further action will be the responsibility of the medical specialist. · If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the MSDS.
Eye Contact:	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> · Immediately hold eyelids apart and flush the eye continuously with running water. <p>Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</p> <ul style="list-style-type: none"> · Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. · Transport to hospital or doctor without delay. · Removal of contact lenses after an eye injury should only be undertaken by Skilled personnel.
Inhalation:	<ul style="list-style-type: none"> · If fumes or combustion products are inhaled remove from contaminated area. · Lay patient down. Keep warm and rested. · Prosthesis such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. · Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. · Transport to hospital, or doctor, without delay.

ADVICE TO DOCTORS –

For sub-chronic and chronic exposures to isocyanates:

- This material may be a potent pulmonary sensitiser which causes bronchospasm even in patients without prior airway hyperreactivity.
- Clinical symptoms of exposure involve mucosal irritation of respiratory and gastrointestinal tracts.
- Conjunctival irritation, skin inflammation (erythema, pain vesiculation) and gastrointestinal disturbances occur soon after exposure.
- Pulmonary symptoms include cough, burning, substantial pain and dyspnoea.
- Some cross-sensitivity occurs between different isocyanates.
- Noncardiogenic pulmonary edema and bronchospasm are the most serious consequences of exposure. Markedly symptomatic patients should receive oxygen, ventilatory support and an intravenous line.
- Treatment for asthma includes inhaled sympathomimetics (epinephrine [adrenalin], terbutaline) and steroids.
- Activated charcoal (1 g/kg) and a cathartic (sorbitol, magnesium citrate) may be useful for ingestion.
- Mydriatics, systemic analgesics and topical antibiotics (Sulamyd) may be used for corneal abrasions.
- There is no effective therapy for sensitised workers. [Ellenhorn and Barceloux; Medical Toxicology]

The information provided herein and/or otherwise supplied to users is based on our current knowledge, accordingly any conclusions or recommendations are made without liability on the part of Rhino Linings Australasia Pty Ltd and/or any of the company's employees or associates. Factors outside of our control can affect the use of these products and we therefore cannot accept responsibility for any injury, loss or damage resulting from reliance upon such information.

TUFF STUFF A-SIDE

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ADVICE TO DOCTORS cont.

NOTE: Isocyanates cause airway restriction in naive individuals with the degree of response dependant on the concentration and duration of exposure. They induce smooth muscle contraction which leads to bronchoconstrictive episodes. Acute changes in lung function, such as decreased FEV1, may not represent sensitivity. [Karol & Jin, Frontiers in Molecular Toxicology, pp 56-61, 1992]

PRECAUTIONS FOR USE

Exposure Standards:	No data for Ultracoat Tuff Stuff A-Side.																				
Engineering Controls:	<p>Use in a well-ventilated area</p> <p>General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas.</p> <p>Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Type of Contaminant:</td> <td style="width: 40%;">Air Speed:</td> </tr> <tr> <td>solvent, vapours, degreasing etc., evaporating from tank (in still air).</td> <td>0.25-0.5 m/s (50-100 f/min)</td> </tr> <tr> <td>aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)</td> <td>0.5-1 m/s (100-200 f/min.)</td> </tr> <tr> <td>direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) 1</td> <td>-2.5 m/s (200-500 f/min.)</td> </tr> <tr> <td>grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).</td> <td>2.5-10 m/s (500-2000 f/min.)</td> </tr> </table> <p>Within each range the appropriate value depends on:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Lower end of the range</td> <td style="width: 50%;">Upper end of the range</td> </tr> <tr> <td>1: Room air currents minimal or</td> <td>1: Disturbing room air currents favourable to capture</td> </tr> <tr> <td>2: Contaminants of low toxicity or of</td> <td>2: Contaminants of high toxicity nuisance value only.</td> </tr> <tr> <td>3: Intermittent, low production.</td> <td>3: High production, heavy use</td> </tr> <tr> <td>4: Large hood or large air mass in</td> <td>4: Small hood-local control only motion</td> </tr> </table> <p>Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.</p> <p>Refer also to protective measures for the other component used with the product. Read both MSDS before using; store and attach MSDS together.</p>	Type of Contaminant:	Air Speed:	solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min)	aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)	direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) 1	-2.5 m/s (200-500 f/min.)	grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)	Lower end of the range	Upper end of the range	1: Room air currents minimal or	1: Disturbing room air currents favourable to capture	2: Contaminants of low toxicity or of	2: Contaminants of high toxicity nuisance value only.	3: Intermittent, low production.	3: High production, heavy use	4: Large hood or large air mass in	4: Small hood-local control only motion
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PRECAUTIONS FOR USE cont

Personal Protection:	<p>EYE Chemical goggles. Full-face shield. DO NOT wear contact lenses. Contact lenses pose a special hazard; soft contact lenses may absorb irritants and all lenses concentrate them.</p> <p>HANDS/FEET Neoprene gloves or Butyl rubber gloves PVC gloves Rubber boots DO NOT use skin cream unless necessary and then use only minimum amount. Isocyanate vapour may be absorbed into skin cream and this increases hazard.</p> <p>OTHER Overalls. Eyewash unit. DO NOT return unused product to containers. The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.</p>
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SAFE HANDLING INFORMATION

Storage and Transport:	<p>SUITABLE CONTAINER Metal can or drum · Packaging as recommended by manufacturer. · Check all containers are clearly labeled and free from leaks</p> <p>STORAGE INCOMPATIBILITY Avoid storage with oxidisers · Avoid contamination with water, alkalies and detergent solutions. · Material reacts with water and generates gas, pressurises containers with even drum rupture resulting. · DO NOT reseal container if contamination is suspected. · Open all containers with care.</p>
Storage and Transport: cont:	<p>STORAGE REQUIREMENTS Rotate all stock to prevent ageing. Use on FIFO (First In-First Out) basis Keep dry · Store in original containers. · Keep containers securely sealed. · No smoking, naked lights or ignition sources. · Store in a cool, dry, well-ventilated area. · Store away from incompatible materials and foodstuff containers. · Protect containers against physical damage and check regularly for leaks. · Observe manufacturer's storing and handling recommendations. Store at 16-38 deg.C.</p> <p>TRANSPORTATION No restrictions.</p>

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SAFE HANDLING INFORMATION cont.

Spillages:	<p>MINOR SPILLS Clean up all spills immediately. Shut off all possible sources of ignition and increase ventilation. Avoid contact with skin and eyes. Wear protective clothing, impervious gloves and safety glasses. Contain and absorb spill with sand, earth, inert material or vermiculite. Trowel up/scrape up. Collect residues and place in labelled plastic containers with vented lids</p> <p>MAJOR SPILLS DO NOT touch the spill material Pollutant - contain spillage Clear area of personnel and move upwind · Wear full body protective clothing with breathing apparatus. · Prevent, by any means available, spillage from entering drains or water courses. Shut off all possible sources of ignition and increase ventilation. No smoking or naked lights within area. Stop leak if safe to do so. Contain and absorb spill with sand, earth, inert material or vermiculite. Collect residues and seal in labelled drums for disposal Wash spill area with detergent and water. DO NOT USE WATER OR NEUTRALISING AGENTS INDISCRIMINATELY ON LARGE SPILLS.</p> <p>DISPOSAL · DO NOT recycle spilled material. · Consult State Land Waste Management Authority for disposal. · Neutralise spill material carefully and decontaminate empty containers and spill residues with 10% ammonia solution plus detergent or a proprietary decontaminant prior to disposal. · DO NOT seal or stopper drums being decontaminated as CO₂ gas is generated and may pressurise containers. · Puncture containers to prevent re-use. · Bury or incinerate residues at an approved site.</p>
Fire/Explosion Risk	<p>EXTINGUISHING MEDIA</p> <p>SMALL FIRES Dry chemical powder. Carbon dioxide. Protein foam.</p> <p>LARGE FIRES Water spray or fog. Flooding quantities of water only. · Small quantities of water in contact with hot liquid may react violently with generation of a large volume of rapidly expanding hot sticky semi-solid foam. · Presents additional hazard when fire fighting in a confined space. · Cooling with flooding quantities of water reduces this risk.</p>

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Material Safety Data Sheet

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SAFE HANDLING INFORMATION cont

Fire/Explosion Risk	<p>FIRE FIGHTING</p> <ul style="list-style-type: none"> · Clear area of personnel. · Alert Fire Brigade and tell them location and nature of hazard. · Wear full body protective clothing with breathing apparatus. · Prevent, by any means available, spillage from entering drains or water course. · Use water delivered as a fine spray to control fire and cool adjacent area. · Avoid spraying water onto liquid pools. · DO NOT approach containers suspected to be hot. · Cool fire exposed containers with water spray from a protected location. · If safe to do so, remove containers from path of fire. <p>FIRE/EXPLOSION HAZARD</p> <ul style="list-style-type: none"> · Combustible. · Moderate fire hazard when exposed to heat or flame. · When heated to high temperatures decomposes rapidly generating vapour which pressures and may then rupture containers with release of flammable and highly toxic isocyanate vapour. · Burns with acrid black smoke and poisonous fumes. · Combustion yields traces of highly toxic hydrogen cyanide HCN, plus toxic nitrogen oxides NOx and carbon monoxide. <p>FIRE INCOMPATIBILITY</p> <p>Avoid contamination with oxidizing agents i.e. nitrates, oxidizing acids, chlorine bleaches, pool chlorine etc. as ignition may result</p> <p>HAZCHEM</p> <p>None</p>
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CONTACT POINT:

Company Contact	+61 7 5597 2877
Australian Poisons Information Centre 24 hr Service	13 11 26
Police, Ambulance, Fire Brigade	000
New Zealand Poisons Information Centre 24 hr Service	0800 764 766
New Zealand Emergency Services	111

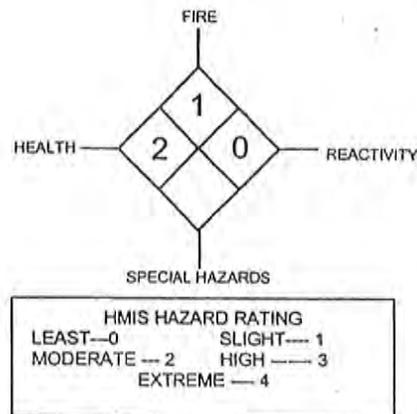
End of Report:-
Issue Date: Fri 28-Feb-2003
Print Date: Tue 4-Mar-2003

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PRODUCT NAME: TUFF STUFF B-SIDE FR20

SECTION 1 - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: Rhino Linings USA, Inc.
ADDRESS: 9151 Rehco Road, San Diego, CA, 92121
INFORMATION PHONE: 858-450-0441
EMERGENCY CONTACT: (CHEMTREC): 800-424-9300
DATE: April 13, 2001
SUPERSEDES: November 1995



SECTION 2 - HAZARDOUS INGREDIENTS

Ingredients	CAS #	OCCUPATIONAL EXPOSURE LIMITS	
		OSHA PEL	ACGIH TLV
Glycol	111-46-6	N/E	N/E
Aromatic Amine	68479-98-1	N/E	N/E

*No toxic chemical(s) subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372.

SECTION 3 - PHYSICAL DATA

Appearance and Odor: Yellow/gold liquid, slight odor.
Boiling Point: 586° F (308° C)
Vapor Density (Air = 1): Heavier than air.
Coating V.O.C.: N/A

Solubility in Water: N/E
Specific Gravity (H₂O = 1): 1.12
Evaporation Rate: Slower than ether.
V.O.C.s: None

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: > 275° F (> 135° C) **Method:** TCC
Flammable Limits in Air by Volume: (Based on Diglycol) Lower: N/E Upper: N/E
Extinguishing Media: Dry chemical, alcohol foam, carbon dioxide.
Special Fire Fighting Protective Equipment: Wear NIOSH approved self contained breathing apparatus in positive pressure mode with full face piece. Boots, gloves (neoprene), goggles & full protective clothing are also required.
Unusual Fire and Explosion Hazards: Closed containers may rupture due to very high temperatures or induced pressure.

SECTION 5 - HEALTH HAZARD ASSESSMENT

Skin Contact: Frequent and prolonged contact can cause irritation. Skin sensitization and irritation may develop after repeated and/or prolonged contact with human skin.
Skin Absorption: Systematically toxic concentrations of this product will probably not be absorbed through human skin.
Skin First Aid: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.
Eye Contact: Can induce irritation or chemical burns on contact with eyes.
Eye First Aid: Immediately flush eyes with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and treated by medical personnel.
Ingestion: Swallowing small amounts of this material is not likely to cause harmful effects. Swallowing large amounts may be harmful.
Ingestion First Aid: Give 1 or 2 glasses of water and induce vomiting. Call a physician immediately. (Never give anything by mouth to an unconscious person).
Inhalation: Vapors can irritate eyes, nose and respiratory passages. Overexposure may induce headache or dizziness. Severe overexposure to this material could cause stomach or intestinal upset, chronic cough, dizziness, or weakness.
Inhalation First Aid: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is labored, give oxygen. Consult medical personnel.

SECTION 5 – HEALTH HAZARD ASSESSMENT (Continued)

Carcinogenicity: NTP – No IARC Monographs – No OSHA Regulated – No
Health Hazards: **Acute:** Exposure may cause skin and eye irritation, respiratory tract irritation. Chemical burns may result due to overexposure. Effects of exposure may be delayed. **Chronic:** Repeated and prolonged exposure at low levels may result in adverse skin and eye effects, liver and kidney disorders.

SECTION 6 – REACTIVITY DATA

Stability: Stable under normal conditions.
Conditions to Avoid: Heat, high temperatures, open flame, sparks and moisture. Contact with incompatible materials in a closed system will cause buildup of pressure.
Incompatibility: Isocyanates and strong oxidizers.
Hazardous Decomposition Products: Organic vapors and other thermal decomposition products.
Hazardous Polymerization: Will not occur.

SECTION 7 – SPILL OR LEAK PROCEDURES

Steps To Be Taken In Case Material is Released Or Spilled: Wear skin, eye, and respiratory protection during cleanup. Soak up material with absorbent and shovel into a chemical waste container. Cover container, but do not seal, and remove from work area. Residues from spill cleanup may continue to be regulated under provisions of RCRA and require storage and disposal as hazardous waste. For major spills, call CHEMTREC (Chemical Transportation Emergency Center) at 800-424-9300.
Disposal Method: Spill cleanup residues may still be subject to RCRA storage and disposal requirements. Dispose of in compliance with all relevant local, state, and federal laws and regulations regarding treatment.

SECTION 8 – SPECIAL PROTECTION INFORMATION

Ventilation: Good general ventilation should be sufficient to control airborne levels.
Respiratory Protection: Use a NIOSH approved respirator as required to prevent overexposure. In accordance with 29 CFR 1910.134, use either an atmosphere supplying respirator or and air purifying respirator for organic vapors.
Protective Clothing: Gloves determined to be impervious under the options of use should be worn always when working with this product. Depending on conditions of use, additional protection may be reassured such as apron, arm covers, or full body suit. Wash contaminated clothing before wearing. Protective clothing should be selected and used in accordance with "Guidelines for the Selection of Chemical Protective Clothing" published by ACGIH.
Eye Protection: Chemical tight goggles and full face shield.
Other Protective Equipment: Unhindered access to safety shower and eye wash stations. As a general hygiene practice, wash hands and face after use. Showers and cleaning of clothes are recommended. Follow all label instructions. Educate and train employees in safe use of product.

SECTION 9 – SPECIAL PRECAUTIONS OR OTHER COMMENTS

Precautions To Be Taken In Handling & Storing: Keep in cool, dry, ventilated storage area, in closed container and out of direct sunlight. Keep liquid away from heat, sparks and flame, store in container above ground and surrounded by dikes to contain spills or leaks. Excessive heat or pressure may ignite or detonate even liquid product in the absence of sparks or open flames. Keep containers closed when not in use. Containers, even those that have been emptied, may contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers. Do not pressurize to empty them.

SECTION 10– REGULATORY INFORMATION

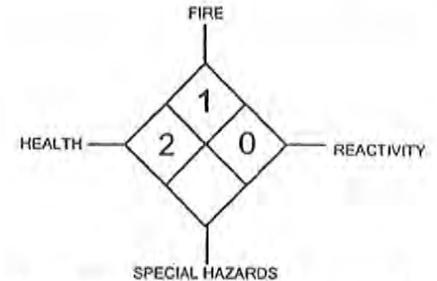
DOT Proper Shipping Name: Not regulated.
Toxic Substances Control Act (TSCA) Status: All chemicals comprising this product are listed on the TSCA inventory.
State Regulations: California – As per requirements of the State Drinking Water and Toxic Enforcement Act of CA, USA 1985 (Proposition 65), the public is warned that the materials used in this product may create an exposure to chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm. This warning required by Section 25249.6 of The California Health and Safety Code.

SECTION 11– SPECIAL PRECAUTIONS OR OTHER COMMENTS

Disclaimer: The data set forth in this sheet are based on information provided by the suppliers of the raw materials and chemicals used in the manufacture of the aforementioned product. Rhino Linings USA, Inc. makes no warranty with respect to the accuracy of the information provided by their suppliers, and disclaims all liability of reliance thereof.

PRODUCT NAME: TUFF STUFF B-SIDE CLEAR
SECTION 1 - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: Rhino Linings USA, Inc.
ADDRESS: 9151 Rehco Road, San Diego, CA, 92121
INFORMATION PHONE: 858-450-0441
EMERGENCY CONTACT: (CHEMTREC): 800-424-9300
DATE: April 12, 2001
SUPERSEDES: January 1998



HMIS HAZARD RATING
 LEAST—0 SLIGHT—1
 MODERATE — 2 HIGH — 3
 EXTREME — 4

SECTION 2 - HAZARDOUS INGREDIENTS

Ingredients	CAS #	OCCUPATIONAL EXPOSURE LIMITS OSHA PEL	ACGIH TLV
Glycol	111-46-6	N/E	N/E
Aromatic Amine	68479-98-1	N/E	N/E

*No toxic chemical(s) subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372.

SECTION 3 - PHYSICAL DATA

Appearance and Odor: Yellow/gold liquid, slight odor. Boiling Point: > 392° F (> 200° C) Vapor Density (Air = 1): Heavier than air. Coating V.O.C.: 0 G/L (0 LB/GL)	Solubility in Water: N/E Specific Gravity (H2O = 1): 1.04 Evaporation Rate: Slower than ether. V.O.C.s: None
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SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: > 302° F (150° C) **Method:** PMCC
Flammable Limits in Air by Volume: (Based on Diglycol) Lower: N/E Upper: N/E
Extinguishing Media: Dry chemical, alcohol foam, carbon dioxide.
Special Fire Fighting Protective Equipment: Wear NIOSH approved self contained breathing apparatus in positive pressure mode with full face piece. Boots, gloves (neoprene), goggles & full protective clothing are also required.
Unusual Fire and Explosion Hazards: Closed containers may rupture due to very high temperatures or induced pressure.

SECTION 5 - HEALTH HAZARD ASSESSMENT

Skin Contact: Frequent and prolonged contact can cause irritation. Skin sensitization and irritation may develop after repeated and/or prolonged contact with human skin.
Skin Absorption: Systematically toxic concentrations of this product will probably not be absorbed through human skin.
Skin First Aid: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.
Eye Contact: Can induce irritation or chemical burns on contact with eyes.
Eye First Aid: Immediately flush eyes with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and treated by medical personnel.
Ingestion: Swallowing small amounts of this material is not likely to cause harmful effects. Swallowing large amounts may be harmful.
Ingestion First Aid: Give 1 or 2 glasses of water and induce vomiting. Call a physician immediately. (Never give anything by mouth to an unconscious person).
Inhalation: Vapors can irritate eyes, nose and respiratory passages. Overexposure may induce headache or dizziness. Severe overexposure to this material could cause stomach or intestinal upset, chronic cough, dizziness, or weakness.
Inhalation First Aid: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is labored, give oxygen. Consult medical personnel.

SECTION 5 – HEALTH HAZARD ASSESSMENT (Continued)

Carcinogenicity: NTP – No IARC Monographs – No OSHA Regulated – No
Health Hazards: Acute: Exposure may cause skin and eye irritation, respiratory tract irritation. Chemical burns may result due to overexposure. Affects of exposure may be delayed. **Chronic:** Repeated and prolonged exposure at low levels may result in adverse skin and eye effects, liver and kidney disorders.

SECTION 6 – REACTIVITY DATA

Stability: Stable under normal conditions.
Conditions to Avoid: Heat, high temperatures, open flame, sparks and moisture. Contact with incompatible materials in a closed system will cause buildup of pressure.
Incompatibility: Isocyanates and strong oxidizers.
Hazardous Decomposition Products: Organic vapors and other thermal decomposition products.
Hazardous Polymerization: Will not occur.

SECTION 7 – SPILL OR LEAK PROCEDURES

Steps To Be Taken In Case Material is Released Or Spilled: Wear skin, eye, and respiratory protection during cleanup. Soak up material with absorbent and shovel into a chemical waste container. Cover container, but do not seal, and remove from work area. Residues from spill cleanup may continue to be regulated under provisions of RCRA and require storage and disposal as hazardous waste. For major spills, call CHEMTREC (Chemical Transportation Emergency Center) at 800-424-9300.
Disposal Method: Spill cleanup residues may still be subject to RCRA storage and disposal requirements. Dispose of in compliance with all relevant local, state, and federal laws and regulations regarding treatment.

SECTION 8 – SPECIAL PROTECTION INFORMATION

Ventilation: Good general ventilation should be sufficient to control airborne levels.
Respiratory Protection: Use a NIOSH approved respirator as required to prevent overexposure. In accordance with 29 CFR 1910.134, use either an atmosphere supplying respirator or and air purifying respirator for organic vapors.
Protective Clothing: Gloves determined to be impervious under the options of use should be worn always when working with this product. Depending on conditions of use, additional protection may be reassured such as apron, arm covers, or full body suit. Wash contaminated clothing before wearing. Protective clothing should be selected and used in accordance with "Guidelines for the Selection of Chemical Protective Clothing" published by ACGIH.
Eye Protection: Chemical tight goggles and full face shield.
Other Protective Equipment: Unhindered access to safety shower and eye wash stations. As a general hygiene practice, wash hands and face after use. Showers and cleaning of clothes are recommended. Follow all label instructions. Educate and train employees in safe use of product.

SECTION 9 – SPECIAL PRECAUTIONS OR OTHER COMMENTS

Precautions To Be Taken In Handling & Storing: Keep in cool, dry, ventilated storage area, in closed container and out of direct sunlight. Keep liquid away from heat, sparks and flame, store in container above ground and surrounded by dikes to contain spills or leaks. Excessive heat or pressure may ignite or detonate even liquid product in the absence of sparks or open flames. Keep containers closed when not in use. Containers, even those that have been emptied, may contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers. Do not pressurize to empty them.

SECTION 10– REGULATORY INFORMATION

DOT Proper Shipping Name: Not regulated.
Toxic Substances Control Act (TSCA) Status: All chemicals comprising this product are listed on the TSCA inventory.
State Regulations: California – As per requirements of the State Drinking Water and Toxic Enforcement Act of CA, USA 1985 (Proposition 65), the public is warned that the materials used in this product may create an exposure to chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm. This warning required by Section 25249.6 of The California Health and Safety Code.

SECTION 11– SPECIAL PRECAUTIONS OR OTHER COMMENTS

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MATERIAL SAFETY DATA SHEET

Part No.: 70020

PRODUCT NAME: WHITE PIGMENT

SECTION 1 - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: Rhino Linings USA, Inc.

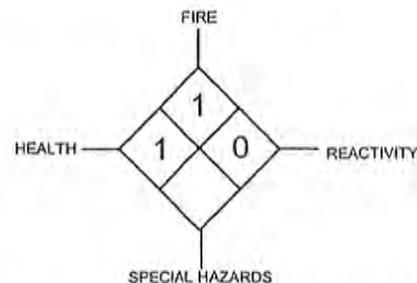
ADDRESS: 9151 Rehco Road, San Diego, CA, 92121

INFORMATION PHONE: 858-450-0441

EMERGENCY CONTACT: (CHEMTREC): 800-424-9300

DATE: April 16, 2001

SUPERSEDES: January 3, 1996



HMIS HAZARD RATING	
LEAST—0	SLIGHT—1
MODERATE—2	HIGH—3
EXTREME—4	

SECTION 2 - HAZARDOUS INGREDIENTS

None

SECTION 3 - PHYSICAL DATA

Appearance and Odor: White liquid, mild odor.

Solubility in Water: Negligible.

Boiling Point: 410° F

Specific Gravity (H₂O = 1): 1.47

Vapor Density (Air = 1): Greater than air.

Vapor Pressure (mm Hg): 68° F < 0

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: 410° F

Method: PMCC

Extinguishing Media: Water, spray, dry chemical, CO₂ foam.

Unusual Fire and Explosion Hazards: Under fire conditions, fumes, smoke, carbon monoxide.

Special Fire Fighting Procedures: Use self-contained breathing apparatus & protective clothing.

SECTION 5 - HEALTH HAZARD DATA

Effects Of Overexposure: No harmful effects expected from reasonably foreseeable exposure.

Skin First Aid: Flush skin with water.

Eye First Aid: Flush eyes with water.

Inhalation Exposure: No problem at room temperature.

Inhalation First Aid: Smoke formed at high temperature. Smoke formed at high temperature. Will be mildly irritating with prompt relief on removal to fresh air.

SECTION 6 - REACTIVITY DATA

Stability: Stable.

Incompatible Materials: Oxidizing agents, nitric acid, and strong acids.

Hazardous Decomposition Products: None.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: None.

SECTION 7 - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled: Contain with sand, earth or sawdust. Implement cleanup procedures. Use suitable absorbent.

Disposal Method: Incinerate in furnace or dispose as required under appropriate federal, state and local regulations.

SECTION 8 – SPECIAL PROTECTION INFORMATION

Respiratory Protection: None.
Ventilation: Mechanical.
Other Equipment: Eye bath and shower.

Eye Protection: Safety spectacles.
Protective Gloves: Advised.

SECTION 9 – SPECIAL PRECAUTIONS

Handling Precautions: Normal handling.

SECTION 10 - DISCLAIMER

Disclaimer: The data set forth in this sheet are based on information provided by the suppliers of the raw materials and chemicals used in the manufacture of the aforementioned product. Rhino Linings USA, Inc. makes no warranty with respect to the accuracy of the information provided by their suppliers, and disclaims all liability of reliance thereof.

SAFETY DATA SHEET

RONSON BUTANE REFILL

1. IDENTIFICATION OF THE PREPARATION AND THE COMPANY

Product Name: Ronson Butane Refill
Synonyms, Trade Names: Butane Fuel 90ml to 400ml
Applications: Gas lighter fuel
Supplier: Ronson International Ltd.
International House, Old Brighton Road,
Lowfield Heath, Crawley, West Sussex. RH11 0QN
Emergency Telephone: 01293 843600 (office hours only)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name	CAS No	Contents	Health (class)	Risk (R No.)
Butane	106 - 97 - 8	99%		

Composition Comments Substances indicating a hazard do so under EC Directives 88/379 & 67/548
Aerosol classified as Flammable

3. HAZARDS IDENTIFICATION

Flammable
Substances not indicating a health hazard may have Occupational Exposure Limits detailed in Section 8 of this data sheet
Ingredients are below the levels to cause the product to be classified

4. FIRST AID MEASURES

General: Note! Keep affected person away from heat, sparks and flames!
Eyes: Promptly wash eyes with water while lifting the eyelids. Get medical attention immediately. Continue to rinse. Burns should be flushed with water to normalise Temperature. Cover eyes with sterile dressing. Do NOT apply ointments or powder.
Skin: Remove affected person from source of contamination. Promptly stop exposure and get medical attention if frostbite has occurred. Promptly flush contaminated skin with soap or mild detergent and water. Promptly remove clothing if penetrated and flush the skin with water.
Inhalation: Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. When breathing is difficult, properly trained personnel may assist affected person by administering 100% oxygen. Keep the affected person warm and at rest. Get prompt medical attention
Ingestion: NEVER MAKE AN UNCONCIOUS PERSON VOMIT OR DRINK FLUIDS.
DO NOT induce vomiting Get medical attention immediately.

5. FIRE FIGHTING MEASURES

Extinguishing Media Stop flow of material to fire. Fire can be extinguished using foam, dry chemicals, and sand dolomite etc.
Special Fire Fighting Procedures Use water to keep fire exposed cool and disperse vapours. Cool containers exposed to flames with water from side until well after fire is out. Move container from fire area if it can be done without risk.

SAFETY DATA SHEET

RONSON BUTANE REFILL

Vapour Pressure (mmHg)	1520 @ 18°C	Vapour Density (air = 1)	2.05
Melting Point	-137 °C		
Flash Point	-60 °C	Flash Point Method	CC (closed cup)
Auto ignition Temperature	405 °C		
Flammability Limit	lower % 1.90		
Flammability Limit	upper % 8.50		

10. STABILITY AND REACTIVITY

Stability	Avoid heat, sparks and flames
Materials to avoid	Strong oxidizing agents
Conditions to avoid	Evaporates easily in air. Reacts strongly with oxidizers.
Hazardous Decomposition Products	Toxic gases/vapours/fumes of carbon monoxide (CO) carbon dioxide (CO ₂)

11. TOXICOLOGICAL INFORMATION

Toxic Conc.-LC50	680 ppm/2h (inh - mus)
Target organs	Central nervous system, eyes, respiratory system and lungs
Health Warnings	Gas or vapour displaces oxygen available for breathing (asphyxiant). Narcotic effect
Medical Symptoms	May cause suffocation. Dizziness.
Acute and chronic health hazards	Contact with liquid form may cause frostbite.

12. ECOLOGICAL INFORMATION

13. DISPOSAL CONSIDERATIONS

Disposal Methods	Vent to atmosphere
Empty Containers	Dispose of empty containers without puncturing DO NOT INCINERATE

14. TRANSPORT INFORMATION

ROAD:			
UN No	1950	Hazchem Code	2WE
ADR Class	2	ADR Item No.	3b
ADR Hazard No.	23 Flammable Gas		
CEFIC TEC ® No.	276	ADR Label No.	3
Label for conveyance			

SAFETY DATA SHEET

RONSON BUTANE REFILL

AIR:
UN No. 1950 Air Transport Class No. 2
AIR Sub Class 3

SEA:
UN No. 1950 Sea Transport Class No. 2(2.1)

RAIL:
Rail Transport Class No 2 Road PT. 3b

15. REGULATORY INFORMATION

Label for Supply

Risk Phrases R 10 Flammable

Safety Phrases S - 9 Keep container in well ventilated place
S - 16 Keep away from sources of ignition - **NO SMOKING**
S - 33 Take precautionary measures against
Static discharges

16. OTHER INFORMATION

-User Notes This product is supplied in an aerosol form using a highly flammable gas as a propellant. Properly used for the intended purpose and in accordance to this safety data sheet should not present any undue hazard.

Information Sources Dangerous Properties of Industrial Chemicals, 6.edition, N.Sax,1984
OSHA Air Contaminants - Permissible Exposure Limits (Title 29)
Handbook of Toxic and Hazardous Chemicals and Carcinogens, Sittig,'85
Hazardous Materials, Emergency Response Guidebook, DOT-P 5800.3, 1984
NIOSH/OSHA Pocket Guide to Chemical Hazards (latest edition)
Threshold Limit Values and Biological Exposure Indices for 1994 - 95
Chemical Safety Data Guide. Bureau of National Affairs , 1985

SDS No: 1001
Revision Date: May 2000
Revision No./Replaces: SDS issued 01 09 95
Revision Comments: New Safety Data to CHIP format



MATERIAL SAFETY DATA SHEET

FOR COATINGS AND RELATED MATERIALS

MOISTURE SCAVENGER

Part No. 50110

SECTION 1 - MANUFACTURER'S IDENTIFICATION

Rhino Linings USA, Inc.
9151 Rehco Road
San Diego, CA 92121
Phone: (858) 450-0441
Fax: (858) 450-6881
Emergency: (800) 424-9300

Date: May 1989
Supersedes: New
Product Name: Moisture Scavenger
Part No.: 50110

SECTION 2 - HAZARDOUS INGREDIENTS

<u>INGREDIENTS</u>	<u>CAS #</u>	<u>PERCENT BY WT.</u>	<u>OSHA PEL</u>
Sodium Potassium Alumina Silicate	12736-96-8		None. Est.
Castor Oil	8001-79-4	50	None Est.

Governmental Inventory Status: All components registered in accordance with TSCA.

SECTION 3 - TRANSPORTATION CLASSIFICATION

DOT Category: Oils, liquid or solidified
IMO Hazard Class: Not regulated

SECTION 4 - PHYSICAL DATA

Boiling Point (F & C): 595°F 312°C
Melting Point (F & C): 14°F -10°C
Vapor Density (Air = 1): >1*
Density (g/ml): 1.25

Solubility in H₂O: Insoluble
Appearance And Odor: Paste, White, Castor Oil
% Volatile by Volume: Negligible

SECTION 5 - FIRE AND EXPLOSION HAZARD DATA

Flash Point (F & C): 540°F 282°C*
Method: PMCC
Autoignition Temp (F & C): 840°F 449°C

Extinguishing Media: Dry chemical, carbon dioxide, halon water spray.

Fire and Explosion Hazards: May generate toxic fumes if combusted.

* Estimates based on properties of castor oil.

SECTION 6 - HEALTH HAZARD DATA

Primary Routes of Exposure: Contact with skin and eyes. Product ingestion is unlikely but may occur if proper safety/hygiene procedures are not followed. Exposure may also occur via inhalation or ingestion if the product is misted or sprayed during handling and/or processing. In order to minimize exposure to product, proper protective equipment should be used and proper safety/hygiene procedures should be followed.

Eye Exposure: Exposure to the liquid or product mists may cause eye irritation, including reddening and swelling of mucose membranes and tearing.

Eye First Aid: Flush with water for at least 15 minutes; if irritation persists, seek medical attention.

Skin Exposure: Repeated or prolonged skin contact with this product may cause dermatitis and in some individuals, an allergic response.

Skin First Aid: Remove from skin immediately. Flush skin with large amounts of water. Then wash the skin with a mild soap, rinsing with water. If skin irritation develops, seek professional medical attention.

Inhalation Exposure: Allergic asthmatic reactions may occur in persons previously exposed.

Inhalation First Aid: Remove from contaminated area. If unconscious, give artificial respiration and obtain professional medical attention.

Ingestion Exposure: May cause irritation of gastrointestinal tract and pelvic congestion.

Ingestion First Aid: Obtain professional medical attention.

SECTION 7 - REACTIVITY DATA

Stability: Stable under normal temperatures and pressure.

Conditions to Avoid: Oxidizing agents, water, high concentrations of olefins, HC1, heat sparks and flames.

Incompatible Materials: None known.

Hazardous Decomposition Products: CO, hydrocarbon and oxygenated hydrocarbon fragments (when combusted).

Hazardous Polymerization: None known.

SECTION 8 - SPILL OR LEAK PROCEDURES

Large Spills: Immediately isolate the affected areas and keep out all unauthorized personnel. Confine entry to the contaminated area to those persons who are properly protected. Remove all sources of ignition. Work from up-wind side of the spill area to prevent vapor inhalation.

Stop leak at the source. If possible, reposition, plug, or encapsulate the container to stop further leakage. Cut off and redirect surface runoff by trenching or diking. Spills should be contained through the use of a commercial oil absorbent, but other materials such as earth, sand, or sawdust may be more expedient to limit the extent of contamination.

Clean up contaminated surface with a generous amount of oil absorbent, soaking up as much liquid as possible. Contaminated material should be disposed of in accordance with Federal, State, and Local waste disposal regulations. Refer to WASTE DISPOSAL section.

Prevent the release of these materials into a waterway or plant sewer. If this should occur, follow the established plant procedures for waste water treatment. Product is essentially insoluble in water and can be removed from a water surface with floating absorbent pads.

Small Spills: Wear proper protective equipment. Absorb spilled material using a commercial oil absorbent soaking up as much material as possible. Contaminated material should be disposed of in accordance with waste disposal regulations. See WASTE DISPOSAL section.

Waste Disposal: General Waste: Waste material, including concentrated liquids, contaminated absorbent and materials from spill clean-up procedures, must be handled in accordance with Federal, State and Local regulations. Recommended disposal methods include incineration for liquids and for contaminated solids.

***Note:** Standard hydrocarbon spill procedures apply to this product.

SECTION 9 - SPECIAL PROTECTION INFORMATION

Respiratory Protection: Where natural ventilation is inadequate, use mechanical ventilation, other engineering controls or a NIOSH-approved self-contained breathing apparatus to prevent inhalation of product vapors.

Skin Protection: Gloves and work uniform as necessary to prevent repeated or prolonged skin contact.

Eye Protection: Chemical goggles or face shield as necessary to prevent eye contact.

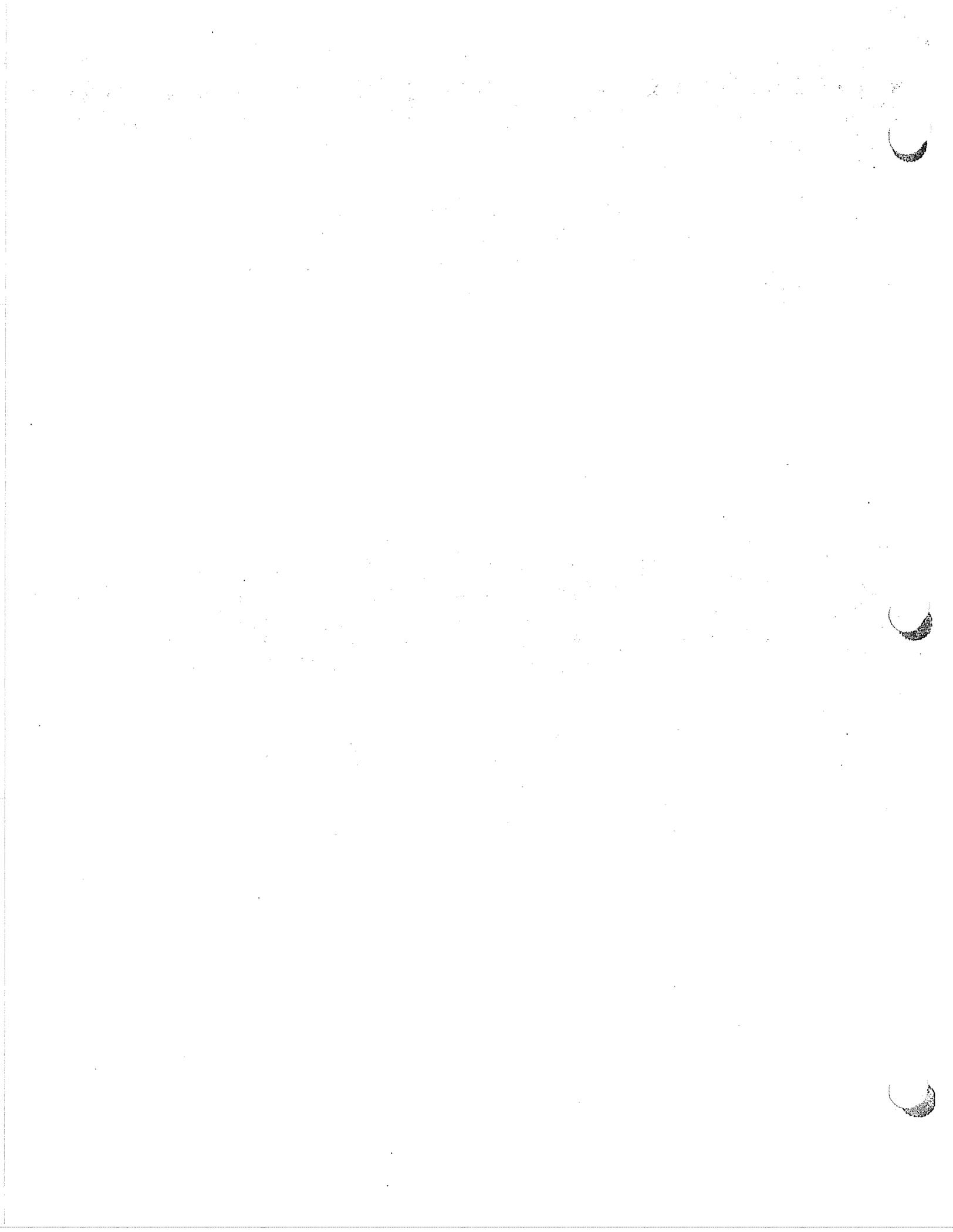
***Note:** Personal protection information shown above is based upon general information as to normal uses and conditions. Where special or unusual uses or conditions exist, it is suggested that the expert assistance of an industrial hygienist or other qualified personnel be sought.

SECTION 9 - SPECIAL PRECAUTIONS OR OTHER COMMENTS

Special Precautions and Other Comments: Store in tightly closed, properly labeled containers in a cool, well-ventilated area away from all ignition sources. Do not store near oxidizers. Avoid contact with skin and eyes. Avoid inhalation of product vapors. Do not take internally.

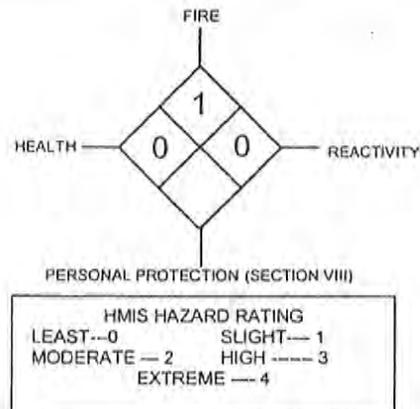
SECTION 11 - DISCLAIMER

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PRODUCT NAME: RHINOFLUSH**SECTION 1 - MANUFACTURER IDENTIFICATION**

MANUFACTURER'S NAME: Rhino Linings USA, Inc.
ADDRESS: 9151 Rehco Road, San Diego, CA, 92121
INFORMATION PHONE: 858-450-0441
EMERGENCY CONTACT: (CHEMTREC): 800-424-9300
DATE: April 20, 2001
SUPERSEDES: March 21, 1998

**SECTION 2 - HAZARDOUS INGREDIENTS**

This product is not hazardous as defined in 29 CFR 1910.1200

SECTION 3 - PHYSICAL DATA

Appearance and Odor: Clear liquid, mild odor.
Boiling Point: Greater than 482° F
Vapor Pressure, mmHg: < 0.001 @ 68° F, 1 @ 392° F
Specific Gravity: 0.97 @ 68° F
Specific Gravity of Vapor (1 ATM (Air = 1)): Less than 0.1
Viscosity of Liquid (cSt @ °F): 102 @ 68° F.
Density: 8.1 lbs/gal @ 68° F
Solubility in Water (Weight % @ °F): Insoluble.
Freezing/Melting Point: - 54° F Pour point.

SECTION 4 - HAZARD SUMMARY**POTENTIAL HEALTH EFFECTS:**

Eye Contact: Slightly irritating but does not injure eye tissue.
Skin Contact: Low order of toxicity. Frequent or prolonged contact may irritate skin.
Inhalation: Negligible hazard at ambient temperature (- 18° C to 38° C, 0° F to 100° F).
Ingestion: Minimal toxicity.

SECTION 5 - FIRST AID MEASURES

Eye Contact: Flush eye with large amounts of water until irritation subsides. If irritation persists, get medical attention.
Skin Contact: Flush with large amounts of water, use soap if available.
Inhalation: Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.
Ingestion: First aid is normally not required.

SECTION 6 - FIRE FIGHTING MEASURES

Flashpoint: 415° F **Method:** PMCC
Flammable Limits: Not available.
Autoignition Temperature: > 500° F
General Hazards: Low hazard, liquid can burn upon heating to temperatures at or above the flashpoint. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition: they may explode and cause injury or death. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.
Fire Fighting: Use water spray to cool fire exposed surfaces and to protect personnel. Isolate "fuel" supply from fire. Use foam, dry chemical, or water spray to extinguish fire. Avoid spraying water directly into storage containers due to danger of boilover.
Decomposition Products Under Fire Conditions: Not unusual.

SECTION 7 – ACCIDENTAL RELEASE MEASURES

Land Spill: Eliminate sources of ignition. Prevent additional discharge of material, if possible to do so without hazard. For small spills implement cleanup procedures; for large spills implement cleanup procedures and, if in public area, keep public away and advise authorities. Also, if this product is subject to CERCLA reporting (see Section 11 REGULATORY INFORMATION) notify The National Response Center. Prevent liquid from entering sewers, watercourses, or low areas. Contain spilled liquid with sand or earth. Recover by pumping or with a suitable absorbent. If liquid is too viscous for pumping, scrape up. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

Water Spill: Remove from surface by skimming or with suitable absorbents. If allowed by local authorities and environmental agencies, sinking and/or suitable dispersants may be used in non-confined waters. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

SECTION 8 – STORAGE AND HANDLING

Storage Temperature: Ambient.

Storage/Transport Pressure, mmHg: Atmospheric

Storage and Handling: Keep container closed. Handle and open containers with care. Store in a cool, well ventilated place away from incompatible materials. DO NOT handle or store near an open flame, heat or other sources of ignition. Protect material from direct sunlight. This material is not a static accumulator. Use proper bonding and/or grounding procedures. DO NOT pressurize, cut, heat, or weld containers. Empty product containers may contain product residue. DO NOT reuse empty containers without commercial cleaning or reconditioning.

SECTION 9 – EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Controls: The use of local exhaust ventilation is recommended to control process emissions near the source. Laboratory samples should be handled in a lab hood. Provide mechanical ventilation of confined spaces. See respiratory protection recommendations.

Personal Protection: For open systems where contact is likely, wear safety glasses with side shields, long sleeves, and chemical resistant gloves. Where contact may occur, wear safety glasses with shields. Where concentrations in air may exceed the limits given in this Section and engineering, work practice or other means of exposure reduction are not adequate, NIOSH/MSHA approved respirators may be necessary to prevent overexposure by inhalation. Natural rubber, butyl rubber and vinyl are not suitable protective materials, neoprene is recommended.

Workplace Exposure Guidelines

Rhino Linings Recommends the Following Occupational Exposure Limits: A TWA of 5 mg/m³ for alkyl phthalates (C6-C12).

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable.

Conditions to Avoid: Not applicable.

Hazardous Polymerization: Will not occur.

Conditions to Avoid (Hazardous Polymerization): Not applicable.

Materials and Conditions to Avoid (Incompatibility): Oxidizing agents.

Hazardous Decomposition Products: None.

SECTION 11 – REGULATORY INFORMATION

TSCA: This product is listed on the TSCA Inventory as a UVCB (Unknown, Variable Composition or Biological) Chemical at CAS Registry Number 68515-48-0.

CERCLA: If this product is accidentally spilled, it is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). We recommend you contact local authorities to determine if there may be other local reporting requirements.

SARA TITLE III: Under the provisions of Title III, Section 311/312 of the Superfund Amendments and Reauthorization Act, this product is classified into the following hazards categories: Not hazardous.

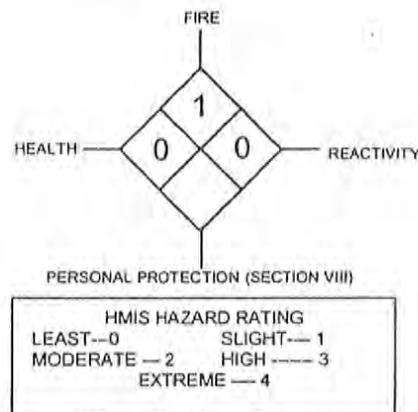
Department of Transportation (DOT): This product is not DOT regulated.

SECTION 12 - DISCLAIMER

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INFORMATION PHONE: 858-450-0441
EMERGENCY CONTACT: (CHEMTREC): 800-424-9300
DATE: April 20, 2001
SUPERSEDES: March 21, 1998


SECTION 2 - HAZARDOUS INGREDIENTS

This product is not hazardous as defined in 29 CFR 1910.1200

SECTION 3 - PHYSICAL DATA

<p> Appearance and Odor: Clear liquid, mild odor. Boiling Point: Greater than 482° F Vapor Pressure, mmHg: < 0.001 @ 68° F, 1 @ 392° F Specific Gravity: 0.97 @ 68° F Specific Gravity of Vapor (1 ATM (Air = 1)): Less than 0.1 </p>	<p> Viscosity of Liquid (cSt @ °F): 102 @ 68° F. Density: 8.1 lbs/gal @ 68° F Solubility in Water (Weight % @ °F): Insoluble. Freezing/Melting Point: - 54° F Pour point. </p>
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SECTION 4 - HAZARD SUMMARY
POTENTIAL HEALTH EFFECTS:

Eye Contact: Slightly irritating but does not injure eye tissue.
Skin Contact: Low order of toxicity. Frequent or prolonged contact may irritate skin.
Inhalation: Negligible hazard at ambient temperature (- 18° C to 38° C, 0° F to 100° F).
Ingestion: Minimal toxicity.

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Inhalation: Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.
Ingestion: First aid is normally not required.

SECTION 6 - FIRE FIGHTING MEASURES

Flashpoint: 415° F **Method:** PMCC
Flammable Limits: Not available.
Autoignition Temperature: > 500° F
General Hazards: Low hazard, liquid can burn upon heating to temperatures at or above the flashpoint. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition: they may explode and cause injury or death. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.
Fire Fighting: Use water spray to cool fire exposed surfaces and to protect personnel. Isolate "fuel" supply from fire. Use foam, dry chemical, or water spray to extinguish fire. Avoid spraying water directly into storage containers due to danger of boilover.
Decomposition Products Under Fire Conditions: Not unusual.

SECTION 7 – ACCIDENTAL RELEASE MEASURES

Land Spill: Eliminate sources of ignition. Prevent additional discharge of material, if possible to do so without hazard. For small spills implement cleanup procedures; for large spills implement cleanup procedures and, if in public area, keep public away and advise authorities. Also, if this product is subject to CERCLA reporting (see Section 11 REGULATORY INFORMATION) notify The National Response Center. Prevent liquid from entering sewers, watercourses, or low areas. Contain spilled liquid with sand or earth. Recover by pumping or with a suitable absorbent. If liquid is too viscous for pumping, scrape up. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

Water Spill: Remove from surface by skimming or with suitable absorbents. If allowed by local authorities and environmental agencies, sinking and/or suitable dispersants may be used in non-confined waters. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

SECTION 8 – STORAGE AND HANDLING

Storage Temperature: Ambient.

Storage/Transport Pressure, mmHg: Atmospheric

Storage and Handling: Keep container closed. Handle and open containers with care. Store in a cool, well ventilated place away from incompatible materials. DO NOT handle or store near an open flame, heat or other sources of ignition. Protect material from direct sunlight. This material is not a static accumulator. Use proper bonding and/or grounding procedures. DO NOT pressurize, cut, heat, or weld containers. Empty product containers may contain product residue. DO NOT reuse empty containers without commercial cleaning or reconditioning.

SECTION 9 – EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Controls: The use of local exhaust ventilation is recommended to control process emissions near the source. Laboratory samples should be handled in a lab hood. Provide mechanical ventilation of confined spaces. See respiratory protection recommendations.

Personal Protection: For open systems where contact is likely, wear safety glasses with side shields, long sleeves, and chemical resistant gloves. Where contact may occur, wear safety glasses with shields. Where concentrations in air may exceed the limits given in this Section and engineering, work practice or other means of exposure reduction are not adequate. NIOSH/MSHA approved respirators may be necessary to prevent overexposure by inhalation. Natural rubber, butyl rubber and vinyl are not suitable protective materials, neoprene is recommended.

Workplace Exposure Guidelines

Rhino Linings Recommends the Following Occupational Exposure Limits: A TWA of 5 mg/m³ for alkyl phthalates (C6-C12).

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable.

Conditions to Avoid: Not applicable.

Hazardous Polymerization: Will not occur.

Conditions to Avoid (Hazardous Polymerization): Not applicable.

Materials and Conditions to Avoid (Incompatibility): Oxidizing agents.

Hazardous Decomposition Products: None.

SECTION 11 – REGULATORY INFORMATION

TSCA: This product is listed on the TSCA Inventory as a UVCB (Unknown, Variable Composition or Biological) Chemical at CAS Registry Number 68515-48-0.

CERCLA: If this product is accidentally spilled, it is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). We recommend you contact local authorities to determine if there may be other local reporting requirements.

SARA TITLE III: Under the provisions of Title III, Section 311/312 of the Superfund Amendments and Reauthorization Act, this product is classified into the following hazards categories: Not hazardous.

Department of Transportation (DOT): This product is not DOT regulated.

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SECTION 1 - MANUFACTURER'S IDENTIFICATION

Rhino Linings USA, Inc.
9151 Rehco Road
San Diego, CA 92121
Phone: (858) 450-0441
Fax: (858) 450-6881
Emergency: (800) 424-9300

Date: November 25, 1996
Supersedes: May 21, 1992
Product Name: N-Methyl Pyrrolidone (NMP)
Part No.: 50020

SECTION 2 - HAZARDOUS INGREDIENTS

Ingredient	CAS #	AMOUNT (WT.)
N-Methyl-Pyrrolidone (PEL/TLV Not Established)	872-50-4	> 99.8%
Water (PEL/TLV Not Established)	7732-18-5	< 0.1%

SECTION 3 - PHYSICAL DATA

Color: Clear
Form/Appearance: Liquid
Odor: Amine
Odor Intensity: Mild
Specific Gravity: Not available
Bulk Density: 1.028 G/CC
pH: 7.7 - 8 SU

pH Method: 100 G/L H₂O
Boiling Point: 395°F (202°C)
Freezing Point: 13°F (-25°C)
Decomposition Temperature: Not available
Solubility in Water Description: Complete
Vapor Pressure: <1 millibars @ 68°F (20°C)
Vapor Density (Air=1): 3.4

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: 196°F (91°C)
Method Used: ASTM D9373
Autoignition Temperature : 464-493°F (240-256°C)
Method Used: ASTM E 659
Flammable Limits: Lower: 1.3% Upper: 9.5%

Extinguishing Media: Use water fog, foam, CO₂ or dry chemical extinguishing media.
Fire Fighting Procedures: Firefighters should be equipped with self-contained breathing apparatus and turn out gear.
Unusual Hazards: Low when exposed to heat or flames. It can react with oxidizing material.

SECTION 5 - HEALTH EFFECTS

Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Toxicology Test Data:

Rat, 3 month oral toxicity, dietary - @ 800-5000 PPM in diet
Body and organ weights, urine affected.
Dog, 90-Day Oral Toxicity - @ 25-250 MG/KG/Day
No compound related adverse effects.
Rat, Oral 2-Gen Reproduction Study-NOAEL:160 MG/KG/Day
Reduced fertility & pup survival @ 500.
Rat, Inhalation Development/Repro Test-10,50,116 PPM
No repro effects; Smaller pups @ 116 ppm.

Screening test for oral toxicity-
Moderate to Low Toxicity.
Screening test for inhalation toxicity
Sat vapor not lethal to 5 species tested.
Rat, 28 day oral study-250-2000 UL/KG
Testicular effects in highest dose group.
Rat, 6 week inhalation study (vapor)-SAT @ 25°C
Intense yellow urine, sl nasal discharge.

SECTION 5 - HEALTH EFFECTS (Continued)

Rat, 2 week (10 dose) inhalation study-6/HR/DAY @ 1 MG/L
No significant difference from control.

Rat, 2 week (10 dose) inhalation study-6/HR/DAY @ 1 MG/L
No deaths occurred.

Rat, 2 week (10 dose) inhalation study-6/HR/DAY @ 1 MG/L
No deaths occurred.

Rat, 2 week (10 dose) inhalation study-6/HR/DAY @ 1 MG/L
No deaths occurred.

Rat, 2 week (10 dose) inhalation study-6/HR/DAY @ 1 MG/L
80% deaths with coarse particle aerosol.

Rat, oral LD50-3.5 ML/KG

Moderately Toxic.

Mouse, Acute Intraperitoneal LD50-1.9 ML/KG

Moderately Toxic.

Rabbit, Primary Skin Irritation-Markedly Irritating

Tox Test Rating Not Found.

Rabbit, Eye Irritation-Markedly Irritating

Tox Test Rating Not Found.

Mouse, Subcutaneous LD50-20% SOLN;3 G/KG

Moderately Toxic.

Rat dermal teratology range finding test-NOEL: 0.5 G/KG

Maternal toxicity and embryoletality.

Rat, Dermal Developmental Toxicity Study-NOEL:237 MG/KG

Maternal toxicity and embryoletality.

Ames Salmonella Assay (Direct Plate)-NEGATIVE

No increase in mutation frequency.

Ames Salmonella Assay (Plate with S-9)-NEGATIVE

No increase in mutation frequency.

Ames Salmonella Assay (Direct Plate)-NEGATIVE

No increase in mutation frequency.

Ames Salmonella Assay (Plate with S-9)-NEGATIVE

No increase in mutation frequency.

Ames Salmonella Assay (Direct Plate)-NEGATIVE

No increase in mutation frequency.

Ames Salmonella Assay (Plate with S-9)-NEGATIVE

No increase in mutation frequency.

CHO/HGPRT Forward Mutation Assay-

No increase in mutation frequency.

CHO/HGPRT Forward Mutation (With S-9)-

No increase in mutation frequency.

Mouse Lymphoma Forward Mutation Assay-

No increase in mutation frequency.

Mouse Lymphoma Assay (with S-9)-

No increase in mutation frequency.

Rat Hepatocyte Unscheduled DNA Synthesis-NEGATIVE

No increase in nuclear labelling.

Rat Hepatocyte Unscheduled DNA Synthesis-NEGATIVE

No increase in nuclear labelling.

Chinese Hamster, cytogenetic study-6 WKS @ 800 PPM

No clastogenic effects reported.

Mouse Micronucleus Test: Bone Marrow-

No clastogenic effects reported.

Mouse, 3 month oral toxicity, dietary-@ 400-2500

Lower body wt. (males), liver wt. increase.

Rabbit, 28 day dermal toxicity study-0.4-1.6 ML/KG/DAY

Irritation at site of application.

Rat, 28 day aerosol inhalation study-NOEL:0.5 MG/L

Excessive mortality at 1 MG/L

Rat, Inhalation Oncogenicity Study- @ 0.04 & 0.4 MG/L

No evidence of carcinogenicity.

Rat, Inhalation Developmental Toxicity- @0.1 & 0.36 MG/L

No maternal or developmental toxicity.

Rat, 2 week (10 dose) inhalation study-

No compound Related Adverse Effects.

Mouse, IP Dominant Lethal Assay- @380 UL/KG

No increase in mutation frequency.

Rat, Oral Developmental Toxicity Study- @323 & 970 UL/KG

Embryoletality, malformations @ 790 ul/kg.

Mouse, IP developmental toxicity- @ 1525-610 UL/KG

Embryotoxic and teratogenic at high dose.

Mouse, Oral Developmental Toxicity Study- @ 2565, 1026 UL/

KG

Embryotoxic and teratogenic at high dose.

Rat, Inhalation Developmental Toxicity- NOM CONC 800

Neither embryotoxic nor teratogenic.

Rat, Inhalation Developmental Toxicity- NOM CONC 800

Neither embryotoxic nor teratogenic.

Rat, 3 month oral toxicity, dietary- @ 800-5000 PPM

Urinary parameters and female wt. effects.

Rat, Inhalation Safety Screen, 8 hr.- SLIGHTLY IRRITATING

No deaths after 8 hour exposure.

Rat, 4 hr. Inhalation LC50- >5.1 MG/L

Slightly Toxic.

Rabbit, Dermal LD50- <8000 MG/KG

Practically Nontoxic.

Rat, 90 day inhalation with recovery- 0, 0.5, 1, 3 MG/L

Testicular effects in highest dose group.

Rat, 28-Day Feeding Study- NOAEL: 6000 PPM IN DIET

Decreased body weights at high doses.

Mouse, 28 day dietary study-NOAEL: 2500 PPM IN DIET

Target organ: kidney

Rat, Oral LD50- 3.6 G/KG

Slightly Toxic.

Rat, Inhalation Risk Test; Sat. Vapor/20C-

No deaths, 8 hours, inhalation.

get immediate medical attention.

Skin: Wash affected areas with soap and water. Remove and launder contaminated clothing before reuse. If irritation develops, get medical attention.

Eyes: Immediately rinse eyes with running water for 15 minutes. If irritation develops, get medical attention.

Ingestion: If swallowed, dilute with water and immediately induce vomiting. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get immediate medical attention.

Notes to Physicians: Not Applicable.

Aggravated Medical Conditions: No data is available which addresses medical conditions that are generally recognized as being aggravated by exposure to this product. Please refer to Section 5 (Effects of Overexposure) for effects observed in animals.

Special Precautions: Not Applicable.

Acute Overexposure Effects: Contact with the liquid results in moderate eye irritation and may cause temporary corneal clouding. Skin contact results in mild irritation. Prolonged skin contact may result in redness and dermatitis. Inhalation of the vapors of NMP may result in respiratory irritation. Accidental ingestion of the liquid cause gastric disturbances. Nausea and vomiting may result.

Chronic Overexposure Effects: In animal studies in rats and mice, N-Methylpyrrolidone (NMP) was embryotoxic by the oral and intraperitoneal routes at very high dose levels which were close to the LD(50). In a dermal exposure study with rats, NMP was only embryotoxic at the high dose level; this effect was attributed to maternal toxicity. Several inhalation studies in rats did not reveal any indication of maternal toxicity or embryotoxicity. In a 2 year inhalation study, NMP did not cause any life-shortening carcinogenic effects in rats at 0.04 or 0.4 mg/l (10 and 100 respectively).

First Aid Procedures:

Inhalation: Move to fresh air. Aid in breathing, if necessary, and

SECTION 6 - REACTIVITY DATA**Stability Data:** Stable**Incompatibility:** Oxidizing reagents and strong acids.**Conditions/Hazards to Avoid:** See Reactivity-Incompatibility section.**Hazardous Decomposition/Polymerization:** Hazardous decomposition products: CO, CO₂ and NO_x. Polymerization: Does not occur.**Corrosive Properties:** Not corrosive.**Oxidizer Properties:** Not an oxidizer.**SECTION 7 - PERSONAL PROTECTION****Clothing:** Manufacturer recommends the use of butyl rubber or FEP teflon gloves, coveralls, apron, and boots as necessary to prevent skin contact.**Eyes:** Chemical goggles; also wear a face shield if splashing hazard exists.**Respiration:** If vapors or mists are generated, wear a NIOSH/MSHA approved organic vapor/mist respirator or an air-supplied respirator as appropriate.**Ventilation:** Use local exhaust to control to recommended P.E.L.**Explosion Proofing:** See Section 4-Fire and Explosion Hazard Data.**Other Personal Protection Data:** Eyewash fountains and safety showers must be easily accessible. Shower after handling**SECTION 8 - SPILL OR LEAK / ENVIRONMENTAL****General:** Spills should be contained, solidified and placed in suitable containers for disposal in a licensed facility. This material is not regulated by RCRA or CERCLA ("Superfund"). Wear appropriate respiratory protection and protective clothing and provide adequate ventilation during clean-up.**Waste Disposal:** Incinerate or bury in a licensed facility. Do not discharge into water ways or sewer systems without proper authority.**Container Disposal:** Dispose of in a licensed facility. Recommend crushing or other means to prevent unauthorized reuse.**Environmental Toxicity Test Data:**Elimination (Method Not Specified) - >90%
Readily Biodegradable.Golden Orfe, static 96 hr. LC50 - 4000 MG/L
Insignificant Hazard.Daphnia magna, 24 hr. LC50 - >1000 MG/L
Insignificant Hazard.Acute Algal Toxicity, 72 hr. EC/LC50 - >500 MG/L
Practically Nontoxic.Toxicity to Bacteria - > 9000 MG/L
Insignificant Hazard.Biological Oxygen Demand, 5 day - 1,100 MG/L
TEST RATING NOT FOUND.Chemical Oxygen Demand - 1,600 MG/L
TEST RATING NOT FOUND.**SECTION 9 - STORAGE AND HANDLING****General:** Avoid exposure to moisture; this product is hygroscopic.**Other Storage and Handling Data:** Consult other sections of this MSDS for information on reactivity and flammability.**SECTION 10 - REGULATORY INFORMATION****TSCA Inventory Status:** Listed on Inventory: YES**SARA - 313 Listed Chemicals:****Name:** N-Methylpyrrolidone **CAS#:** 872-50-4 **Amount:** 99.8%**RCRA Hazard Waste No.:****CERCLA:** NO **Reportable Quantity:** (If Yes)

NMP is subject to the reporting requirements of SARA Title III, Section 313 and 40CFR372.

State Regulatory Information: (By Component)**NJ/PA/MA RTK:** No**CAS#:** 872-50-4**Name:** N-Methylpyrrolidone**State Regulatory Information: (By Component)****NJ/PA/MA RTK:** No**CAS#:** 7732-18-5**Name:** Water

Hazard Ratings:	Health	Fire	Reactivity	Special
HMIS	2	1	0	NA
NFPA	2	1	0	NA

This product is hazardous or contains components which are hazardous according to the OSHA Hazard Communication Standard.

SECTION 11 - DISCLAIMER

Disclaimer : The data set forth in this sheet are based on information provided by the suppliers of the raw materials and chemicals in the manufacture of the aforementioned product. Rhino Linings USA, Inc. makes no warranty with respect to the accuracy of the information provided by their suppliers, and disclaims all liability of reliance thereof.

ITEM: 6KP53 - CONCRETE PATCH KIT

MSDS: A7513

ORDER: 0002298699

DROP LOCATION: P1-026

MATERIAL SAFETY DATA SHEET (MSDS)

This MSDS should be attached or kept with the respective product with which it is associated.

MATERIAL SAFETY DATA SHEET - A7513

United Grainger Items

MATERIAL SAFETY DATA SHEET

24 HOUR ASSISTANCE: 1-847-367-7700

RUST-OLEUM CORP.

WWW.RUSTOLEUM.COM

SECTION 1 - CHEMICAL PRODUCT/COMPANY INFORMATION

PRODUCT NAME: TURBOKRETE PART C

IDENTIFICATION NUMBER: 5494C

PRODUCT USE/CLASS: AGGREGATE/TURBOKRETE

SUPPLIER: RUST-OLEUM CORPORATION 11 HAWTHORN PARKWAY VERNON HILLS, IL 60061 USA

MANUFACTURER: RUST-OLEUM CORPORATION 11 HAWTHORN PARKWAY VERNON HILLS, IL 60061 USA

PREPARER: DEPARTMENT, REGULATORY

REVISION DATE: 09/17/2004

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Table with 5 columns: CHEMICAL NAME, CAS NUMBER, WEIGHT % LESS THAN, ACGIH TLV-TWA, ACGIH TLV-STEL. Rows include MICROCRYSTALLINE SILICA and CRYSTALLINE SILICA.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: HARMFUL IF INHALED. MAY CAUSE DELAYED LUNG DAMAGE.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: IRRITATING, AND MAY INJURE EYE TISSUE IF NOT REMOVED PROMPTLY.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: LOW HAZARD FOR USUAL INDUSTRIAL HANDLING OR COMMERCIAL HANDLING BY TRAINED PERSONNEL.

EFFECTS OF OVEREXPOSURE - INHALATION: HARMFUL IF INHALED.

EFFECTS OF OVEREXPOSURE - INGESTION: EXPECTED TO BE A LOW INGESTION HAZARD.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: CONTAINS CRYSTALLINE SILICA AS SILICON DIOXIDE. EXCESSIVE INHALATION OF RESPIRABLE CRYSTALLINE SILICA DUST MAY CAUSE LUNG DISEASE, SILICOSIS OR LUNG CANCER.

PRIMARY ROUTE(S) OF ENTRY: INHALATION

SECTION 4 - FIRST AID MEASURES

FIRST AID - EYE CONTACT: HOLD EYELIDS APART AND FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION.

FIRST AID - SKIN CONTACT: WASH WITH SOAP AND WATER. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS OR PERSISTS.

FIRST AID - INHALATION: REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. GET IMMEDIATE MEDICAL ATTENTION.

FIRST AID - INGESTION: SWALLOWING LESS THAN AN OUNCE WILL NOT CAUSE SIGNIFICANT HARM. FOR LARGER AMOUNTS, DO NOT INDUCE VOMITING, BUT GIVE ONE OR TWO GLASSES OF WATER TO DRINK AND GET MEDICAL ATTENTION.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: NA F (SETAFLASH)

LOWER EXPLOSIVE LIMIT: N.A. % UPPER EXPLOSIVE LIMIT: N.A. %

EXTINGUISHING MEDIA: DRY CHEMICAL, FOAM, WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS: NO INFORMATION.

SPECIAL FIREFIGHTING PROCEDURES: IF WATER IS USED, FOG NOZZLES ARE PREFERRED.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: NO INFORMATION.

SECTION 7 - HANDLING AND STORAGE

HANDLING: USE WITH ADEQUATE VENTILATION.

STORAGE: KEEP CONTAINER CLOSED WHEN NOT IN USE.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: PROVIDE GENERAL DILUTION OF LOCAL EXHAUST VENTILATION IN VOLUME AND PATTERN TO KEEP TLV OF HAZARDOUS INGREDIENTS BELOW ACCEPTABLE LIMITS.

RESPIRATORY PROTECTION: A RESPIRATORY PROTECTION PROGRAM THAT MEETS OSHA 1910.134 AND ANSI Z88.2 REQUIREMENTS MUST BE FOLLOWED WHENEVER WORKPLACE CONDITIONS WARRANT A RESPIRATOR'S USE.

SKIN PROTECTION: USE GLOVES TO PREVENT PROLONGED SKIN CONTACT.

EYE PROTECTION: NO INFORMATION.

OTHER PROTECTIVE EQUIPMENT: REFER TO SAFETY SUPERVISOR OR INDUSTRIAL HYGIENIST FOR FURTHER INFORMATION REGARDING PERSONAL PROTECTIVE EQUIPMENT AND ITS APPLICATION.

HYGIENIC PRACTICES: WASH THOROUGHLY WITH SOAP AND WATER BEFORE EATING, DRINKING OR SMOKING.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE: N.A. - F

VAPOR DENSITY: N.A.

ODOR: N.A.

ODOR THRESHOLD: ND

APPEARANCE: GRANULAR POWDER

EVAPORATION RATE: SLOWER THAN ETHER

SOLUBILITY IN H2O: SLIGHT

FREEZE POINT: ND

SPECIFIC GRAVITY: 2.643

VAPOR PRESSURE: ND

PH: NE

PHYSICAL STATE: SOLID

(SEE SECTION 16 FOR ABBREVIATION LEGEND)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: FLAMMABLE HYDROGEN GAS WILL EVOLVE WHEN PRODUCT COMES IN CONTACT WITH WATER OR DAMP AIR. HEAT WILL BE GENERATED. THE AMOUNT OF HEAT GENERATED WILL DEPEND UPON THE VOLUME OF MATERIAL IN CONTACT.

INCOMPATIBILITY: NOT APPLICABLE FOR THIS PRODUCT.

HAZARDOUS DECOMPOSITION: MAY PRODUCE HAZARDOUS FUMES WHEN HEATED TO DECOMPOSITION AS IN WELDING. FUMES MAY CONTAIN: CARBON MONOXIDE, CARBON DIOXIDE, CHLORINE, HYDROGEN CHLORIDE AND POSSIBLE CYANIDE AND MDI.

HAZARDOUS POLYMERIZATION: NO INFORMATION.

STABILITY: NO INFORMATION.

SECTION 11 - TOXICOLOGICAL INFORMATION

PRODUCT LD50: ND

PRODUCT LC50: ND

CHEMICAL NAME LD50 LC50

MICROCRYSTALLINE SILICA ND ND

MICROCRYSTALLINE SILICA N.D. N.D.

SECTION 12 - ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: PRODUCT IS A MIXTURE OF LISTED COMPONENTS.

SECTION 13 - DISPOSAL INFORMATION

DISPOSAL INFORMATION:
DISPOSE OF MATERIAL IN ACCORDANCE TO LOCAL, STATE AND FEDERAL REGULATIONS
AND ORDINANCES. DO NOT ALLOW TO ENTER STORM DRAINS OR SEWER SYSTEMS.

SECTION 14 - TRANSPORTATION INFORMATION

PROPER SHIPPING NAME:

DOT TECHNICAL NAME:

DOT HAZARD CLASS:

DOT UN/NA NUMBER:

PACKING GROUP:

HAZARD SUBCLASS:

RESP. GUIDE PAGE:

SECTION 15 - REGULATORY INFORMATION

CERCLA - SARA HAZARD CATEGORY:
THIS PRODUCT HAS BEEN REVIEWED ACCORDING TO THE EPA 'HAZARD CATEGORIES'
PROMULGATED UNDER SECTIONS 311 AND 312 OF THE SUPERFUND AMENDMENT AND
REAUTHORIZATION ACT OF 1986 (SARA TITLE III) AND IS CONSIDERED, UNDER
APPLICABLE DEFINITIONS, TO MEET THE FOLLOWING CATEGORIES:
CHRONIC HEALTH HAZARD

SARA SECTION 313:
LISTED BELOW ARE THE SUBSTANCES (IF ANY) CONTAINED IN THIS PRODUCT THAT
ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF
THE SUPERFUND AMENDMENT AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART
372:

TOXIC SUBSTANCES CONTROL ACT:
LISTED BELOW ARE THE SUBSTANCES (IF ANY) CONTAINED IN THIS PRODUCT THAT ARE
SUBJECT TO THE REPORTING REQUIREMENTS OF TSCA 12(B) IF EXPORTED FROM THE
UNITED STATES:

U.S. STATE REGULATIONS: AS FOLLOWS -

NEW JERSEY RIGHT-TO-KNOW:
THE FOLLOWING MATERIALS ARE NON-HAZARDOUS, BUT ARE AMONG THE TOP FIVE
COMPONENTS IN THIS PRODUCT.

CHEMICAL NAME	CAS NUMBER
GLASS BEADS	65997-17-3

PENNSYLVANIA RIGHT-TO-KNOW:
THE FOLLOWING NON-HAZARDOUS INGREDIENTS ARE PRESENT IN THE PRODUCT AT
GREATER THAN 3%.

CHEMICAL NAME	CAS NUMBER
GLASS BEADS	65997-17-3

CALIFORNIA PROPOSITION 65:
WARNING!
THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN BY THE STATE OF CALIFORNIA TO
CAUSE CANCER.

THIS PRODUCT CONTAINS NO KNOWN CHEMICALS KNOWN BY THE STATE OF CALIFORNIA TO
CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM

INTERNATIONAL REGULATIONS: AS FOLLOWS -

CANADIAN WHMIS:
THIS MSDS HAS BEEN PREPARED IN COMPLIANCE WITH CONTROLLED PRODUCT
REGULATIONS EXCEPT FOR THE USE OF THE 16 HEADINGS.

CANADIAN WHMIS CLASS:

SECTION 16 - OTHER INFORMATION

HMIS RATINGS:
HEALTH: 1*
FLAMMABILITY: 0
REACTIVITY: 0
PERSONAL PROTECTION: X

VOLATILE ORGANIC COMPOUNDS, G/L:

REASON FOR REVISION: REGULATORY UPDATE

LEGEND:
N.A. - NOT APPLICABLE
N.E. - NOT ESTABLISHED
N.D. - NOT DETERMINED

THE INFORMATION CONTAINED ON THIS MSDS HAS BEEN CHECKED AND SHOULD BE
ACCURATE. HOWEVER, IT IS THE RESPONSIBILITY OF THE USER TO COMPLY WITH ALL
FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.

MSDS - Material Safety Data Sheet

Product Name: DOT HEAVY DUTY BRAKE FLUID

MSDS No.: M4432

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY
Address: P.O. BOX 159, 600 RADIATOR ROAD
City, ST Zip: INDIAN TRAIL, NC 28079
Emergency Contact: Rocky Mountain Poison Control Center
Emergency Telephone Number: 303-623-5716
Contact: Robert Geer
Information Telephone Number: 704-688-3430



1	Health
1	Flammability
0	Reactivity
C	Pers. Protection

Last Update: 06/05/2003

Chemical State: Liquid Gas Solid
Chemical Type: Pure Mixture

II. Ingredients:

Trade Secret

CAS No.	Chemical Name	% Range	EHS		IARC		SARA 313	OSHA PEL	ACGIH TLV	Other Limits
			NTP	SUB Z						
112345	2-Butoxyethoxy-2-ethanol	<=10.0					X	N/E	N/E	
111-46-6	Diethylene Glycol	<=5.0						N/E	N/E	50 ppm
111-77-3	Diethylene Glycol Monomethyl Ether	<=4.0						N/E	N/E	
6881-94-3	Diethylene glycol monopropyl ether	<=3.0						N/E	N/E	
25322-68-3	Poly(ethylene oxide)	>=5.0 <=30.0						N/E	N/E	
9004-77-7	Polyethylene glycol monobutyl ether	<=25.0						N/E	N/E	
9004-74-4	Polyethylene glycol monomethyl ether	<=25.0						N/E	N/E	
112276	Triethylene glycol	<=10.00						N/E	N/E	100 mg/
143226	Triethylene glycol monobutyl ether	<=35.0					X	N/E	N/E	
112-50-5	Triethylene glycol monoethyl ether	<=50.0						N/E	N/E	
112-35-6	Triethylene glycol monomethyl ether	<=40.0					X	N/E	N/E	

III. Hazardous Identification:

Hazard Category:

Acute Chronic Fire Pressure Reactive

Hazardous Identification Information:

Highly toxic and may be fatal if swallowed. May cause CNS depression. Eye and Skin Irritant.

IV. First Aid Measures:

Route(s) of Entry:

Absorption, Inhalation, and Ingestion.

MSDS - Material Safety Data Sheet

Product Name: DOT HEAVY DUTY BRAKE FLUID

MSDS No.: M4432

Health Hazards (Acute and Chronic):

Exposure to high concentrations of mist generated at room temperature may cause lung injury and liver dysfunction. Skin contact may cause sensitization and allergic skin reaction. Components of this formulation have caused slight embryofetal toxicity (delayed development), but no increase in birth defects in laboratory animals.

Signs and Symptoms:

EYE CONTACT: Causes severe irritation, experienced as discomfort or pain, excess blinking and tear production, marked excess redness and swelling of the conjunctiva.

SKIN CONTACT: Prolonged or repeated contact may cause discomfort and local redness. Prolonged or repeated contact may cause defatting and drying of the skin.

INHALATION: Short-term health effects are not expected from vapor generated at ambient temperature.

INGESTION: Slightly toxic. May cause abdominal discomfort, nausea, and vomiting.

Medical Conditions Generally Aggravated by Exposure:

Skin contact may aggravate an existing dermatitis.

Emergency and First Aid Procedures:

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.

Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing before reuse.

Inhalation: Remove to fresh air. If breathing becomes difficult give oxygen and get prompt medical attention. If breathing stops, give artificial respiration and get prompt medical attention.

Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately.

Aspiration of vomitus into the lungs can cause pneumonitis, which can be fatal.

Other Health Warnings:

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

V. Fire Fighting Measures:

Flash Point: 230°F

Lower Explosive Limit: ND

Upper Explosive Limit: ND

F.P. Method: TCC

Fire Extinguishing Media: Water Fog, Foam, Carbon Dioxide, Dry Chemical

Special Fire Fighting Procedures:

Wear self-contained positive pressure breathing apparatus and protective clothes. Cool containers with a water fog. Do not use forced water stream or direct foam as this could cause the fire to spread.

Unusual Fire and Explosion:

Use protective equipment and clothing. During a fire, oxides of nitrogen may be produced.

VI. Accidental Release Measures:

Steps to be Taken in Case Material is Released or Spilled:

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc). Place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material. Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred.

MSDS - Material Safety Data Sheet

Product Name: DOT HEAVY DUTY BRAKE FLUID

MSDS No.: M4432

VII. Handling and Storage:

Precautions to be Taken:

Avoid contact with eyes, skin, and clothing. Avoid repeated breathing of mist. Keep containers closed. Use with adequate ventilation. Wash thoroughly after handling.

Other Precautions:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye.
KEEP AWAY FROM CHILDREN AND ANIMALS!

VIII. Exposure Controls/Personal Protection:

Ventilation Requirements:

General (mechanical) room ventilation is expected to be satisfactory. Avoid breathing mist.

As Ethylene Glycol Vapors ACGIH -TLV recommends a ceiling level of 39.4 ppm (v)
OSHA - PEL recommends a ceiling level of 50 ppm (v)

Personal Protective Equipment:

Safety glasses and goggles for bulk handling. Use PVC coated gloves. Other protective equipment: eye bath and shower.

IX. Physical and Chemical Properties:

Boiling Point: >450°F

Melting Point: NA

Evaporation Rate (Butyl Acetate = 1): <0.01

Vapor Pressure (mm Hg.): <0.1

Specific Gravity (H₂O = 1): 1.03900

Vapor Density (AIR = 1): 6

Solubility In Water: Soluble

Appearance and Odor: Transparent yellow to amber with mild ether like odor

Other Information: N/D

X. Stability and Reactivity:

Stability:

Stable

MSDS - Material Safety Data Sheet

Product Name: DOT HEAVY DUTY BRAKE FLUID

MSDS No.: M4432

Incompatibility (Materials to Avoid):

Strong alkalis. High temperatures in the presence of strong bases, acids, strong oxidizing agents. Do not mix this product with nitrites or other nitrosating agent because nitrosamines may be formed.

Decomposition/By Products:

Carbon monoxide and/or carbon dioxide. Oxides of nitrogen.

Hazardous Polymerization:

Will not occur.

XI. Toxicological Information:

Contains one or more amines which may react with nitrites to form nitrosamines.

XII. Ecological Information:

No data available

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in a recycling centers when empty. Before offering for recycling, empty the can or bottle by using the product according to the label. If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations

XIV. Transport Information:

U.S. Department of Transportation (DOT)
Non-Bulk: Not Regulated
Bulk: Not Regulated

International Information:

Vessel: IMDG Regulated: no
Air: ICAO Regulated: no

XV. Regulatory Information:

USA TSCA: All chemicals used are listed on the TSCA Inventory.

CERCLA: The following components of this product are specifically listed as hazardous substances in 40 CFR 302.4 and are present at levels which could require reporting:

Ethylene Glycol Monoethyl Ether (CAS# 110-80-5) <= 0.010%

SARA, SECTION 313 TITLE III: This product contains glycol ethers which are subject to reporting requirement.

WARNING: This product contains chemicals known to the State of California to cause cancer and/or birth defects or other reproductive harm.

STATE/LOCAL:

Pennsylvania Right-to-Know Chemicals:

Diethylene Glycol (111-46-6)

Triethylene Glycol (112-27-6)

Triethylene Glycol Monobutyl Ether (143-22-6)

New Jersey Right-to-Know Chemicals:

Triethylene Glycol (143-22-6)

MSDS - Material Safety Data Sheet

Product Name: DOT HEAVY DUTY BRAKE FLUID

MSDS No.: M4432

XVI. Other Information:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye.
KEEP AWAY FROM CHILDREN AND ANIMALS!

N/E: Not Established

N/D: Not Determined

N/A: Not Applicable

N/AV: Not Available

KEEP AWAY FROM CHILDREN AND ANIMALS. WEARING CONTACT LENSES IS INADVISABLE WHEN USING THIS PRODUCT.

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.



**SAFETY DATA SHEET
SECONDARY BATTERY
(FORM : EEC Directive 93/112)**

Date of issue : APRIL 2003
REF. MSDS-IBG-Bdx-EN

1. IDENTIFICATION

- 1.1. **PRODUCT** NICKEL CADMIUM BATTERY (Rechargeable & Alkaline & vented)
Trade name : SRX, SRM, SM, SPH, STH, STM, NCX, VO, and other plastics/steel cells.
IEC Designation : KH ; KM ; KL acc. To IEC 60623
Proper shipping name : BATTERIES, WET, FILLED WITH ALKALI electric storage.
Electrochemical System : Nickel Cadmium, alkaline electrolyte.

Electrode Positive	Nickel hydroxide and Cobalt hydroxide Nickel Plated
Electrode Négative	Cadmium Hydroxyde on Nickel plated substrade
Electrolyte	Potassium Hydroxide + water
Nominal voltage	1,2 V

1.2. **SUPPLIER**

- NAME :** SAFT S.A. (HEADQUARTER)
Address : 12 rue Sadi Carnot - 93170 BAGNOLET - France -
Phone/Fax : +33 (0) 1 49 93 19 18 /+33 (0) 1 49 93 19 50
Nom de l'usine : SAFT Bordeaux
Address : 111/113 Boulevard Alfred DANEY - 33074 BORDEAUX - France -
Phone/Fax : +33 (0) 5 57 10 64 00/ +33 (0) 5 57 10 66 70

1.3. **EMERGENCY CONTACT :** www.saftbatteries.com look for « contact ».

2. COMPOSITION (weight percentage of basic materials)

2.1. **MEDIUM SIZE SINGLE CELL WITH STEEL CONTAINER**

Métals%	Plastic %	Other %
Steel Fe 43-51	Polypropylene 1,1-1,6	Potassium hydroxide 5,4-5,8
Nickel Ni 5-10		Lithium Hydroxyde 0,5
Cadmium Cd 5-12		
Chromium Cr 2,3-2,6		Water 27-31
Cobalt < 0.3		

2.2. **MEDIUM SIZE SINGLE CELL WITH PLASTIC CONTAINER**

Métals %	Plastic %	Other %
Steel Fe 20	Polypropylène 8-11	Potassium Hydroxyde 5,5-6,2
Nickel Ni 5-10		Lithium Hydroxyde 0,5
Cadmium Cd 5-12		
		Water 28-35

3. HAZARDS

3.1. PHYSICAL

No risk if batteries are used for its intended purpose and according to valid directions for use.

If the directions for use are not followed as regards ventilation, oxygen and hydrogen gas, which may developed during over charging the batteries, can be collected in battery box or room. If the gas is ignited by an electric spark or open fire, a violent explosion may occur.

3.2. CHEMICAL

In normal use the only chemical risk is the caustic nature of the electrolyte. Precautions must be taken when emptying and filling the battery cells. The properties of the electrode materials are hazardous only if the materials are released by crushing the battery or if it is exposed to fire.

CLASSIFICATION OF DANGEROUS SUBSTANCES CONTAINED INTO THE PRODUCT.

SUBSTANCES				CLASSIFICATION			
Name	Chemical	EINECS Number	CAS Number	Letter	Identification of danger	Special risk (1)	Safety advice -2
Nickel hydroxide	Ni (OH) ₂	235-008-5	12054-48-7	Xn	Harmful	R20/22 R40, R43	S2, S22, S26
Cadmium hydroxide	Cd (OH) ₂	244-168-5	21041-95-2	Xn	Harmful	R20/21/22 R50/53	S2, S60, S61
Potassium hydroxide	KOH	215-181-3	1310-58-3	C Xi	Corrosive Irritant	R35, R22, R36/37	S ^{1/2} , S26, S36/37/39, S45
Lithium hydroxide	Li OH	215-183-4	1310-65-2	C	Not classified	Not classified	Not classified
Cobalt hydroxide	Co (OH) ₂	244-166-4	21041-93-0	C	Not classified	Not classified	Not classified Not classified
Chromium	Cr	231-157-5	774-47-3		Not classified	Not classified	Not classified

(1) Nature of special risk

- R20/22 Harmful by inhalation and if swallowed
- R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
- R22 Harmful if swallowed.
- R35 Causes severe burns.
- R36/37 Irritating to eyes and respiratory system.
- R40 Limited evidence of a carcinogenic effect.
- R43 May cause sensitization by skin contact.
- R50/53 Very Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

(2) Safety advice

- S_{1/2} Keep locked up and out of the reach of children.
- S2 Keep out of the reach of children
- S22 Do not breathe dust
- S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
- S36/37/39 Wear suitable protective clothing, gloves and eyes/face protection.
- S45 In case of accident or if you feel unwell, seek medical advice immediately.
- S60 Must be disposed of as hazardous waste.
- S61 Avoid release to the environment.

4. FIRST AID MEASURES

When handling electrolyte, precautions must be taken to avoid personal to get in direct contact with it. If this accidentally happens the following must be exercised :

- 4.1. Inhalation :
Fresh air. Rinse mouth and nose with water. Medical treatment.
- 4.2. Skin contact :
Rinse immediately with plenty of water. Medical treatment.
- 4.3. Eyes contact:
Important : Rinse immediately with plenty of water during at least 15-30 minutes.
- 4.4. Ingestion :
If the injured is fully conscious : plenty of drink ; preferable milk. Do not induce vomiting. Immediately hospital treatment.

5. FIRE-FIGHTING MEASURES

- 5.1. Extinguishing media
Suitable : Class D-Dry chemical, Sand
Not to be used : Water
- 5.2. Special exposure hazards
Cells can be overheated by an external source or by internal shorting and develop potassium hydroxide mist and/or hydrogen gas. In fire situations fumes containing Cadmium, Nickel and Iron may be evolved.
- 5.3. Special protective equipment
Use self-contained breathing apparatus and full fire-fighting protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Flush electrolyte spillage with plenty of water. Beware risk of slipping.

7. HANDLING AND STORAGE

Handle and store cells filled with electrolyte always with vents upwards.

Store in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

When emptying or filling cells with electrolyte, eye protection glasses and protection gloves must be used.

Under normal condition of use no special personnel protection is required.

9. PHYSICAL PROPERTIES

- 9.1. Appearance
Physical shape and colour as supplied.

- 9.2. Temperature range (ambient °C)

Cell type	Continuous	Occasional
Steel container	-40 +50	-50 +85
Plastic container	-40 +50	-50 +70

- 9.3. Specific energy : 13-22 Wh/kg

Note: WH : Nominal voltage x rated Ah as defined in IEC standard.
Kg : Average battery weight in kg.

- 9.4. Specific instant power : 53-106 W/kg

Note : $W = 0.5 \times \text{nominal voltage} \times I_p$ with I_p = current in Amperes delivered by a fully charged battery for half the nominal voltage at one second.

Kg = Average battery weight in kg.

- 9.5. Mechanical resistance

As defined in relevant IEC standard.

10. STABILITY AND REACTIVITY

10.1. Conditions to avoid

Temperatures over 85°C. short-circuit of electrode connections. Deformation of cells.

10.2. Material to avoid

Do not fill cells with lead/acid battery electrolyte.

10.3. Hazardous decomposition products

Nickel compounds, Cadmium compounds, Caustic liquid.

11. TOXICOLOGICAL INFORMATION

Nickel hydroxide LD₅₀/ oral / rat : 1600mg / kg*

Cadmium Hydroxyde No data available

Potassium Hydroxyde LD₅₀/ oral / rat : 365 mg / kg*

Lithium Hydroxyde No data available.

* (INRS data)

12. ECOLOGICAL INFORMATION

See item n° 3

13. DISPOSAL CONSIDERATIONS

13.1. Incineration

Never incinerate NiCd cells.

13.2. Landfill

Never dispose NiCd cells as landfill.

13.3. Recycling

NiCd cells must be recycled. Contact local Saft dealer for information. Saft has a recycling plant for all types of NiCd cells.

14. TRANSPORT INFORMATION

14.1. United Nations

UN N° : 2795

Customs Code : 85 07 30 98

14.2. International conventions

Air : IATA
Sea : IMDG
Land : ADR (road) or RID (rail) Batteries exempt acc to special paragraph n° 598.

UN N°	NAME	RAIL & ROAD (ADR)				SEA (IMDG)					AIR (IATA)			
		CL	Code	Packing group	Labelling	CL	risk	EmS	Packing group	Labelling	CL	Risk	Packing group	Labelling
2795	BATTERIES, WET, FILLED WITH ALKALI Electric storage	8	C 11	***	None	8	***	8-10	III	8	8	***	***	8

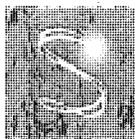
15. REGULATORY INFORMATION

According to item 14.2.

16. OTHER INFORMATIONS

None.

Disclaimer : This information has been compiled for sources considered to be dependable and is, to the best of our knowledge and belief, accurate and reliable as of the dated compiled. However, no representation, warranty (either expressed or implied) or guarantee is made to the accuracy, reliability or completeness of the information contained herein. This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. It is the user's responsibility to satisfy himself as to the suitability and completeness of this information for his own particular use. We do not accept liability for any loss or damage that may occur, whether direct, indirect, incidental or consequential, from the use of this information nor do we offer warranty against patent infringement. Additional information is available by calling the telephone number above designated for this purpose.



SAFT

Material Safety Data Sheet Nickel-Cadmium aircraft battery / cell

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Fax: +1 (229)-245-2890

SAFT BORDEAUX
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33074 BORDEAUX - France
Phone: +33 (0)5 57 10 64 00
Fax: 33 (0)5 57 10 65 70

SAFT BRAND INDUSTRIAL NICKEL CADMIUM STORAGE BATTERY
HMIS RATINGS 3 Health 1 Flammability 2 Reactivity

1. HEALTH HAZARD INFORMATION

Effects of Overexposure

Eye Effects: Contact with electrolyte solution inside battery causes very rapid, severe damage. Extremely corrosive to eye tissues. May result in permanent blindness.

Skin Effects: Contact with electrolyte solution inside battery may cause serious burns to skin tissues. Contact with nickel compounds may cause skin sensitization, resulting in chronic eczema or nickel itch.

Ingestion: Ingestion of electrolyte solution causes tissue damage to throat area and gastro/respiratory tract. Ingestion of cadmium and/or nickel compounds causes nausea and intestinal disorders.

Inhalation: Mists generated during activation procedures may cause varying degrees of irritation to the nasal mucous membranes and respiratory tract tissues varying from mild irritation of nasal mucous membranes to damage of lung tissues proper. Inhalation of cadmium compounds may cause dry throat, cough, headache, vomiting, chest pain, and/or chills. Excessive overexposure may result in pulmonary edema, breathing difficulty, and prostration.

Carcinogenicity: NIOSH recommends that nickel and cadmium be treated as occupational carcinogens.

2. EMERGENCY FIRST AID

Battery Electrolyte

Eye Contact: Flush with plenty of water for at least 20 minutes. Get immediate medical attention.

Skin Contact: Remove contaminated clothing and flush affected areas with plenty of water for at least 20 minutes.

Ingestion: Do not induce vomiting. Dilute by giving large volumes of water or milk. Get immediate medical attention. Do not give anything by mouth to an unconscious person.

Inhalation: Remove to fresh air. Give oxygen or artificial respiration if needed. Get immediate medical attention.

Nickel and Cadmium Compounds

Skin contact: Wash with cold water and soap for 15 minutes.

3. SPECIAL PROTECTION INFORMATION

Perform activation procedures in a well-ventilated area. Battery operating areas must be well ventilated for removal of potentially dangerous and harmful gases generated. Normal reactions inside the battery liberate explosive and flammable hydrogen gas.

Respiratory Protection: Use NIOSH approved mist respirator during activation and actual usage to maintain exposure levels below the TWA.

Eye Protection: Use splash goggles or face shield whenever handling a battery.

Hand Protection: If exposure to electrolyte solution or dried salts is likely, use any water-insoluble, non-permeable glove, i.e., synthetic rubber. DO NOT use leather or wool.

Other protective Equipment: Rubber boots, rubber apron or rainwear, or equivalent if exposure to electrolyte solution is likely.

4. REACTIVITY DATA

CAUTION: NEVER ACTIVATE OR TOP OFF WITH ACID.

Incompatibilities: Aluminum, zinc, tin and other active metals, acid, chlorinated and aromatic hydrocarbons, nitrocarbons, halocarbons. Trichloroethylene will react with electrolyte solution to form dichloroacetylene which is spontaneously combustible.

Hazardous Decomposition Products: Nickel compounds, cadmium compounds, and potassium hydroxide.

Note that normal reactions inside battery liberate explosive and flammable hydrogen gas. Do not seal battery from atmosphere. Hazardous Polymerization will not occur.

5. FIRE AND EXPLOSION HAZARDS

Extinguishing Media:

CO₂, sand

	Melting Point	Boiling Point
Cadmium	608°F / 320°C	1410°F / 766°C
Cadmium hydroxide	N/A	2838°F / 1559°C (sublimes)
Copper	19891°F / 1083°C	4653°F / 2567°C
Nickel	2645°F / 1452°C	4950°F / 2732°C
Nickel hydroxide	N/A	445°F / 229°C (Decomposes to NiO)
Case material : Polamide 11	370-374°F / 188-190°C	N/A (burns may release toxic NO ₂ fumes)



Material Safety Data Sheet Nickel-Cadmium aircraft battery / cell

5. FIRE AND EXPLOSION HAZARDS - continued

Special Fire Fighting Procedures

Use self-contained breathing apparatus to avoid breathing toxic fumes. Wear protective clothing and equipment to prevent potential body contact with electrolyte solution or mixture of water and electrolyte solution. Disconnect or cut all cables to and from battery – especially ground connection.

Fire and Explosion Hazards

Electrolyte solution is corrosive to all human tissues. It will react violently with many organic chemicals, especially nitrocarbons and chlorocarbons. Electrolyte solution reacts with zinc, aluminum, tin and other active materials releasing flammable hydrogen gas.

Cadmium fumes may be released when batteries are subjected to high temperatures. In case of fire, do not breath smoke and fumes!

6. INGREDIENTS

	CAS#	EINECS#	EXPOSURE LIMITS	QUANTITY
Cadmium (as Cadmium and Cadmium Hydroxide)	7440-43-9 21041-95-2	231-152-8 244-168-5	5.0 mcg/m ³ dust – OSHA 0.05 mg/m ³ ACGIH CEILING-Fume	8% - 16%
Nickel (as Nickel and Nickel Hydroxide)	7440-02-0 12054-48-7	231-111-4 235-008-5	1 mg/m ³ – OSHA	19% - 36%
Electrolyte solution (18-30% Potassium Hydroxide)	1310-58-3	215-181-3	2 mg/m ³ ACGIH CEILING-Air	13% - 19%
Cobalt (as Cobalt Hydroxide)	21041-93-0	244-166-4	0.1 mg/m ³ OSHA	≈ 1%
Copper	7440-50-8	231-159-6	1 mg/ m ³ dust - OSHA	9% - 11%
Polyamide 11			None Established - OSHA	11% - 13%
Steel			None Established - OSHA	22% - 34%

7. PHYSICAL PROPERTIES

Boiling Point:	Not Applicable	Melting Point:	Not applicable
Vapor Pressure:	2 mm Hg at 68°F / 20°C	Vapor Density:	Not applicable
Specific Gravity:	1.17 - 1.30 (electrolyte)	Evaporation Rate:	Not Determined
Solubility in water:	Electrolyte solution is completely soluble.	Remainder:	is insoluble

8. SPILL MANAGEMENT PROCEDURES

Electrolyte Solution Spills

Small (up to 19 liters / 5 gallons): Flush with water and neutralize with dilute citric acid.

Large: Contain material in suitable containers or holding area. DO NOT allow material to enter sewers, streams, or storm conduits.

Recover material with vacuum truck and dispose of properly.

Reportable Quantity: 453.6 kg / 1000 pounds. 40 CFR-117.13.

9. DISPOSAL INFORMATION

Nickel-Cadmium aircraft batteries are universal wastes under RCRA. They may be returned to SAFT Valdosta or local collecting points mentioned in Saft website (www.saftbatteries.com) for recycling.

These batteries are TCLP Toxic. These batteries and the electrolyte solution they contain are considered to be corrosives. If not recycled, they must be disposed of in accordance with all federal, state, and local hazardous waste regulations.

10. PRECAUTIONS AND COMMENTS

These cells and the batteries constructed from them may be highly charged and are capable of high energy discharge. Care should be taken to handle cells properly to avoid shorting or misuse that will result in a rapid, uncontrolled electrical, chemical, or heat energy release.

Do not transport activated batteries without vent caps in place.

When removing battery from service, visually inspect for leakage prior to handling. If leakage has occurred follow Spill Management Procedures.

Keep away from exposed flames, sparks, and other ignition sources.

11. EPCRA REPORTING REQUIREMENTS

Section 313 Supplier Notification – This product contains the following EPCRA Section 313 chemicals subject to the reporting requirements of Section 313 if the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372):

CAS #	EINECS#	Chemical Name	Percent by Weight
7440-43-9	231-152-8	Cadmium	8%-16%
7440-48-4	231-158-0	Cobalt	1%
7440-50-8	231-159-6	Copper	9%-11%
7440-02-0	231-111-4	Nickel	19%-36%

A copy of this MSDS may be required to be filed with your local emergency planning commission, state emergency response commission, and local fire department in accordance with sections of the Emergency Planning and Community right-To-Know Act.

12. TRANSPORTATION INFORMATION

Batteries being forwarded or being returned to Saft for repair should be shipped as Hazardous Material using the following description:
Batteries, Wet, Filled with Alkali, 8, UN2795, PG III.

Spent batteries being sent to Saft Valdosta or local collecting points for recycling should be shipped as Universal Waste using the following description:

Used Batteries, Wet, Filled with Alkali, 8, UN2795, PG III.



CYPRESS, TEXAS. 77219
 713 480 4397/FAX: 281 469 0147
 WWW.SEACOAT.COM

EFFECTIVE DATE: 1/11/2005

MATERIAL SAFETY DATA SHEET

No: 061102 -BP

SEA SPEED™ DTM V3

1. PRODUCT IDENTIFICATION

PRODUCT NAME: *SEA SPEED™ DTM V3* ACTIVATOR PART A
 CHEMICAL FAMILY: FORMULATED POLYSILOXANE/AMINE

2. COMPOSITION / INGREDIENT INFORMATION

CAS No.	CHEMICAL IDENTITY	EXPOSURE LIMITS				CARCINOGEN STATUS			
		ACGIH		OSHA		IARC	NTP	OSHA	
		TWA	STEL	PEL	STEL				
*100-51-6	BENZYL ALCOHOL	NE	NE	NE	NE	NR	NR	NR	
*69-72-7	BENZOIC ACID, 2 HYDROXY	NE	NE	NE	NE	NR	NR	NR	
*694-83-7	1,2-CYCLOHEXANEDIAMINE	NE	NE	NE	NE	NR	NR	NR	
*68410-23-1	POLYAMIDE RESIN	NE	NE	NE	NE	NR	NR	NR	
* 110-12-3	METHYL ISOAMYL KETONE								
N/A	PROPRIETARY POLYSILOXANE	N/A	N/A	N/A		N/A	NE	NE	NE

NE= NOT ESTABLISHED NR = NOT REVIEWED * = OSHA HAZARDOUS INGREDIENT

3. HAZARDS IDENTIFICATION

EMERGENCY SUMMARY: WARNING !! SEVERE EYE, SKIN IRRITANT. CAN CAUSE BURNS WITH PROLONGED CONTACT. MAY CAUSE GASTROINTESTINAL TRACT BURNS IF SWALLOWED. CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION.

PRIMARY ROUTES OF ENTRY: DERMAL

4. FIRST AID MEASURES

SKIN: WASH AFFECTED AREAS WITH PLENTY OF SOAP AND WATER. GET MEDICAL ATTENTION IF CONDITION CONTINUES. REMOVE CLOTHING AND SHOES, DECONTAMINATE CLOTHING PRIOR TO RE-USE

INGESTION: IF SWALLOWED, GIVE A MINIMUM OF 3-4 GLASSES OF WATER BUT DO NOT INDUCE VOMITTING. DO NOT GIVE ANYTHING BY MOUTH TO A PERSON WHO IS CONVULSING OR IS UNCONSCIOUS. GET MEDICAL ATTENTION IMMEDIATELY. HAVE PHYSICIAN DETERMINE IF VOMITTING OR STOMACH EVACUATION IS NEEDED.

EYES: FLUSH EYES WITH PLENTY OF WATER. GET MEDICAL ATTENTION IF IRRITATION OCCURS.

INHALATION: MOVE PERSON FROM AREA INTO FRESH AIR. IF RESPIRATORY IRRITATION OR DIFFICULTY IN BREATHING DEVELOPS SEEK MEDICAL ATTENTION.



EFFECTIVE DATE: 1/11/2005

MATERIAL SAFETY DATA SHEET

No: 061102 -BP

SEA SPEED™ DTMV3

FIRE & EXPLOSION HAZARDS: COMBUSTION & DECOMPOSITION PRODUCTS MAY BE TOXIC

FLASH POINT: > 200° F (>93° C)

6. ACCIDENTAL RELEASE

WEAR PROTECTIVE GEAR. ABSORB WITH SAND OR OTHER SUITABLE MATERIAL. PUT INTO AN APPROVE CONTAINER FOR DISPOSAL. FLUSH CONTAMINATED AREA WITH WATER.

7. STORAGE & HANDLING

STORE IN A COOL DRY PLACE. KEEP CONTAINERS WELL SEALED TO PREVENT MOISTURE ABSORPTION OR CONTAMINATION. THIS PRODUCT IS FOR INDUSTRIAL USE ONLY. USE ONLY WITH GOOD VENTILATION. AVOID BREATHING VAPORS OR MIST. AVOID CONTACT WITH SKIN OR EYES. WASH THOROUGHLY AFTER USE.

8. PERSONAL PROTECTION/EXPOSURE CONTROLS

SKIN: WEAR IMPERVIOUS GLOVES

EYE PROTECTION: WEAR SPLASH PROOF CHEMICAL GOGGLES

RESPIRATORY: USE NIOSH APPROVED RESPIRATOR SUITABLE FOR ORGANIC VAPORS, IF REQUIRED. USE VENTILATION AND LOCAL EXHAUST IF NEEDED.

9. CHEMICAL AND PHYSICAL PROPERTIES

COLOR:	CLEAR YELLOW LIQUID
PHYSICAL STATE:	VISCOUS LIQUID
SOLUABILITY IN WATER:	NEGLIGIBLE
ODOR:	STRONG AMINE

10. REACTIVITY / STABILITY

STABILITY:	STABLE
INCOMPATIBILITY:	STRONG ACIDS, OXIDIZING AGENTS
HAZARDOUS POLYMERIZATION:	WILL NOT OCCUR
HAZARDOUS DECOMPOSITION PRODUCTS:	CARBON MONOXIDE, CARBON DIOXIDE, ALDEHYDES

11. TOXICOLOGICAL

SENSITIZATION:
SKIN IRRITATION:
EYE IRRITATION:

MAY CAUSE SENSITIZATION
MODERATE IRRITATION (RABBIT)
SEVERE IRRITATION (RABBIT)



EFFECTIVE DATE: 1/11/2005

MATERIAL SAFETY DATA SHEET

No: 061102 -BP

SeaCoat™ DDM

12. ECOLOGICAL DATA

NO ECOLOGICAL DATA AVAILABLE

13. DISPOSAL

DISPOSE OF IN ACCORDANCE TO LOCAL, STATE AND FEDERAL REGULATIONS

14. TRANSPORTATION

DOT: NOT REGULATED

15. REGULATORY INFORMATION

OSHA (OCCUPATIONAL SAFETY AND HEALTH ACT): THIS DOCUMENT HAS BEEN PREPARED IN ACCORDANCE WITH FEDERAL OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200. THIS PRODUCT IS CONSIDERED A HAZARDOUS CHEMICAL UNDER THE AFOREMENTIONED STANDARD.

RCRA (RESOURCE CONSERVATION AND RECOVERY ACT): NOT A HAZARDOUS WASTE BASED ON RCRA (40 CFR 261)

SARA TITLE III: SECTION 304 - CERCLA: NOT LISTED

SARA TITLE III: SECTION 313 TOXIC CHEMICAL LIST (TCL): THIS PRODUCT DOES NOT CONTAIN A TOXIC CHEMICAL FOR ROUTINE ANNUAL TOXIC RELEASE REPORTING UNDER SECTION 313 (40 CFR 372).

TSCA SECTION 8(B) - INVENTORY STATUS: CHEMICAL COMPONENTS ARE LISTED ON TSCA INVENTORY

CANADIAN INVENTORY STATUS: ALL COMPONENTS ARE LISTED ON (DSL) DOMESTIC SUBSTANCES LIST.

NEW JERSEY RIGHT TO KNOW: CAS NUMBER 100-51-6 BENZYL ALCOHOL
CAS NUMBER 694-83-7 1,2-CYCLOHEXANEDIAMINE
CAS NUMBER 69-72-7 BENZOIC ACID, 2-HYDROXY-
CAS NUMBER 68410-23-1 POLYAMIDE RESIN

NJ REG No: 29943300001-5793P POLYAMIDOAMINE
NJ REG No: 29943300001- 5706P ALIPHATIC AMINE

PENNSYLVANIA RIGHT TO KNOW: CAS NUMBER 68410-23-1 POLYAMIDE RESIN
NOT INCLUDED IN THE PENNSYLVANIA HAZARDOUS SUBSTANCE LIST.
CAS NUMBER 100-51-6 BENZYL ALCOHOL
CAS NUMBER 69-72-7 BENZOIC ACID, 2-HYDROXY-
NOT INCLUDED IN THE PENNSYLVANIA HAZARDOUS SUBSTANCE LIST.
CAS NUMBER 694-83-7 1,2-CYCLOHEXANEDIAMINE
NOT INCLUDED IN THE PENNSYLVANIA HAZARDOUS SUBSTANCE LIST.

16. ADDITIONAL INFORMATION

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH CFR 1910.1200. ALL INFORMATION, RECOMMENDATIONS AND SUGGESTIONS APPEARING HEREIN CONCERNING OUR PRODUCT(S) ARE BASED UPON TESTS AND DATA BELIEVED TO BE RELIABLE, HOWEVER, IT IS THE USER'S SOLE RESPONSIBILITY TO DETERMINE THE SAFETY, TOXICITY AND SUITABILITY FOR HIS OWN USE OF THE PRODUCTS DESCRIBED HEREIN. SINCE THE ACTUAL USE OF THESE PRODUCTS IS BY OTHERS AND BEYOND OUR CONTROL, NO GUARANTEE EXPRESSED OR IMPLIED IS MADE BY SeaCoat TECHNOLOGY, LLC AS TO THE EFFECTS OF SUCH USE, INCLUDING THE RESULTS TO BE OBTAINED OR THE SAFETY AND TOXICITY OF THE PRODUCTS NOR DOES SeaCoat TECHNOLOGY, LLC ASSUME ANY LIABILITY ARISING OUT OF THE USE BY OTHERS OF THE PRODUCTS REFERRED TO HEREIN. NOR IS THE INFORMATION HEREIN TO BE CONSTRUED AS ABSOLUTELY COMPLETE SINCE ADDITIONAL INFORMATION MAY BE NECESSARY OR DESIRABLE WHEN PARTICULAR OR EXCEPTIONAL



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WWW.SEACOAT.COM

EFFECTIVE DATE: 1/11/2005

MATERIAL SAFETY DATA SHEET

No: 061102 -BP

SEA SPEED™ DTM V3

1. PRODUCT IDENTIFICATION

PRODUCT NAME: *SEA SPEED™ DTM V3* BASE RESIN PART B ALL COLORS

CHEMICAL FAMILY: POLYSILOXANE NOVOLAC RESIN

2. COMPOSITION / INGREDIENT INFORMATION

CAS No.	CHEMICAL IDENTITY	EXPOSURE LIMITS				CARCINOGEN STATUS			
		ACGIH		OSHA		IARC	NTP	OSHA	
		TWA	STEL	PEL	STEL				
*28064-14-4	PHENOL POLYMER WITH FORMALDEHYDE.	NE	NE	NE	NE	NR	NR	NR	
N/A	PROPRIETARY POLYSILOXANE	N/A	N/A	N/A		N/A	NE	NE	NE

HAZARDOUS INGREDIENTS

61791 - 10-4	COCO ALKYL BIS HYDROETHYL CHLORIDES ETHOXYLATED METHYL QUATERNARY AMONIUM	NF	NE	NF	NE	NF	NF	NF
	NE= NOT ESTABLISHED	NR = NOT REVIEWED			* = OSHA HAZARDOUS INGREDIENT			

3. HAZARDS IDENTIFICATION

EMERGENCY SUMMARY: WARNING !! CAUSES IRRITATION OR ALLERGIC SKIN REACTIONS

PRIMARY ROUTES OF ENTRY: DERMAL

4. FIRST AID MEASURES

SKIN: WASH AFFECTED AREAS WITH PLENTY OF SOAP AND WATER. GET MEDICAL ATTENTION IF CONDITION CONTINUES.

INGESTION: IF SWALLOWED, GIVE A MINIMUM OF 3-4 GLASSES OF WATER BUT DO NOT INDUCE VOMITTING. DO NOT GIVE ANYTHING BY MOUTH TO A PERSON WHO IS CONVULSING OR IS UNCONSCIOUS.

EYES: FLUSH EYES WITH PLENTY OF WATER. GET MEDICAL ATTENTION IF IRRITATION OCCURS.

INHALATION: MOVE PERSON FROM AREA INTO FRESH AIR. IF RESPIRATORY IRRITATION OR DIFFICULTY IN BREATHING DEVELOPS SEEK MEDICAL ATTENTION.

CONDITIONS AGGRAVATED BY EXPOSURE: ALLERGIES, ECZEMA OR SKIN CONDITIONS

OVEREXPOSURE EFFECTS: IRRITATION, SENSITIZATION, DERMATITIS

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: WATER SPRAY, DRY CHEMICAL, FOAM, CARBON DIOXIDE
FIRE FIGHTING EQUIPMENT: USE SCBA



EFFECTIVE DATE: 1/11/2005

MATERIAL SAFETY DATA SHEET

No: 061102 -BP

SEAFLEED™ DTM V3

FIRE & EXPLOSION HAZARDS: COMBUSTION & DECOMPOSITION PRODUCTS MAY BE TOXIC

FLASH POINT: > 200° F (93° C)

METHOD: CLOSED CUP

6. ACCIDENTAL RELEASE

ABSORB WITH SAND OR OTHER SUITABLE MATERIAL. PUT INTO AN APPROVE CONTAINER FOR DISPOSAL. FLUSH CONTAMINATED AREA WITH WATER.

7. STORAGE & HANDLING

STORE IN A COOL DRY PLACE. KEEP CONTAINERS WELL SEALED TO PREVENT MOISTURE ABSORPTION OR CONTAMINATION. THIS PRODUCT IS FOR INDUSTRIAL USE ONLY. USE ONLY WITH GOOD VENTILATION. AVOID BREATHING VAPORS OR MIST. AVOID CONTACT WITH SKIN OR EYES. WASH THOROUGHLY AFTER USE.

8. PERSONAL PROTECTION/EXPOSURE CONTROLS

SKIN: WEAR IMPERVIOUS GLOVES

EYE PROTECTION: WEAR SPLASH PROOF CHEMICAL GOGGLES

RESPIRATORY: USE NIOSH APPROVED RESPIRATOR SUITABLE FOR ORGANIC VAPORS, IF REQUIRED. USE VENTILATION AND LOCAL EXHAUST IF NEEDED.

9. CHEMICAL AND PHYSICAL PROPERTIES

COLOR:	VARIOUS
PHYSICAL STATE:	THICK LIQUID
SOLUABILITY IN WATER:	NEGLIGIBLE
SP. GRAVITY:	≅ 1.2 AT 25° C (77° F)
VAPOR PRESSURE:	NEGLIGIBLE
MELTING POINT:	NOT DETERMINED
BOILING POINT:	> 200° C (> 392° F)
VOLATILES:	< 3.5%

10. REACTIVITY / STABILITY

STABILITY:

INCOMPATIBILITY:

HAZARDOUS POLYMERIZATION:

HAZARDOUS DECOMPOSITION PRODUCTS:

CONDITIONS TO AVOID:

RESIN

STABLE

STRONG ACIDS, STRONG ALKALIES, OXIDIZING AGENTS

WILL NOT OCCUR

CARBON MONOXIDE, CARBON DIOXIDE, ALDEHYDES

EXCESSIVE HEAT OR COLD OVER LONG PERIODS WILL ADVERSELY AFFECT THE

11. TOXICOLOGICAL

SENSITIZATION:
SKIN IRRITATION:
EYE IRRITATION:

MAY CAUSE SENSITIZATION
MILD IRRITATION (RABBIT)
MILD IRRITATION (RABBIT)



EFFECTIVE DATE: 1/11/2005

MATERIAL SAFETY DATA SHEET

No: 061102 -BP

SEA-SPEED™ DTM V3

12. ECOLOGICAL DATA

NO ECOLOGICAL DATA AVAILABLE

13. DISPOSAL

DISPOSE OF IN ACCORDANCE TO LOCAL, STATE AND FEDERAL REGULATIONS

14. TRANSPORTATION

DOT: NOT REGULATED

15. REGULATORY INFORMATION

OSHA (OCCUPATIONAL SAFETY AND HEALTH ACT): THIS DOCUMENT HAS BEEN PREPARED IN ACCORDANCE WITH FEDERAL OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200. THIS PRODUCT IS CONSIDERED A HAZARDOUS CHEMICAL UNDER THE AFOREMENTIONED STANDARD.

RCRA (RESOURCE CONSERVATION AND RECOVERY ACT): NOT A HAZARDOUS WASTE BASED ON RCRA (40 CFR 261)

SARA TITLE III: SECTION 304 - CERCLA: NOT LISTED

SARA TITLE III: SECTION 313 TOXIC CHEMICAL LIST (TCL): THIS PRODUCT DOES NOT CONTAIN A TOXIC CHEMICAL FOR ROUTINE ANNUAL TOXIC RELEASE REPORTING UNDER SECTION 313 (40 CFR 372).

TSCA SECTION 8(B) - INVENTORY STATUS: CHEMICAL COMPONENTS ARE LISTED ON TSCA INVENTORY

CANADIAN INVENTORY STATUS: ALL COMPONENTS ARE LISTED ON (DSL) DOMESTIC SUBSTANCES LIST.

NEW JERSEY RIGHT TO KNOW: CAS NUMBER 28064-14-4
FORMALDEHYDE, POLYMER WITH (CHLOROMETHYL)OXIRANE AND PHENOL

PENNSYLVANIA RIGHT TO KNOW: CAS NUMBER 28064-14-4
FORMALDEHYDE, POLYMER WITH (CHLOROMETHYL)OXIRANE AND PHENOL
NOT INCLUDED IN THE PENNSYLVANIA HAZARDOUS SUBSTANCE LIST.

PRODUCT NAME: 13003-13023 COLOR COAT CLEAR AEROSOLS

PRODUCT CODE: CCCLRAEROMS

2 4 0 G

on Methylene Chloride formula

===== SECTION I - MANUFACTURER IDENTIFICATION =====

MANUFACTURER'S NAME: SEM PRODUCTS, INC.

ADDRESS : 651 MICHAEL WYLIE DR.
CHARLOTTE, NC 28217

EMERGENCY PHONE : CHEMTRC 800-424-9300 DATE REVISED : 9/23/2002

INFORMATION PHONE : (800) 831-1122 NAME OF PREPARER : CG

===== SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION =====

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
ACETONE OSHA PEL: 1000 PPM, ACGIH TLV: 750 PPM, OTHER: N/A LD50: 9750MG/KG:RAT-ORL, LC50: N/A	67-64-1	186	68 40-45%
PROPANE (HYDROCARBON PROPELLANT) OSHA PEL: 1000 PPM, ACGIH TLV: 1000 PPM, OTHER: N/A LD50: N/A, LC50: N/A	74-98-6	108 PSIG	68 15-20%
* TOLUENE OSHA PEL: 100 PPM-8HR, STEL: 200 PPM, OTHER: 300 PPM CEILING LD50: 5000MG/KG:RAT-ORL, LC50: 5320PPM/8H:MUS-IHL	108-88-3	22	68 5-10%
ISOBUTYL ACETATE OSHA PEL: 150 PPM, ACGIH TLV: 150 PPM, OTHER: N/A LD50: 15GM/KG:RAT-ORL, LC50: N/A	110-19-0	12.8	68 5-10%
METHYL ISOBUTYL KETONE LD50: 2080MG/KG:RAT ORL LC50 23300MG/M3MUS-IHL OSHA PEL: 75PPM	108-10-1	16.00	68 F 5-10%
* METHYL ETHYL KETONE OSHA PEL: 200 PPM, ACGIH TLV: 200 PPM, OTHER: N/A LD50: 3400MG/KG:RAT-ORL, LC50: N/A	78-93-3	70	68 1-5%
1-METHOXY-2-PROPANOL ACETATE OSHA PEL: N/A, ACGIH TLV: N/A, OTHER: N/A LD50: N/A, LC50: N/A	108-65-6	3.7	68 1-5%
ETHYL 3-ETHOXYPROPIONATE (3-ETHOXYPROPIONATE) OSHA PEL: 50 PPM TWA, ACGIH TLV: 100 PPM, OTHER: N/A LD50: N/A, LC50: N/A	763-69-9	1.11	77 1-5%
ETHYLENE GLYCOL MONOPROPYL ETHER OSHA PEL: N/A, ACGIH TLV: N/A, OTHER: N/A LD50: 4890MG/KG:RAT-ORL, LC50: 1530PPM/4H:MUS-IHL	2807-30-9	1.3	68 1-5%

* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

WARNING: CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. TSCA CERTIFICATION: All chemicals in this product are listed, or are exempt from listing on the TSCA inventory.

===== SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS =====

BOILING RANGE: < 0 - 238 F

SPECIFIC GRAVITY (H2O=1): .75

VAPOR DENSITY: HEAVIER THAN AIR

EVAPORATION RATE: FASTER THAN n-BUTYL ACETATE

COATING V.O.C.: 5.25 lb/gal

MATERIAL V.O.C.: 3.23 lb/gal

SOLUBILITY IN WATER: INSOLUBLE
APPEARANCE AND ODOR: CLEAR LIQUID - SOLVENT

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: PROPELLENT < 0 F **METHOD USED: TCC**
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1.0 **UPPER: 13.0**

EXTINGUISHING MEDIA: FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG

SPECIAL FIREFIGHTING PROCEDURES

WATER SPRAY MAY BE INEFFECTIVE, BUT MAY BE USED TO COOL CONTAINERS EXPOSED TO HEAT. WEAR SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS

VAPORS MAY IGNITE EXPLOSIVELY. EXPOSURE TO HEAT OR PROLONGED EXPOSURE TO SUN MAY CAUSE BURSTING. DO NOT EXPOSE TO HEAT OR STORE AT TEMPERATURES ABOVE 120 F DO NOT PUNCTURE OR INCINERATE (BURN) CONTAINER.

===== SECTION V - REACTIVITY DATA =====

STABILITY: STABLE

CONDITIONS TO AVOID

EXCESSIVE HEAT, OPEN FLAMES, SPARK SOURCES

INCOMPATIBILITY (MATERIALS TO AVOID)

OXIDIZING AGENTS

HAZARDOUS DECOMPOSITION OR BYPRODUCTS

CARBON DIOXIDE, CARBON MONOXIDE, VARIOUS HYDROCARBONS, OXIDES OF NITROGEN

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

===== SECTION VI - HEALTH HAZARD DATA =====

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

NASAL AND RESPIRATORY IRRITATION, DIZZINESS, HEADACHE, NAUSEA, POSSIBLE UNCONSCIOUSNESS, AND ASPHYXIATION.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE

MODERATE IRRITATION, REDNESS, ITCHING AND BLURRED VISION. EXCESSIVE SKIN EXPOSURE MAY CAUSE BURNING SENSATION.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

MODERATE IRRITATION, REDNESS, DERMATITIS.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

GASTROINTESTINAL IRRITATION, VOMITING, DIARRHEA.

HEALTH HAZARDS (ACUTE AND CHRONIC)

EYES: IRRITATION, BLURRED VISION. SKIN: MODERATE IRRITATION, DERMATITIS. INHALATION: NASAL AND RESPIRATORY IRRITATION, NAUSEA, POSSIBLE UNCONSCIOUSNESS, ASPHYXIATION. INGESTION: GASTROINTESTINAL IRRITATION, VOMITING, DIARRHEA. CNS: INTOXICATION CAUSING SLIGHT EUPHORIA, DIZZINESS AND HEADACHE. OTHER: OVEREXPOSURE TO ETHYLENE GLYCOL MONOPROPYL ETHER CAN AFFECT LIVER AND KIDNEYS

CARCINOGENICITY: NTP CARCINOGEN: No IARC MONOGRAPHS: No OSHA REGULATED:
No

N/A

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
BRONCHITIS, CNS DISORDERS, ALLERGIES, NAUSEA.

EMERGENCY AND FIRST AID PROCEDURES

EYES: FLUSH WITH LARGE AMOUNTS OF WATER LIFTING UPPER AND LOWER LIDS. GET MEDICAL ATTENTION. SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. INHALATION: REMOVE TO FRESH AIR, GIVE ARTIFICIAL RESPIRATION IF NECESSARY. INGESTION KEEP PERSON WARM AND QUIET. SEEK IMMEDIATE MEDICAL ADVICE REGARDING INDUCTION OF VOMITING.

===== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE =====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

REMOVE ALL SOURCES OF IGNITION. ALLOW VOLATILE PORTION TO EVAPORATE COMPLETELY. AVOID BREATHING VAPORS AND REMOVE WITH INERT ABSORBENT.

WASTE DISPOSAL METHOD

DO NOT INCINERATE. DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATION. DO NOT CONTAMINATE LAKES, STREAMS OR OTHER WATER SUPPLY.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

DO NOT STORE OR USE NEAR HEAT, SPARKS OR FLAME. STORE IN WELL VENTILATED AREA. KEEP CLOSURE TIGHT AND CONTAINER UPRIGHT TO PREVENT LEAKAGE. DO NOT PUNCTURE OR INCINERATE. DO NOT SPRAY NEAR FIRE OR OPEN FLAMES.

OTHER PRECAUTIONS

REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OCCUPATIONAL OVER-EXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL. AVOID SPONTANEOUS COMBUSTION OF CONTAMINATED RAGS OR OTHER IGNITABLE MATERIAL BY IMMEDIATE IMMERSION IN WATER. KEEP OUT OF THE REACH OF CHILDREN.

===== SECTION VIII - CONTROL MEASURES =====

RESPIRATORY PROTECTION

USE OF A NIOSH APPROVED CHEMICAL/MECHANICAL FILTER, DESIGNED TO REMOVE A COMBINATION OF PARTICLES AND VAPOR.

VENTILATION

PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES

NEOPRENE OR BUTYL RUBBER GLOVES.

EYE PROTECTION

GOGGLES OR SIDE-SHIELD SAFETY GLASSES.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

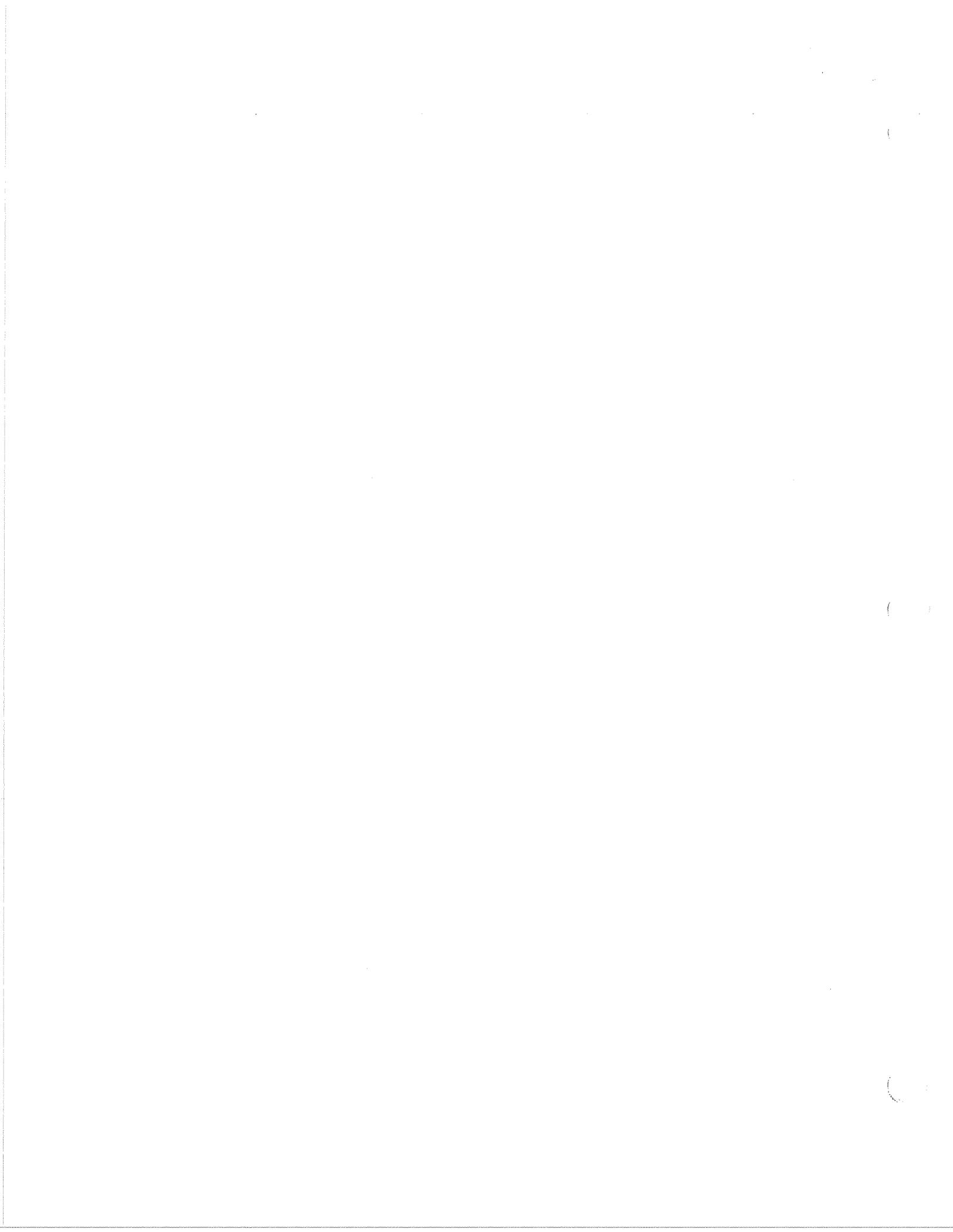
TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS. WASH CONTAMINATED CLOTHING BEFORE RE-USE.

WORK/HYGIENIC PRACTICES

WASH HANDS BEFORE EATING, SMOKING OR USING THE WASHROOM.

===== SECTION IX - DISCLAIMER =====

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE AND RELIABLE AS OF THE DATE INDICATED ABOVE, HOWEVER SEMI-CHEMICAL PRODUCTS, INC., MAKES NO REPRESENTATION, WARRANTY OR GUARANTEE NOR ASSUMES ANY LEGAL RESPONSIBILITY AS TO ITS ACCURACY, RELIABILITY OR COMPLETENESS. ULTIMATE DETERMINATION OF SUITABILITY FOR INTENDED USE IS THE RESPONSIBILITY OF THE USER.



15003-15723 COLOR COAT AEROSOLS-

PRODUCT NAME: 15003-15723 COLOR COAT AEROSOLS-
 PRODUCT CODE: CCAEROMSDS
 Non Methylene Chloride formula

240 G

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: SEM PRODUCTS, INC.
 ADDRESS : 651 MICHAEL WYLIE DR.
 CHARLOTTE, NC 28217

EMERGENCY PHONE : CHEMTRC 800-424-9300 DATE REVISED : 9/23/2002
 INFORMATION PHONE : (800) 831-1122 NAME OF PREPARER : CG

SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
ACETONE OSHA PEL: 1000 PPM, ACGIH TLV: 750 PPM, OTHER: N/A LD50: 9750MG/KG:RAT-ORL, LC50: N/A	67-64-1	186	68 35-40%
PROPANE/BUTANE BLEND OSHA PEL: 1000 PPM, ACGIH TLV: 1000 PPM, OTHER: N/A LD50: N/A, LC50: N/A	68476-85-7	70 PSIG	70 25-30%
* TOLUENE OSHA PEL: 100 PPM-8HR, STEL: 200 PPM, OTHER: 300 PPM CEILING LD50: 5000MG/KG:RAT-ORL, LC50: 5320PPM/8H:MUS-IHL	108-88-3	22	68 10-15%
ISOBUTYL ACETATE OSHA PEL: 150 PPM, ACGIH TLV: 150 PPM, OTHER: N/A LD50: 15GM/KG:RAT-ORL, LC50: N/A	110-19-0	12.8	68 1-5%
METHYL ISOBUTYL KETONE LD50: 2080MG/KG:RAT ORL LC50 23300MG/M3MUS-IHL OSHA PEL: 75PPM	108-10-1	16.00	68 F 1-5%
TITANIUM DIOXIDE INERT NUISANCE DUST-OSHA TWA 10/5 MG/M	13463-67-7	NA	NA 1-5%
ETHYL 3- ETHOXYPROPIONATE (3-ETHOXYPROPIONATE) OSHA PEL: 50 PPM TWA, ACGIH TLV: 100 PPM, OTHER: N/A LD50: N/A, LC50: N/A	763-69-9	1.11	77 1-5%
* METHYL ETHYL KETONE OSHA PEL: 200 PPM, ACGIH TLV: 200 PPM, OTHER: N/A LD50: 3400MG/KG:RAT-ORL, LC50: N/A	78-93-3	70	68 1-5%
* SOLVENT SOLUTION COPOLYMER CONTAINS: 15% TOLUENE, 25% XYLENE OSHA PEL: 100 PPM, ACGIH TLV: 100 PPM LD50: 4300MG/KG:RAT-ORL, LC50: 6700PPM/4HR:RAT-IHL	MIXTURE	13	68 F 1-5%
1-METHOXY-2-PROPANOL ACETATE OSHA PEL: N/A, ACGIH TLV: N/A, OTHER: N/A LD50: N/A, LC50: N/A	108-65-6	3.7	68 1-5%
ETHYLENE GLYCOL MONOPROPYL ETHER OSHA PEL: N/A, ACGIH TLV: N/A, OTHER: N/A LD50: 4890MG/KG:RAT-ORL, LC50: 1530PPM/4H:MUS-IHL	2807-30-9	1.3	68 1-5%

* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.
 WARNING: CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR BIRTH DEFECTS OR OTHER REPRODUCTIVE
 **RM. TSCA CERTIFICATION: All chemicals in this product are listed, or are exempt from listing on the TSCA inventory.
 E PRODUCTS MAY CONTAIN CARBON BLACK.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

M A T E R I A L S A F E T Y D A T A S H E E T

15003-15723 COLOR COAT AEROSOLS-

Page: 2

BOILING RANGE: < 0 - 238 F
VAPOR DENSITY: HEAVIER THAN AIR

SPECIFIC GRAVITY (H₂O=1): .77
EVAPORATION RATE: FASTER THAN n-BUTYL
ACETATE

COATING V.O.C.: 5.14 lb/gl
SOLUBILITY IN WATER: INSOLUBLE
APPEARANCE AND ODOR: VARIES IN COLOR, STRONG SOLVENT ODOR

MATERIAL V.O.C.: 3.38 lb/gl

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: PROPELLENT < 0 F METHOD USED: TCC
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1.0 UPPER: 13.0

EXTINGUISHING MEDIA: FOAM, ALCOHOL FOAM, CO₂, DRY CHEMICAL, WATER FOG

SPECIAL FIREFIGHTING PROCEDURES

WATER SPRAY MAY BE INEFFECTIVE, BUT MAY BE USED TO COOL CONTAINERS EXPOSED TO HEAT. WEAR SELF-CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS

VAPORS MAY IGNITE EXPLOSIVELY. EXPOSURE TO HEAT OR PROLONGED EXPOSURE TO SUN MAY CAUSE BURSTING. DO NOT EXPOSE TO HEAT OR STORE AT TEMPERATURES ABOVE 120 F DO NOT PUNCTURE OR INCINERATE (BURN) CONTAINER.

===== SECTION V - REACTIVITY DATA =====

STABILITY: STABLE

CONDITIONS TO AVOID

EXCESSIVE HEAT, OPEN FLAMES, SPARK SOURCES

INCOMPATIBILITY (MATERIALS TO AVOID)

OXIDIZING AGENTS

HAZARDOUS DECOMPOSITION OR BYPRODUCTS

CARBON DIOXIDE, CARBON MONOXIDE, VARIOUS HYDROCARBONS, OXIDES OF NITROGEN

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

===== SECTION VI - HEALTH HAZARD DATA =====

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

NASAL AND RESPIRATORY IRRITATION, DIZZINESS, HEADACHE, NAUSEA, POSSIBLE UNCONSCIOUSNESS, AND ASPHYXIATION.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE

MODERATE IRRITATION, REDNESS, ITCHING AND BLURRED VISION. EXCESSIVE SKIN EXPOSURE MAY CAUSE BURNING SENSATION.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

MODERATE IRRITATION, REDNESS, DERMATITIS.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

GASTROINTESTINAL IRRITATION, VOMITING, DIARRHEA.

HEALTH HAZARDS (ACUTE AND CHRONIC)

EYES: IRRITATION, BLURRED VISION. SKIN: MODERATE IRRITATION, DERMATITIS. INHALATION: NASAL AND RESPIRATORY IRRITATION, NAUSEA, POSSIBLE UNCONSCIOUSNESS, ASPHYXIATION. INGESTION: GASTROINTESTINAL IRRITATION, VOMITING, DIARRHEA. CNS: INTOXICATION CAUSING SLIGHT EUPHORIA, DIZZINESS AND HEADACHE. OTHER: OVEREXPOSURE TO ETHYLENE GLYCOL MONOPROPYL ETHER CAN AFFECT LIVER AND KIDNEYS

RCINOGENICITY: NTP CARCINOGEN: No IARC MONOGRAPHS: No OSHA REGULATED:
No

MAY CONTAIN CARBON BLACK, WHICH IS CLASSIFIED BY IARC AS A GROUP 2B, PROBABLE CARCINOGEN.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

BRONCHITIS, CNS DISORDERS, ALLERGIES, NAUSEA.

EMERGENCY AND FIRST AID PROCEDURES

EYES: FLUSH WITH LARGE AMOUNTS OF WATER LIFTING UPPER AND LOWER LIDS. GET MEDICAL ATTENTION. SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. INHALATION: REMOVE TO FRESH AIR, GIVE ARTIFICIAL RESPIRATION IF NECESSARY. INGESTION KEEP PERSON WARM AND QUIET. SEEK IMMEDIATE MEDICAL ADVICE REGARDING INDUCTION OF VOMITING.

===== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE =====**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

REMOVE ALL SOURCES OF IGNITION. ALLOW VOLATILE PORTION TO EVAPORATE COMPLETELY. AVOID BREATHING VAPORS AND REMOVE WITH INERT ABORBENT.

WASTE DISPOSAL METHOD

DO NOT INCINERATE. DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATION. DO NOT CONTAMINATE LAKES, STREAMS OR OTHER WATER SUPPLY.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

DO NOT STORE OR USE NEAR HEAT, SPARKS OR FLAME. STORE IN WELL VENTILATED AREA. KEEP CLOSURE TIGHT AND CONTAINER UPRIGHT. PREVENT LEAKAGE. DO NOT PUNCTURE OR INCINERATE. DO NOT SPRAY NEAR FIRE OR OPEN FLAMES.

OTHER PRECAUTIONS

REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OCCUPATIONAL OVER-EXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL. AVOID SPONTANEOUS COMBUSTION OF CONTAMINATED RAGS OR OTHER IGNITABLE MATERIAL BY IMMEDIATE IMMERSION IN WATER. KEEP OUT OF THE REACH OF CHILDREN.

===== SECTION VIII - CONTROL MEASURES =====**RESPIRATORY PROTECTION**

USE OF A NIOSH APPROVED CHEMICAL/MECHANICAL FILTER, DESIGNED TO REMOVE A COMBINATION OF PARTICLES AND VAPOR.

VENTILATION

PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES

NEOPRENE OR BUTYL RUBBER GLOVES.

EYE PROTECTION

GOGGLES OR SIDE-SHIELD SAFETY GLASSES.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS. WASH CONTAMINATED CLOTHING BEFORE RE-USE.

WORK/HYGIENIC PRACTICES

WASH HANDS BEFORE EATING, SMOKING OR USING THE WASHROOM.

===== SECTION IX - DISCLAIMER =====

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE AND RELIABLE AS OF THE DATE INDICATED ABOVE, HOWEVER SEM PRODUCTS, INC., MAKES NO REPRESENTATION, WARRANTY OR GUARANTEE NOR ASSUMES ANY LEGAL RESPONSIBILITY AS TO ITS ACCURACY, RELIABILITY OR COMPLETENESS. ULTIMATE DETERMINATION OF SUITABILITY FOR INTENDED USE IS THE RESPONSIBILITY OF THE USER.

MATERIAL SAFETY DATA SHEET

B53B300
04 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	B53B300	HMIS CODES	
		Health	3*
		Flammability	0
		Reactivity	0
PRODUCT NAME	Waterbased Industrial Enamel, Black	EMERGENCY TELEPHONE NO.	(216) 566-2917
MANUFACTURER'S NAME	THE SHERWIN-WILLIAMS COMPANY	INFORMATION TELEPHONE NO.	(216) 566-2902
	101 Prospect Avenue N.W.		
	Cleveland, OH 44115		
DATE OF PREPARATION	09-JAN-05		

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
5	5131-66-8	Butoxypropanol		0.6 mm
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
2	121-44-8	Triethylamine		54 mm
		ACGIH TLV	1 ppm (Skin)	
		ACGIH TLV	3 ppm (Skin) STEL	
		OSHA PEL	25 ppm (Skin)	
		OSHA PEL	100 ppm (Skin) STEL	
6	1332-58-7	Kaolin		
		ACGIH TLV	2 mg/m3 as Resp. Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	
1	1333-86-4	Carbon Black		
		ACGIH TLV	3.5 mg/m3	
		OSHA PEL	3.5 mg/m3	

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

Continued on page 2

For complete discussion of toxicology data refer to Section 11.

Section 4 -- FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes.
Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing.
Keep warm and quiet.
INGESTION: Do not induce vomiting.
Get medical attention immediately.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
>200 F PMCC	N.A.	N.A.

FLAMMABILITY CLASSIFICATION

Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class IIIIP

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

Continued on page 3

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page 3

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	8.85 lb/gal	1060 g/l
SPECIFIC GRAVITY	1.07	
BOILING POINT	185 - 339 F	85 - 170 C
MELTING POINT	Not Available	
VOLATILE VOLUME	70 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	9.0	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical)		
1.64 lb/gal	196 g/l	Less Water and Federally Exempt Solvents
0.62 lb/gal	75 g/l	Emitted VOC

Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

Continued on page 4

HAZARDOUS POLYMERIZATION
 Will not occur

Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Carbon Black is classified by IARC as possibly carcinogenic to humans (group 2B) based on experimental animal data, however, there is insufficient evidence in humans for its carcinogenicity.

TOXICOLOGY DATA

CAS No.	Ingredient Name				
5131-66-8	Butoxypropanol	LC50	RAT	4HR	Not Available
		LD50	RAT		1900 mg/kg
121-44-8	Triethylamine	LC50	RAT	4HR	Not Available
		LD50	RAT		460 mg/kg
1332-58-7	Kaolin	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
1333-86-4	Carbon Black	LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Section 14 -- TRANSPORT INFORMATION

No data available.

Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
121-44-8	Triethylamine	2	

Continued on page 5

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page 5

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.



SUPER LUBE GREASE, page 2

SECTION V - REACTIVITY DATA

Stability: Unstable
Stable: YES Conditions to Avoid: None Known

Incompatibility (materials to avoid): May React with strong oxidizing agents.

Hazardous Decomposition or Byproducts: Burning may produce carbon monoxide.

Hazardous Polymerization: May occur
Will not occur: YES Conditions to Avoid: None Known

SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry: INHALATION? SKIN? YES INGESTION? YES

Health Hazards (Acute and Chronic): No Evidence of adverse effect from available information on swallowing. SKIN ABSORPTION and INHALATION: May cause slight irritation in contact with skin and eyes.

Carcinogenicity: NTP? IARC MONOGRAPHS? OSHA REGULATIONS?
Not Listed Not Listed Not Listed

Signs and Symptoms of Exposure: Contact with Eye may result in slight irritation. Prolonged or repeated skin contact may cause mild irritation.

Medical Conditions Generally Aggravated by Exposure: N/E

Emergency and First Aid Procedures: SKIN: Remove by wiping and wash with soap and water. EYES: Wash with copious amounts of water.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled: Spills should be absorbed or scraped up.

Waste Disposal Method: Use method outlined in local EPA and Governmental Regulations. Contact your local EPA office.

Precautions to be Taken in Handling and Storage: Good manufacturing practices should be followed in handling and storage.

Other Precautions: Surface subject to spills with this product can become slippery.

SECTION VIII - CONTROL MEASURES

Respiratory Protection (Specify Type): None Required

Ventilation Local Exhaust: N/A Special: N/A
Mechanical (General) N/A Other: N/A

Protective Gloves: None under Normal Use

Eye Protection: None under Normal Use

Other Protective Clothing or Equipment: None under Normal Use

Work Hygienic Practices: Normal Precautions common to good manufacturing practices should be followed.

HMIS CODES

FIRE: 1
HEALTH: 0
REACTANCE: 0
OTHER: 0



Material Safety Data Sheet
 May be used to comply with
 OSHA's Hazard Communication Standard
 29 CFR 1910.1200. Standard must be consulted
 for specific requirements

U.S. Department of Labor
 Occupational Safety and Health Administration
 (Non-Mandatory Form)
 Form Approved
 OMB No. 1218-0072

IDENTITY (as used on Label and List)

SUPER LUBE GREASE

Part Numbers- 82340, 21010, 21030, 21036, 41150, 41160
 41050, 41030, 41120, 41140, 21013, 21015, 11520

Note: Blank spaces are not permitted. If any item is
 not applicable, or no information is available, the
 space must be marked to indicate that.

SECTION I

Manufacturer's Name: SYNCO CHEMICAL CORPORATION
 Address: 24 DaVINCI DRIVE
 BOHEMIA, NY 11716

Emergency Telephone Number: 631-567-5300
 Telephone Number for Information: 631-567-5300
 Date Prepared: February 5, 2003
 Signature of Preparer (Optional):

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

<u>Hazardous Components</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Recommended Percentages</u>
(Specific Chemical/Identity; Common Name(s))			
SYNTHETIC HYDROCARBON	CAS# 68037-01-4		70-80%
HYDRO TREATED POLYMER	CAS# 8042-47-5		10-20%
ANTI-OXIDANT	CAS# 41484-35-9		.5-2%
FUMED SILICA	CAS# 68611-44-9		7-10%
THERMAL STABILIZER	CAS# 68648-89-5		3-5%
POLYTETRAFLUORETHYLENE	CAS# 9002-84-0		.5-2%
POLYGLYCOL	CAS# 025322-69-4		1-2%
PROPRIETARY ADDITIVES			.25 -1%

ALL INGREDIENTS ARE TSCA LISTED

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

<u>Boiling Point</u>	N/A	<u>Specific Gravity (H2O = 1)</u>	0.87 ± 0.02
<u>Vapor Pressure (mm Hg.)</u>	N/E	<u>Melting Point</u>	N/A
<u>Vapor Density (AIR = 1)</u>	N/E	<u>Evaporation Rate (Butyl Acetate = 1)</u>	N/E
<u>Solubility in Water</u>	Not Soluble in Water		
<u>Appearance and Odor</u>	Translucent White to Slightly Yellow, Slight Odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method used) >428°F (220°C) COC Flammable Limits: N/A LEL: N/E UEL: N/E

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam

Special Fire Fighting Procedures: Self-contained respiratory protection should be provided for fighting fires in confined areas.

Unusual Fire and Explosion Hazards: None Known

Other: Protective clothing(long sleeves, pants), eye wash, safety shower are always advisable when working with chemicals.

Engineering Controls

Ventilation In applications where sprays or mists may be generated, proper ventilation in accordance with good industrial hygiene should be provided

Section Nine Physical/Chemical Properties

Form	Liquid	pH	10.5	Color	None
Specific Gravity	1.050	Odor	None	Solubility	Complete
Boiling Point	190-212° F	Freezing Point	32° F	Evaporation Rate	> Water
% Volatile	> 70%				

Section Ten Stability and Reactivity

Stability: This product is stable at ambient temperatures and atmospheric pressures. It is not self-reactive and has a shelf life of at least one year under so called conditions. Conditions to avoid are temperatures above 130° F or below 32° F. Do not mix with other chemicals. Hazardous conditions may arise from improper mixing of chemicals.

Hazardous Decomposition Products: Thermal decomposition may generate toxic materials such as oxides of nitrogen.

Dangerous Polymerization: Will not occur. Conditions to avoid: None

Dangerous Reactions: May react with strong acids to give oxides of nitrogen

Section Eleven Toxicology Information

Acute Toxicity: This product has not been evaluated for its acute toxicology profile

Chronic Toxicity: This product has not been evaluated for its chronic toxicology profile

Carcinogenicity: This product does not contain a listed carcinogen from NTP, ACGIH or IARC.

Irritation: This product can be expected to be a skin and eye corrosive. No skin sensitization data is currently available.

Section Twelve Ecology Information

Ecotoxicity: The ecological toxicity of this product is not known.

Section Thirteen Disposal Considerations

Waste Disposal: Material that cannot be used according to label direction and is destined for disposal should be disposed of in accordance with all applicable regulations. Empty containers should be triple rinsed and offered for recycling or reconditioning, or disposed of in a sanitary landfill or for small containers(1 gallon or less), may be wrapped and discarded in trash. Waste generators are required to evaluate all waste material to determine if it is hazardous by characteristics or listing for compliance with RCRA and any local disposal procedures and regulations. NOTE: State and local regulations may be more stringent than Federal regulations

Section Fourteen Transport Information

DOT

Proper Shipping Name:	Not regulated	Hazard Class:	N/A	Packing Group:	N/A
ID Number:	N/A	DOT Label:	N/A	Emergency Guide No.:	N/A
Emergency Phone No.:	CIEMTREC 1-800-424-9300				

Section Fifteen Regulatory Information

Toxic Substances Control Act(TSCA): All of the components intentionally added to this product are listed on the on the U.S. EPA TSCA inventory. SARA Title III

Section 302 This product contains the following chemicals subject to SARA 302 reporting: None.

Section 311/312 This product is classified as an "immediate (acute) health hazard".

Section 313 *Chemicals marked with an asterisk in Section Two are subject to the reporting requirements for Section 313 of Title III of the Superfund Amendments

and Reauthorization Act(SARA) of 1986 and 40CFR Part 372. However, if this product is utilized for routine janitorial maintenance, it is exempted from this section, as stated in paragraph B.3.b Activity Exemptions of the Form R instructions.

(OSHA Hazard Communication Standard(29 CFR 1910.1200)

This product is hazardous by definition of the Hazard Communication Standard

NPCA Hazardous Material Identification System (HMIS Rating)

Health 2 Flammability 0 Reactivity 1 Personal Protective Eqpt. II

State Regulations

Pennsylvania/New Jersey/Massachusetts Right to Know

See "Section Two Composition" for listing of hazardous and top five ingredients present in concentration greater than 1%.

California Proposition 65: Components of this product which are present at a concentration which could require reporting under this statute are: None

Section Sixteen Other Information

Disclaimer: No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, are made with respect to information concerning the product referred to in this document. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, it is impossible to foresee every health effect or exposure risk incurred by the use of this product. All chemicals present unknown health hazards and should always be used with caution. The information and recommendations contained herein are presented in good faith and are supplied pursuant to 29 CFR 1910.1200. The user should review this information in conjunction with their knowledge of the application intended to determine the suitability of this product for such purpose. In no event will the supplier be responsible for any damages of any nature whatsoever, resulting from the use, reliance upon, or the misuse of this information. Furthermore, it is the direct responsibility of the user to comply with all applicable Federal, State and local regulations governing the use and disposal of this material. Prepared by: Regulatory Affairs Dept./P700-005

MATERIAL SAFETY DATA SHEET

ATT
CHILE
STERNER

Product Name: Penetro Wet

Date: Jan. 21, 2003

Section One Product and Company Information
Chemical Family: Aqueous solution Application: Cleaner CAS#: Mixture
Manufacturer: Stevens Co. Product Technical Information: 1-419-536-0222
P.O. Box 23312 Medical/Handling Emergency: 1-419-536-0222
Toledo, Ohio 43623 Transportation Emergency: Chemtrec 1-800-424-9300

Section Two Composition/Information on Ingredients

Component	Hazard	CAS#	OSHA PEL	ACGIH TLV	%
Water		7732-18-5			> 70
Sodium Nitrite	Oxidizer	8002-09-3	N/A	N/A	< 10
Nontonic Surfactant	Irritant	9016-45-9	N/A	N/A	< 10
Triethanolamine	Irritant	102-71-6	N/A	N/A	< 5
Anionic surfactant	Irritant	42502-46-1	N/A	N/A	< 5

Section Three Hazards Identification

Statement of Hazards: Caution. Causes eye and skin irritation
Fire and Explosion Hazards: This product is water based and represents little or no fire hazard at room temperature. Elevated temperatures may generate small quantities of combustible vapors, especially in enclosed spaces. Thermal decomposition products may include carbon monoxide, carbon dioxide and sulfur oxides.
Primary Route of Exposure: Skin and eye contact are the principal routes of exposure in this product.
Skin Contact: Skin contact can cause irritation with possible redness. Severity of action is highly dependent on contact time.
Eye Contact: Eye contact may cause irritation.
Ingestion: If swallowed, this product may cause irritation of mucosal linings of the mouth, throat, esophagus or stomach.
Inhalation: Inhalation may cause irritation of respiratory passages.
Carcinogenicity: IARC - No NTP - No OSHA - No ACGIH - No

Section Four First Aid Measures

Skin Contact: Remove contaminated shoes and clothing. Wash skin with soap and plenty of water for 15 minutes. Wash contaminated clothing before reuse.
Eye Contact: Flush immediately with water and remove contact lenses, if applicable. Then flush with large quantities of running water for 15 minutes. Hold eyelids apart during flushing to ensure complete rinsing of entire surface of eye and lids with water. Get medical attention, if necessary.
Ingestion: DO NOT induce vomiting. Rinse mouth with water. Then give 1-2 glasses of water or milk and call a physician or poison control center immediately. If vomiting occurs, keep head below hips to reduce risk of aspiration. Give water again. NEVER give anything by mouth to a person who is unconscious or convulsing. Get medical attention immediately.
Inhalation: Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Medical Conditions Aggravated: No data is available that addresses medical conditions that are recognized as being aggravated by exposure to this product.
Note to Physician: Treat exposed patients symptomatically.

Section Five Fire Fighting Measures

Flash Point(Method): Not Established **Flammable Limits:** Not determined.
Extinguishing Media: Use water spray, dry chemical, carbon dioxide or foam extinguishing agents unless contraindicated by surrounding environment.
Special Fire Fighting Procedures: Prevent human exposure to fire, smoke, fumes or products of combustion. Evacuate non-essential personnel from fire area.
All ignition sources should be extinguished. Fire fighters should wear appropriate protective equipment, including self contained breathing apparatus and impervious clothing. Keep containers cooled with water spray to prevent rupture from excess heat.
Fire and Explosion Hazards: No unusual fire or explosion hazards of this product are known.
Hazardous Products: Thermal decomposition of this product may generate oxides of carbon and sulfur.

Section Six Accidental Release Measures

Caution: Ventilate area immediately. If spilled, floors may be extremely slippery. Wear appropriate protective gear to avoid skin or eye contact. Extinguish all ignition sources. Dike and contain spill with inert material(sand, clay). Transfer liquid and solids to separate containers for recovery or proper disposal. Keep spill out of storm sewers and open bodies of water. After removal, flush area with water. Follow good industrial hygiene practices. Wash thoroughly after clean-up. If uncertain about proper disposal, contact your local waste disposal provider or the regional office of the Environmental Protection Agency for guidance.

Section Seven Handling and Storage

Handling: Avoid contact with skin or eyes. Avoid breathing vapor, spray or mist. Use product only according to label directions. If unsure about safe use, contact your supervisor immediately. Wash with soap and water after handling.
Storage: Store in original container in a cool, dry, well ventilated area away from sources of ignition. Store away from food or feed. Containers should be kept tightly closed when not in use. Keep in an area inaccessible to small children.

Section Eight Exposure Controls/Personal Protection

Personal Protective Equipment
Respiratory: Respiratory protection is not expected to be necessary under normal conditions of use. Where exposure cannot be adequately controlled by general or local ventilation, use appropriate respiratory protection to prevent over exposure. An approved dust/mist respirator would be recommended.
Gloves: Use water impervious gloves, such as latex or neoprene rubber.
Eye Protection: Chemical resistant goggles or face shield are recommended.

INTENTIONAL MISUSE BY DELIBERATE INHALATION OF **TOLUENE** HAS BEEN ASSOCIATED WITH LIVER, KIDNEY, AND BRAIN DAMAGE IN HUMANS. OVEREXPOSURE TO **TOLUENE** HAS BEEN FOUND TO CAUSE LIVER, KIDNEY, NASAL, AND BRAIN DAMAGE IN LABORATORY ANIMALS. REPEATED OVEREXPOSURE TO HIGH VAPOR CONCENTRATIONS (1000ppm) OF **N-HEXANE** CAN CAUSE IRREVERSIBLE NERVE DAMAGE. THIS NEUROTOXICITY CAN BE ENHANCED BY THE PRESENCE OF **METHYL ETHYL KETONE**.

Consult physician on all above cases.

=====
SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE
=====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Handle as a flammable liquid. Remove all ignition sources. Soak up wet material on a non-combustible absorbent and place in a closed metal container.

WASTE DISPOSAL METHOD

Dispose of in accordance with all local, state and federal regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store in cool, well ventilated area away from any ignition sources and strong oxidizing agents. Keep containers tightly closed when not in use. Do not transfer to plastic containers.

OTHER PRECAUTIONS

Ground and bond metal containers when not in use. No smoking in areas of use or storage. Use only non-sparking tools near wet adhesive or solvent vapors. Solvent vapor is much heavier than air and can collect in dangerous concentrations in floor drains or low areas.

=====
SECTION VIII - CONTROL MEASURES
=====

RESPIRATORY PROTECTION

Atmospheric levels should be maintained below the exposure guideline. For exposure to higher, or unknown, levels use an approved supplied air respirator or an approved positive pressure self-contained breathing apparatus if these levels are exceeded.

VENTILATION

Mechanical ventilation and/or local exhaust, sufficient in pattern and volume, to meet TLV requirements and prevent explosive concentrations of solvent vapors.

PROTECTIVE GLOVES

Use Neoprene, vinyl or natural rubber gloves.

EYE PROTECTION

Use safety glasses or chemical goggles.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

Eye wash fountain or bottles.
Solvent insoluble barrier hand cream

WORK/HYGIENIC PRACTICES

Remove contaminated clothing. Wash skin and launder clothing before use.

=====
SECTION IX - DISCLAIMER
=====

ALL INFORMATION IS BASED UPON DATA FROM MFG'S AND/OR TECHNICAL SOURCE, & IS BELIEVED TO BE ACCURATE. CONDITIONS OF USE ARE BEYOND OUR CONTROL & THEREFORE USERS ARE RESPONSIBLE TO VERIFY THIS DATA UNDER THEIR OWN CONDITIONS TO DETERMINE SUITABILITY FOR THEIR PURPOSE, & THEY ASSUME ALL RISKS OF USE, HANDLING, & DISPOSAL, OR FORM USE OF INFO CONTAINED HEREIN.

THIS INFORMATION RELATES ONLY TO THE PRODUCT DESIGNATED HEREIN, AND DOES NOT RELATE TO ITS USE IN COMBINATION WITH OTHER MATERIAL OR IN ANY OTHER PROCESS.

ADDENDUM TO MSDS

UNUSUAL FIRE AND EXPLOSION HAZARDS

Volatile solvent constituent can readily form explosive or flammable mixtures in air. Vapors can flow along surfaces to distant ignition sources and flash back.

===== SECTION V - REACTIVITY DATA =====

STABILITY: STABLE

CONDITIONS TO AVOID

Keep away from all sources of ignition or heat.

INCOMPATIBILITY (MATERIALS TO AVOID)

Strong oxidizing agents can cause spontaneous combustion.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS

Burning may produce fumes of carbon dioxide, carbon monoxide, hydrogen cyanide, phenols and nitrous oxides.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

===== SECTION VI - HEALTH HAZARD DATA =====

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

May cause headache, dizziness and drowsiness. High concentrations, or prolonged exposure to lower concentrations, may be irritating to mucous membranes and may cause CNS depression.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE

SKIN-Prolonged or repeated exposure may result in drying of the skin, which can cause skin irritation or dermatitis. May cause temporary staining.

EYES-Liquid or high vapor concentrations can be severely irritating to the eyes.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

May be irritating. Skin contact may play a role in respiratory sensitization and protective rubber gloves should be worn at all times when working with this product.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

Moderate CNS depression may be shown by giddiness, headache, dizziness and nausea. If vomiting occurs, keep head below hips to prevent aspiration of liquid into lungs. Aspiration pneumonitis may be evidenced by coughing and cyanosis.

HEALTH HAZARDS (ACUTE AND CHRONIC)

Eye: May cause irritation with tearing.

Skin: May cause skin irritation, dermatitis, staining and allergic sensitivity.

Ingestion: May cause irritation and corrosion on the mouth and stomach tissue.

Inhalation: May cause irritation to upper respiratory tract and at higher concentrations narcosis or CNS depression. May cause respiratory sensitivity with asthma like symptoms.

CARCINOGENICITY: NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? NO

This product contains chemicals known to the state of California to cause cancer and/or birth defects or other reproductive harm.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

Skin contact may aggravate an existing dermatitis. Preexisting eye and respiratory disorders may be aggravated.

EMERGENCY AND FIRST AID PROCEDURES

Eyes: Immediately irrigate with flowing water for 15 minutes.

Skin: Wash off in flowing water or shower.

Ingestion: Do not induce vomiting. If vomiting should occur spontaneously keep victims head below knees to prevent aspiration into the lungs.

Inhalation: Remove to fresh air. Restore breathing, if required.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: UK 148
PRODUCT CODE: UK 148

HMS CODES: H F R P
2 3 0 K

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: STABOND CORPORATION
ADDRESS: 14010 S. WESTERN AVE., GARDENA CA. 90249
EMERGENCY PHONE: 800 424 9300
INFORMATION PHONE: 310 380 6168

DATE REVISED: 12-01-03
REASON REVISED: UPDATE
NAME OF PREPARER: G. KINNARD

SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OCCUPATIONAL EXPOSURE LIMITS			VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
		OSHA PEL	ACGIH TLV	OTHER		
*METHYL ETHYL KETONE	78-93-3	200 ppm	200 ppm		70.0 @ 68°F	62
N-PROPYL ACETATE	109-60-4	200 ppm	200 ppm		47.5 @ 68°F	10
*4,4' DIPHENYLMETHANE-DIISOCYANATE	101-68-8	0.02 ppm	.005ppm		< 1x10 ⁻⁵ @ 77°F	5
*CHLOROBENZENE	108-90-7	75 ppm	75 ppm		11.8 @ 77°F	5

*Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title II and of 40 CFR 372.

WARNING THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: 175°F to 270°F
SPECIFIC GRAVITY (H2O=1): 0.9
EVAPORATION RATE: SLOWER THAN ETHER
VAPOR DENSITY: HEAVIER THAN AIR
COATING V.O.C.: 5.76 LB/GL (690 GRAMS/LITER)
MATERIAL V.O.C.: 5.76 LB/GL (690 GRAMS/LITER)
SOLUBILITY IN WATER: NIL
APPEARANCE AND ODOR: MEDIUM VISCOSITY CLEAR LIQUID

SECTION IV - FIRE AND EXPLOSION HAZARD AREA

FLASH POINT: 16°F METHOD USED: TCC
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1.3% UPPER: 11.4%

EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL, WATER FOG
SPECIAL FIREFIGHTING PROCEDURES
Self-contained breathing apparatus and full protective clothing.

SOUND SPECIALTY COATINGS, CORP.

SECTION TWELVE ECOLOGICAL INFORMATION

BIOCONCENTRATION POTENTIAL IS LOW
BIODEGRADATION IS BELOW DETECTABLE LIMITS ECOTOXICOLOGY; HIGHLY TOXIC TO
AQUATIC ORGANISMS 0.1 TO 1.0MG/L

SECTION THIRTEEN DISPOSAL

ANY DISPOSAL MUST BE IN COMPLETE COMPLIANCE WITH ALL LOCAL, STATE, AND FEDERAL
REGULATIONS.
DO NOT ALLOW IN STORM DRAINS, SEWERS, ON THE GROUND OR INTO ANY BODY OF WATER.

SECTION FOURTEEN TRANSPORTATION

DOT NOT REGULATED

SECTION FIFTEEN REGULATORY INFORMATION

US REG'S. SARA 313 N/A TI SARA TITLE III SECTION 313.
SARA HAZARD CATEGORY; IMMEDIATE HEALTH HAZARD DUE TO POSSIBLE ALLERGIC SKIN
REACTION. TOXIC SUBSTANCES (TSCA) NOT REQUIRED TO BE LISTED.
OSHA HAZARD: THIS PRODUCT IS A HAZARDOUS CHEMICAL PER 29 CFR 1910, 1200.
CANADIAN REGULATIONS: WHMIS: D2B SKIN SENSITIZER.

CPR; MSDS CONTAINS ALL INFORMATION REQUIRED BY THE CPR.

Page 5

SOUND SPECIALTY COATINGS, CORP.

SECTION EIGHT PERSONAL PROTECTION

RESPIRATORY PROTECTION NONE. GOOD VENTILATION.
PERSONAL PROTECTION SAFETY GLASSES, PROTECTIVE CLOTHING, GLOVES, BOOTS.

SECTION NINE PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE PIGMENTED OR CLEAR LIQUID
ODOR VERY SLIGHT EPOXY
VAPOR PRESSURE N/A
VAPOR DENSITY N/A
BOILING POINT N/A
SOLUBILITY IN WATER NONE
SPECIFIC GRAVITY 1.6

SECTION TEN STABILITY AND REACTIVITY

STABLE AT AMBIENT TEMPERATURE HIGH HEAT WILL CAUSE DEGRADING OF RESIN.

SECTION ELEVEN TOXICOLOGICAL

SKIN THE LK50 FOR SKIN ABSORPTION IN RABBITS IS 20,000MG/KG.
INGESTION THE ORAL LD50 FOR RATS IS >5000MG/KG.
MUTAGENICITY (EFFECTS ON GENETIC MATERIAL): ANIMAL MUTAGENICITY STUDIES WERE NEGATIVE. IN VITRO MUTAGENICITY STUDIES WERE NEGATIVE IN SOME CASES AND POSITIVE IN OTHERS.

SOUND SPECIALTY COATINGS, CORP.**SECTION FOUR FIRST AID**

EYES FLUSH EYES WITH FRESH WATER FOR AT LEAST 15 MINUTES.
SKIN WASH OFF WITH FRESH FLOW OF WATER OR TAKE A SHOWER.
INGESTION SEE A PHYSICIAN. DO NOT INDUCE VOMITING UNLESS DIRECTED
TO DO SO BY A PHYSICIAN.
INHALATION NO REACTIONS ARE EXPECTED. FRESH AIR.

SECTION FIVE FIRE FIGHTING

FLASH POINT 485F 252C
METHOD N/A
AUTOIGNITION TEMP. N/A
FLAMMABILITY
LIMITS UFL LFL N/A
HAZARDOUS COMBUSTION PRODUCTS: WATER, CARBON MONOXIDE, PHENOLICS.

EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL, WATER SPRAY.

FIRE FIGHTING INSTRUCTIONS: SPRAY WITH WATER TO COOL. AND UNTIL FIRE IS OUT.
PROTECTIVE EQUIPMENT: POSITIVE PRESSURE BREATHING APPARATUS (SELF CONTAINED)
FULL PROTECTIVE CLOTHING.

SECTION SIX ACCIDENTAL SPILL

PROTECT PEOPLE ISOLATE HAZARD AREA AND KEEP PEOPLE AWAY.
PROTECT ENVIRONMENT CONTAIN WITH DIKE, CLOSE STORM DRAINS AND SEWERS,
KEEP SPARKS AWAY.
CLEANUP SOAK UP WITH ABSORBENT MATERIAL, SAND POLYPROPYLEN OR
FIBEROUS MATERIAL. WASH WITH HOT SOAPY WATER.
DO NOT USE SOLVENTS.

SECTION SEVEN HANDLING AND STORAGE

HANDLING PRACTICE SAFE HANDLING PRACTICES. AVOID GETTING ON SKIN, IN
EYES, BREATHING HEATED VAPORS. ALWAYS KEEP AWAY FROM
CHILDREN.
STORAGE MAY BE KEPT IN SEALED CONTAINERS AT AMBIENT TEMPERATURE
FOR 12-24 MONTHS.

SSCC

SOUND SPECIALTY COATINGS, CORP. MATERIAL SAFETY DATA SHEET

SECTION ONE IDENTIFICATION

PRODUCT NAME	AQUAPLY M
CHEMICAL FAMILY	EPOXY RESIN & CURTIVE AGENT
CHEMICAL NAME	BISPHENOL A/ EPICHLORCHYDRIN/POLYAMIDE BLEND
MANUFACTURER	SOUND SPECIALTY COATINGS, CORP. P.O. BOX 13160, BURTON, WA. 98013
TELEPHONE	206-517-2611
EMERGENCY NUMBER	206-517-2611
DATE PREPARED	02 MAY 96, updated, '98'00,'02,'04
INTENDED USE	ADHESIVE, COATING, LO VOC, HAP FREE

SECTION TWO INGREDIENTS

%	CAS NUMBER AND CHEMICAL NAME
100	025068-38-6 BISPHENOL A/EPICHLOROHYDRIN/POLYAMIDE BLEND
	OR
100	025085-99-8 BISPHENOL A/EPICHLOROHYDRIN/POLYAMIDE BLEND

THE REMAINING COMPONENTS ARE TRADE SECRET

SECTION THREE HAZARDS AND HEALTH EFFECTS

EXPOSURE LIMITS	CANCER-NOT CLASSIFIABLE AS A CARCINOGEN
BIRTH DEFECTS	UNLIKELY
REPRODUCTION	DOES NOT INTERFERE
EYES	MAY CAUSE SLIGHT IRRITATION
SKIN	MAY CAUSE ALLERGIC SKIN REACTION
INGESTION	SWALLOWING SMALL AMOUNTS IS NOT CONSIDERED TOXIC
INHALATION	UNLIKELY TO CAUSE ANY IRRITATION DUE TO LOW VAPOR CONTENT.

SECTION 7**TOXICOLOGICAL PROPERTIES**

ROUTES OF ENTRY

SKIN CONTACT.....no hazard in normal industrial use. Exposure to hot material may cause thermal burns.
EYES.....particulates may scratch eye surfaces cause mechanical irritation.
INHALATION.....negligible hazard at ambient temperature.
INGESTION.....attention contains allergen products.

CHRONIC OVER EXPOSURE EFFECTS..... some components are irritating and sensible for the skin and eyes.

CARCINOGENECITY.....presence due to aromatic fraction of hydrocarbon.

REPRODUCTIVE EFFECTS.....presence due to aromatic fraction of hydrocarbon

MUTAGENICITY.....small traces.

SECTION 8**PREVENTIVE MEASURES**

STORAGE AND HANDLING :

Store in a cool, dry location. Handle in a well ventilated area. Local exhaust recommended. Avoid contact with skin and eyes, inhalation of dust and vapours.

ENVIRONMENTAL TOXICITY DATA :

Environmental effects have not been determined.

WASTE DISPOSAL METHOD :

In accordance with local, provincial and federal regulations. Contact regional environmental agency.

RESPIRATORY PROTECTION :

(NIOSH/MSHA) approved for dusts and organic vapours.

PROTECTIVE GLOVES :

Impervious and thermal gloves.

EYE PROTECTION :

Chemical safety goggles.

VENTILATION

Local exhaust recommended. Wear respiratory protection in the absence of adequate ventilation.

SECTION 9**FIRST AID**

EYES.....Immediately flush with water for at least 15 minutes, get prompt medical attention.

SKIN.....wash thoroughly with soap and water. Remove contaminated clothing and wash before re-use.
Get medical attention if irritation persists or dermatitis develops.

INHALATION.....Remove to fresh air. Aid or restore breathings if necessary. Get medical attention.

INGESTION.....Have victim rinse mouth out with water. If conscious give two glasses of water.
If vomiting occurs naturally, rinse mouth and repeat administration of water. Get medical attention.

MATERIAL SAFETY DATA SHEET

4/29/05

OR10-0428

SECTION 1	HAZARDOUS INGREDIENTS OF MATERIAL	
CHEMICAL IDENTITY	CONCENTRATION	CAS
MAGNESIUM SILICATE	5-10%	14807-96-6
CARBON BLACK	10-30%	1333-86-4
ZINC OXIDE	1-5%	1314-13-2

SECTION 2	PREPARATION OF MATERIAL SAFETY DATA SHEET
PREPARED BY	TERRY JONES
PHONE NUMBER	1-819-864-4284
DATE PREPARED	APRIL 28, 2005

SECTION 3	MATERIAL IDENTIFICATION AND USE
MANUFACTURER'S NAME	SOUCY TECHNO
MANUFACTURER'S ADDRESS	468 ST-ROCH NORD C, ROCK FOREST PQ- JIN 2R6
MANUFACTURER'S PHONE	1-819-864-4284
PRODUCT IDENTIFIER	OR10-0428
PRODUCT USE	unvulcanized rubber compound

SECTION 4	PHYSICAL DATA OF PRODUCT
PHYSICAL STATE	solid
ODOUR AND APPEARANCE	typical odour of black rubber
SPECIFIC GRAVITY	1.241
COEFFICIENT OF WATER/OIL DISTRIBUTION	insoluble

SECTION 5	FIRE AND EXPLOSION HAZARD OF PRODUCT
CONDITIONS OF INFLAMMABILITY	flammable solid contact with combustible material may cause fire
MEANS OF EXTINCTION	use water, dry chemical, CO2, alcohol foam.
FLASHPOINT AND METHOD OF DETERMINATION	500 deg F, greater than decomposes
HAZARDOUS COMBUSTION PRODUCTS	oxygen, lean conditions may produce carbon monoxide and irritating smoke.

SECTION 6	REACTIVITY DATA
CHEMICAL STABILITY	stable
INCOMPATIBLE MATERIAL	strong oxidizing agents
CONDITIONS OF REACTIVITY	when heated, the rubber polymerizes
HAZARDOUS DECOMPOSITION PRODUCTS	we find in major part some carbon monoxide and dioxide, due to carbon black and hydrocarbon, at all temperatures, possible emission of sulphur, nitrogen and formaldehyde, avoid excessive heat.

Mark Myers

Raney Hodge

360-674-2353

Immediate Health	Delayed Health	Fire	Pressure	Reactivity
NO	NO	NO	NO	NO

SARA Toxic Release Inventory (TRI) (313):

There are no components in this product on the SARA 313 list.

Toxic Substances Control Act (TSCA) Status:

All component(s) of this material is(are) listed on the EPA/TSCA Inventory of Chemical Substances.

Other Chemical Inventories:

Component(s) of this material is (are) listed on the Australian AICS, Canadian DSL, European EINECS,

State Regulation

This material is not regulated by California Prop 65, New Jersey Right-to-Know Chemical List or Pennsylvania Right-To-Know Chemical List. However for details on your regulation requirements you should contact the appropriate agency in your state.

SECTION 16

OTHER INFORMATION

Revision#: 0

Revision Date: 12/20/2004

Review Date: 12/20/2004

Revisions since last change (discussion): This Material Safety Data Sheet (MSDS) has been created to fully comply with the guidance contained in the ANSI MSDS standard (ANSI Z400.1-1998). We encourage you to take the opportunity to read the MSDS and review the information contained therein.

SECTION 17

LABEL INFORMATION

READ AND UNDERSTAND MATERIAL SAFETY DATA SHEET BEFORE HANDLING OR DISPOSING OF PRODUCT. THIS LABEL COMPLIES WITH THE REQUIREMENTS OF THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200) FOR USE IN THE WORKPLACE. THIS LABEL IS NOT INTENDED TO BE USED WITH PACKAGING INTENDED FOR SALE TO CONSUMERS AND MAY NOT CONFORM WITH THE REQUIREMENTS OF THE CONSUMER PRODUCT SAFETY ACT OR OTHER RELATED REGULATORY REQUIREMENTS.

PRODUCT CODE(S): 61526, 61538

QUAKER STATE™ Full Synthetic SAE 75W-90 GL-5

ATTENTION!

PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE OIL ACNE OR DERMATITIS.

Precautionary Measures:

Avoid prolonged or repeated contact with eyes, skin and clothing. Wash thoroughly after handling.

FIRST AID

Inhalation: Remove victim to fresh air and provide oxygen if breathing is difficult. Get medical attention.

Skin Contact: Remove contaminated clothing and shoes and wipe excess from skin. Flush skin with water, then wash with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned.

Eye Contact: Flush with water. If irritation occurs, get medical attention.

Ingestion: Do not induce vomiting. In general, no treatment is necessary unless large quantities of product are

ingested. However, get medical attention.

FIRE

In case of fire, Use water fog, 'alcohol foam', dry chemical or carbon dioxide (CO2) to extinguish flames. Do not use a direct stream of water. Material will float and can be re-ignited on surface of water.

SPILL OR LEAK

Dike and contain spill.

FOR LARGE SPILLS: Remove with vacuum truck or pump to storage/salvage vessels.

FOR SMALL SPILLS: Soak up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal.

CONTAINS: Polyalphaolefin synthetic base oil, 68037-01-4; Proprietary additives, Mixture

NFPA Rating (Health, Fire, Reactivity): 0, 1, 0

TRANSPORTATION

US Department of Transportation Classification

This material is not subject to DOT regulations under 49 CFR Parts 171-180.

Oil: This product is an oil under 49CFR (DOT) Part 130. If shipped by rail or highway in a tank with a capacity of 3500 gallons or more, it is subject to these requirements. Mixtures or solutions containing 10% or more of this product may also be subject to this rule.

CAUTION: Misuse of empty containers can be hazardous. Empty containers can be hazardous if used to store toxic, flammable, or reactive materials. Cutting or welding of empty containers might cause fire, explosion or toxic fumes from residues. Do not pressurize or expose to open flames or heat. Keep container closed and drum bungs in place.

Name and Address

SOPUS Products
P.O. Box 4427
Houston, TX 77210-4427

ADMINISTRATIVE INFORMATION

MANUFACTURER ADDRESS: SOPUS Products, P.O. Box 4427, Houston, TX. 77210-4427

THE INFORMATION CONTAINED IN THIS DATA SHEET IS BASED ON THE DATA AVAILABLE TO US AT THIS TIME, AND IS BELIEVED TO BE ACCURATE BASED UPON THAT : IT IS PROVIDED INDEPENDENTLY OF ANY SALE OF THE PRODUCT, FOR PURPOSE OF HAZARD COMMUNICATION. IT IS NOT INTENDED TO CONSTITUTE PRODUCT PERFORMANCE INFORMATION, AND NO EXPRESS OR IMPLIED WARRANTY OF ANY KIND IS MADE WITH RESPECT TO THE PRODUCT, UNDERLYING DATA OR THE INFORMATION CONTAINED HEREIN. YOU ARE URGED TO OBTAIN DATA SHEETS FOR ALL PRODUCTS YOU BUY, PROCESS, USE OR DISTRIBUTE, AND ARE ENCOURAGED TO ADVISE THOSE WHO MAY COME IN CONTACT WITH SUCH PRODUCTS OF THE INFORMATION CONTAINED HEREIN.

TO DETERMINE THE APPLICABILITY OR EFFECT OF ANY LAW OR REGULATION WITH RESPECT TO THE PRODUCT, YOU SHOULD CONSULT WITH YOUR LEGAL ADVISOR OR THE APPROPRIATE GOVERNMENT AGENCY. WE WILL NOT PROVIDE ADVICE ON SUCH MATTERS, OR BE RESPONSIBLE FOR ANY INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN. THE UNDERLYING DATA, AND THE INFORMATION PROVIDED HEREIN AS A RESULT OF THAT DATA, IS THE PROPERTY OF SOPUS PRODUCTS AND IS NOT TO BE THE SUBJECT OF SALE OR EXCHANGE WITHOUT THE EXPRESS WRITTEN CONSENT OF SOPUS PRODUCTS.

43650-29832-100R-12/20/2004

SECTION 12**ECOLOGICAL INFORMATION****Environmental Impact Summary:**

There is no ecological data available for this product. However, this product is an oil. It is persistent and does not readily biodegrade. However, it does not bioaccumulate.

SECTION 13**DISPOSAL CONSIDERATIONS****RCRA Information:**

Under RCRA, it is the responsibility of the user of the material to determine, at the time of the disposal, whether the material meets RCRA criteria for hazardous waste. This is because material uses, transformations, mixtures, processes, etc. may affect the classification. Refer to the latest EPA, state and local regulations regarding proper disposal.

SECTION 14**TRANSPORT INFORMATION****US Department of Transportation Classification**

This material is not subject to DOT regulations under 49 CFR Parts 171-180.

Oil: This product is an oil under 49CFR (DOT) Part 130. If shipped by rail or highway in a tank with a capacity of 3500 gallons or more, it is subject to these requirements. Mixtures or solutions containing 10% or more of this product may also be subject to this rule.

International Air Transport Association

Not regulated under IATA rules.

International Maritime Organization Classification

Not regulated under International Maritime Organization rules.

SECTION 15**REGULATORY INFORMATION****Federal Regulatory Status****OSHA Classification:**

Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

WHMIS Classification: Not a controlled substance.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Ozone Depleting Substances (40 CFR 82 Clean Air Act):

This material does not contain nor was it directly manufactured with any Class I or Class II ozone depleting substances.

Superfund Amendment & Reauthorization Act (SARA) Title III:

There are no components in this product on the SARA 302 list.

SARA Hazard Categories (311/312):

health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 CFR 1910.134.

Types of respirator(s) to be considered in the selection process include:

For Mist: Air Purifying, R or P style NIOSH approved respirator.

For Vapors: Air Purifying, R or P style prefilter & organic cartridge, NIOSH approved respirator.

Self-contained breathing apparatus for use in environments with unknown concentrations or emergency situations.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor: Liquid. Mild odor.
 Substance Chemical Family: Lubricants
 Physical State: Liquid

Flash Point	> 300 °F [Cleveland Open Cup]	Odor	Mild odor.
Pour Point	-40 °F	Specific Gravity	0.867
Viscosity	> 400 cSt @ 40 °C		

Odor Threshold: Not Determined
 Partition Coefficient: Not Determined
 pH: Not Determined

SECTION 10 REACTIVITY AND STABILITY

Stability:
 Material is stable under normal conditions.

Conditions to Avoid:
 Avoid heat and open flames.

Materials to Avoid:
 Avoid contact with strong oxidizing agents.

Hazardous Decomposition Products:

Thermal decomposition products are highly dependent on combustion conditions. A complex mixture of airborne solids, liquids and gases will evolve when this material undergoes pyrolysis or combustion. Aldehydes, Carbon Monoxide, Carbon Dioxide, Ketones and other unidentified organic compounds may be formed upon combustion.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Toxicity

TEST	Result	OSHA Classification	Material Tested
Dermal LD50	>2 g/kg(Rabbit)	Non-Toxic	Based on components(s)
Inhalation LC50	>5 mg/l(Rat)	Non-Toxic	Based on components(s)
Oral LD50	>2 g/kg(Rat)	Non-Toxic	Based on components(s)

Carcinogenicity Classification

Chemical Name	NTP	IARC	ACGIH	OSHA
Synthetic Gear Oil	No	Not Reviewed	No	No

FOR SMALL SPILLS: Soak up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal.

Reporting:
 CERCLA: Product is covered by EPA's Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) petroleum exclusion. Releases to air, land, or water are not reportable under CERCLA (Superfund).

CWA: This product is an oil as defined under Section 311 of EPA's Clean Water Act (CWA). Spills into or leading to surface waters that cause a sheen must be reported to the National Response Center, 1-800-424-8802.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures:
 Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet. Launder contaminated clothing before reuse. Properly dispose of contaminated leather articles such as shoes or belts that cannot be decontaminated. Avoid heat, open flames, including pilot lights, and strong oxidizing agents. Use explosion-proof ventilation to prevent vapor accumulation. Ground all handling equipment to prevent sparking.

Storage:
 Do not store in open or unlabeled containers. Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.

Container Warnings:
 Keep containers closed when not in use. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical	Limit	TWA	STEL	Ceiling	Notation
Polyalphaolefin	ACGIH TLV	5 mg/m ³	10 mg/m ³		
Polyalphaolefin	OSHA PEL	5 mg/m ³			

Exposure Controls

Provide adequate ventilation to control airborne concentrations below the exposure guidelines/limits.

Personal Protection

Personal protective equipment (PPE) selections vary based on potential exposure conditions such as handling practices, concentration and ventilation. Information on the selection of eye, skin and respiratory protection for use with this material is provided below.

Eye Protection:
 Chemical Goggles, or Safety glasses with side shields

Skin Protection:
 Use protective clothing which is chemically resistant to this material. Selection of protective clothing depends on potential exposure conditions and may include gloves, boots, suits and other items. The selection(s) should take into account such factors as job task, type of exposure and durability requirements.

Published literature, test data and/or glove and clothing manufacturers indicate the best protection is provided by:
 Neoprene, or Nitrile Rubber

Respiratory Protection:
 If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker

Signs and Symptoms:
Irritation as noted above.

Aggravated Medical Conditions:
Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to this product.

For additional health information, refer to section 11.

SECTION 4

FIRST AID MEASURES

Inhalation:

Remove victim to fresh air and provide oxygen if breathing is difficult. Get medical attention.

Skin:

Remove contaminated clothing and shoes and wipe excess from skin. Flush skin with water, then wash with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned.

Eye:

Flush with water. If irritation occurs, get medical attention.

Ingestion:

Do not induce vomiting. In general, no treatment is necessary unless large quantities of product are ingested. However, get medical attention.

Note to Physician:

In general, emesis induction is unnecessary in high viscosity, low volatility products such as oils and greases.

SECTION 5

FIRE FIGHTING MEASURES

Flash Point [Method]: >300 °F/>148.89 °C [Cleveland Open Cup]

Upper Flammability Limit: Not Determined

Lower Flammability Limit: Not Determined

Extinguishing Media:

This material is non-flammable. Material will float and can be re-ignited on surface of water. Use water fog, 'alcohol foam', dry chemical or carbon dioxide (CO₂) to extinguish flames. Do not use a direct stream of water.

Fire Fighting Instructions:

Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure, NIOSH approved, self-contained breathing apparatus. This material is non-flammable.

Unusual Fire Hazards:

Material may ignite when preheated.

SECTION 6

ACCIDENTAL RELEASE MEASURES

Protective Measures:

May burn although not readily ignitable.

Wear appropriate personal protective equipment when cleaning up spills. Refer to Section 8.

Spill Management:

FOR LARGE SPILLS: Remove with vacuum truck or pump to storage/salvage vessels.

MATERIAL SAFETY DATA SHEET

Review Date: 12/20/2004

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: **QUAKER STATE™ Full Synthetic SAE 75W-90 GL-5**

MSDS NUMBER: 402407LU - 0
PRODUCT CODE(S): 61525, 61538

PRODUCT USE: Gear lubricant

MANUFACTURER

SOPUS Products
P.O. Box 4427
Houston, TX, 77210-4427

TELEPHONE NUMBERS

Spill Information: (877) 242-7400
Health Information: (877) 504-9351
MSDS Assistance Number: (877) 276-7285

SECTION 2 PRODUCT/INGREDIENTS

INGREDIENTS	CAS#	CONCENTRATION
Synthetic Gear Oil	66037-01-4	90 - 99 %weight
Polyalphaolefin synthetic base oil	Mixture	1 - 10 %weight
Proprietary additives		

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance & Odor: Liquid. Mild odor.
Health Hazards: No known immediate health hazards.
Physical Hazards: No known physical hazards.
NFPA Rating (Health, Fire, Reactivity): 0, 1, 0
Hazard Rating: Least - 0 Slight - 1 Moderate - 2 High - 3 Extreme - 4

Route(s) of Exposure: Skin

Inhalation:

Inhalation of vapors (generated at high temperatures only) or oil mist may cause mild irritation of the nose, throat, and respiratory tract.

Eye Irritation:

Lubricating oils are generally considered no more than minimally irritating to the eyes.

Skin Contact:

Lubricating oils are generally considered no more than minimally irritating to the skin. Prolonged and repeated contact may result in defatting and drying of the skin that may cause various skin disorders such as dermatitis, folliculitis or oil acne.

Ingestion:

Lubricating oils are generally no more than slightly toxic if swallowed.

IMPLEMENTED TO REDUCE EXPOSURE.

VENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES: WEAR RESISTANT GLOVES (CONSULT YOUR SAFETY EQUIPMENT SUPPLIER).

EYE PROTECTION: CHEMICAL SPLASH GOGGLES IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. CONSULT YOUR SAFETY REPRESENTATIVE.

OTHER PROTECTIVE EQUIPMENT: TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

SECTION IX

SPECIAL PRECAUTIONS OR OTHER COMMENTS:

CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED, SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THIS DATA SHEET MUST BE OBSERVED.

WARNING!!! SUDDEN RELEASE OF HOT ORGANIC CHEMICAL VAPORS OR MIST FROM PROCESS EQUIPMENT OPERATING AT ELEVATED TEMPERATURE AND PRESSURE OR SUDDEN INGRESS OF AIR INTO A VACUUM EQUIPMENT MAY RESULT IN IGNITIONS WITHOUT THE PRESENCE OF OBVIOUS IGNITION SOURCES. "AUTO IGNITION" OR "IGNITION" TEMPERATURE VALUES CANNOT BE TREATED AS SAFE OPERATING TEMPERATURES IN CHEMICAL PROCESSES WITHOUT ANALYSIS OF THE ACTUAL PROCESS CONDITIONS. ANY USE OF THIS PRODUCT IN ELEVATED TEMPERATURE PROCESSES SHOULD BE THOROUGHLY EVALUATED TO ESTABLISH AND MAINTAIN SAFE OPERATING CONDITIONS.

HYDROCARBON SOLVENTS ARE BASICALLY NON-CONDUCTORS OF ELECTRICITY AND CAN BECOME ELECTROSTATICALLY CHARGED DURING MIXING, FILTERING OR PUMPING AT HIGH FLOW RATES. IF THIS CHARGE REACHES A SUFFICIENTLY HIGH LEVEL, SPARKS CAN FORM THAT MAY IGNITE THE VAPORS OF FLAMMABLE LIQUIDS.

THE INFORMATION PROVIDED HEREIN OBTAINED FROM SOURCES BELIEVED TO BE RELIABLE. WE PROVIDE NO WARRANTIES, EITHER EXPRESSED OR IMPLIED FOR THE ACCURACY OR COMPLETENESS OF THE DATA CONTAINED HEREIN. THIS INFORMATION IS OFFERED FOR YOUR CONSIDERATION AND INVESTIGATION. YOU SHOULD INSURE THAT YOU HAVE ALL CURRENT DATA RELEVANT TO YOUR PARTICULAR USE.

BASED ON THE AVAILABLE INFORMATION, THIS MATERIAL CANNOT BE CLASSIFIED WITH REGARD TO CARCINOGENICITY.

THIS MATERIAL IS NOT LISTED AS A CARCINOGEN BY IARC, NTP OR OSHA.

SECTION VII

CONTROL MEASURES (SPILL OR LEAK PROCEDURES):

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

SMALL SPILL: ABSORB LIQUID ON VERMICULITE, FLOOR ABSORBENT OR OTHER ABSORBENT MATERIAL.

LARGE SPILL: ELIMINATE ALL IGNITION SOURCES (FLARES, FLAMES INCLUDING PILOT LIGHTS, ELECTRICAL SPARKS). PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE. PREVENT FROM ENTERING DRAINS, SEWERS, SEWERS STREAMS OR OTHER BODIES OF WATER. PREVENT FROM SPREADING. IF RUNOFF OCCURS, NOTIFY AUTHORITIES AS REQUIRED THAT A SPILL HAS OCCURRED. PUMP OR VACUUM TRANSFER SPILLED PRODUCT TO CLEAN CONTAINERS FOR RECOVERY. ABSORB UNRECOVERABLE PRODUCT. TRANSFER CONTAMINATED ABSORBENT, SOIL AND OTHER MATERIALS TO CONTAINERS FOR DISPOSAL.

WASTE DISPOSAL METHOD:

SMALL SPILL: DISPOSE OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

LARGE SPILL: DISPOSE OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

SECTION VIII

PROTECTIVE EQUIPMENT TO BE USED:

RESPIRATORY PROTECTION: IF WORKPLACE EXPOSURE LIMIT(S) OF PRODUCT OR ANY COMPONENT IS EXCEEDED (SEE SECTION II), A NIOSH/MSHA APPROVED AIR SUPPLIED RESPIRATOR IS ADVISED IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL CONDITIONS (SEE YOUR INDUSTRIAL HYGIENIST). ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE

VENTILATION AND IGNITED BY HEAT, PILOT LIGHTS, OTHER FLAMES AND IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.

NFPA CODES: HEALTH - 1 FLAMMABILITY - 2 REACTIVITY - 0

SECTION V
REACTIVITY DATA:

PRODUCT IS STABLE.
INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZING AGENTS.
HAZARDOUS POLYMERIZATION: CANNOT OCCUR

SECTION VI
HEALTH HAZARD DATA:

PERMISSIBLE EXPOSURE LEVEL 100 PPM
THRESHOLD LIMIT VALUE 100 PPM

EFFECTS OF ACUTE OVEREXPOSURE:

EYES - EXPOSURE MAY CAUSE MILD EYE IRRITATION. SYMPTOMS MAY INCLUDE STINGING, TEARING, AND REDNESS.
SKIN - EXPOSURE CAUSES SKIN IRRITATION. PROLONGED OR REPEATED EXPOSURE MAY DRY THE SKIN. SYMPTOMS MAY INCLUDE REDNESS, BURNING, DRYING AND CRACKING. SKIN BURNS AND DAMAGE. PREEXISTING SKIN DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS MATERIAL. SKIN ABSORPTION IS POSSIBLE, BUT HARMFUL EFFECTS ARE NOT EXPECTED FROM THIS ROUTE OF EXPOSURE UNDER NORMAL CONDITIONS OF HANDLING AND USE.

BREATHING - EXPOSURE TO VAPOR OR MIST IS POSSIBLE.
SHORT-TERM INHALATION TOXICITY IS LOW. BREATHING SMALL AMOUNTS DURING NORMAL HANDLING IS NOT LIKELY TO CAUSE HARMFUL EFFECTS; BREATHING LARGE AMOUNTS MAY BE HARMFUL. SYMPTOMS ARE MORE TYPICALLY SEEN AT AIR CONCENTRATIONS EXCEEDING THE RECOMMENDED EXPOSURE LIMITS. SYMPTOMS OF EXPOSURE MAY INCLUDE:
- IRRITATION (NOSE, THROAT, RESPIRATORY TRACT) - PREEXISTING LUNG DISORDERS, E.G. ASTHMA-LIKE CONDITIONS, MAY BE AGGRAVATED BY EXPOSURE TO THIS MATERIAL.
- CENTRAL NERVOUS SYSTEM DEPRESSION (DIZZINESS, WEAKNESS, FATIGUE, NAUSEA, HEADACHE, UNCONSCIOUSNESS)

SWALLOWING - SINGLE DOSE ORAL TOXICITY IS LOW. SWALLOWING SMALL AMOUNTS DURING NORMAL HANDLING IS NOT LIKELY TO CAUSE HARMFUL EFFECTS; SWALLOWING LARGE AMOUNTS MAY BE HARMFUL. SYMPTOMS MAY INCLUDE:
- GASTROINTESTINAL IRRITATION (NAUSEA, VOMITING, DIARRHEA)
- CENTRAL NERVOUS SYSTEM DEPRESSION (DIZZINESS, WEAKNESS, FATIGUE, NAUSEA, HEADACHE, UNCONSCIOUSNESS)

THIS MATERIAL CAN ENTER THE LUNGS DURING SWALLOWING OR VOMITING AND CAUSE LUNG INFLAMMATION AND/OR DAMAGE.

FIRST AID :

IF ON SKIN : REMOVE CONTAMINATED CLOTHING. FLUSH EXPOSED AREAS WITH LARGE AMOUNTS OF WATER. IF SKIN IS DAMAGED, SEEK IMMEDIATE MEDICAL ATTENTION. IF SKIN IS NOT DAMAGED AND SYMPTOMS PERSIST, SEEK MEDICAL ATTENTION. LAUNDER CLOTHING BEFORE REUSE

Material Safety Data Sheet

PREPARED: 05/29/96

SO-BRITE DSR-5 (SILICONE & ADHESIVE REMOVER)

SO-BRITE CHEMICALS INTERNATIONAL INC.

P. O. BOX 1152

TALLEVAST, FL. 34270

SECTION I

DOT Hazard Classification: COMBUSTIBLE

SECTION II

HAZARDOUS INGREDIENTS:	CAS#	OSHA PEL	ACGIH TLV
Aliphatic Hydrocarbons (Stoddard Type)	8052-41-3	100PPM	100PPM

(BALANCE OF FORMULA IS CONSIDERED NON HAZARDOUS BY PROPORTION AND ARE TRADE SECRETS.)

*** NIOSH RECOMMENDS A LIMIT OF 350 MG/CUM - 8 HOUR TIME WEIGHTED AVERAGE, 1800 MG/CUM AS DETERMINED BY A 15 MINUTE SAMPLE

SECTION III

PHYSICAL / CHEMICAL CHARACTERISTICS:

BOILING POINT: 315 DEG. F. SPEC GRAVITY (WATER=1): 0.0.779
 VAPOR PRESSURE (3.00mm.HG.): @ 68.00DEG F
 VAPOR DENSITY (AIR=1): 4.70
 EVAPORATION RATE (BuAc=1): .20
 PERCENT VOLATILES 100.00%
 RESIDUE SOLUBLE WITH WATER AND DETERGENT.
 APPEARANCE AND ODOR: CLEAR WITH MILD CITRUS ODOR.

SECTION IV

FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT (METHOD USED): 105.0 DEG F EXPLOSIVE LIMITS: (PRODUCT) LOWER 40.6 Deg C
 EXTINGUISHING MEDIA: REGULAR FOAM OR CARBON DIOXIDE OR DRY CHEMICAL

HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS., CARBON DIOXIDE AND CARBON MONOXIDE, VARIOUS HYDROCARBONS, ETC.

FIRE FIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACE PIECE OPERATED IN THE POSITIVE PRESSURE DEMAND MODE WHEN FIGHTING FIRES.

SPECIAL FIRE & EXPLOSION HAZARDS: NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

ALL FIVE GALLON PAILS AND LARGER METAL CONTAINERS INCLUDING TANK CARS AND TANK TRUCKS SHOULD BE GROUNDED AND/OR BONDED WHEN MATERIAL IS TRANSFERRED.

VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR BE MOVED BY

MATERIAL SAFETY DATA SHEET

Sikaflex® 521 UV

14. Transport Information

Proper Shipping Name

Not regulated by the USDOT

15. Regulatory Information

U.S. Regulatory Information

All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

SARA Section 313 Notification

This product does not contain any ingredients regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372.

16. Other Information

HMIS Rating

Health: 2

Fire: 1

Reactivity: 0

PPE: C

Revision/Preparer Information

MSDS Preparer: EHS Department

MSDS Preparer Phone Number: 201 933 8800

This MSDS Supersedes A Previous MSDS Dated: 05/24/2004

Disclaimer

The data in this Material Safety Data Sheet relates only to the specific material herein and does not relate to use in combination with any other material or in any process. The information set forth herein is based on technical data that Sika believes to be reliable as of the date hereof. Since conditions of use are outside our control, we make no warranties, express or implied and assume no liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under or a recommendation to infringe any patents.

Sika Corporation

Printed Using MSDS Generator™ 2000

MATERIAL SAFETY DATA SHEET

Sikaflex® 521 UV

8. Exposure Controls/Personal Protection - Continued

Respiratory Protection

A respirator protection program that meets 29 CFR 1910.134 requirement must be followed whenever workplace conditions warrant a respirator's use.

Other/General Protection

Wash thoroughly after handling.

9. Physical And Chemical Properties

Appearance

Paste (solid)

Odor

Odorless

Chemical Type: Mixture

Physical State: Solid

Melting Point: N/A °F

Specific Gravity: 1.4 g/cm³

Percent VOCs: 1.06

Packing Density: 11.7 lb.s / gal

Vapor Pressure: N/A

Solubility: Insoluble

Viscosity: 2000 mPas @ 20C

VOC Content: 14.9 grams / liter

10. Stability And Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability)

None Known

Incompatible Materials

None Known

Hazardous Decomposition Products

CO, CO₂

11. Toxicological Information

Miscellaneous Toxicological Information

This material releases trace levels of methanol (methyl alcohol) upon moisture curing (less than 1%). Upon completion of the curing process, methanol will no longer be released. According to literature, methanol (CAS No 67-56-1) irritates mucus membranes, has skin drying and narcotic effects up to coma or death. Absorption by the skin is possible.

12. Ecological Information

No Data Available...

13. Disposal Considerations

Dispose in accordance with applicable federal, state and local government regulations. Waste generators must determine whether a discarded material is classified as a hazardous waste. USEPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

MATERIAL SAFETY DATA SHEET

Sikaflex® 521 UV

4. First Aid Measures

Eye

In case of contact, hold eyelids apart and immediately flush eyes with plenty of tepid water for at least 15 minutes. Get medical attention immediately if irritation develops and persists.

Skin

In case of contact, immediately flush skin with soap and plenty of tepid water for at least 15 minutes. Get medical attention immediately if irritation (redness, rash, blistering) develops and persists.

Ingestion

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Seek medical attention immediately.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. Seek medical attention immediately.

5. Fire Fighting Measures

Flash Point: >212 °F >96 °C

Flash Point Method: TCC

Autoignition Point: N/AV °F

Lower Explosive Limit: N/AV

Upper Explosive Limit: N/AV

Extinguishing Media

In case of fire, use water spray (fog) foam, dry chemical, or CO₂.

Fire Fighting Instructions

In the event of a fire, firefighters should wear full protective clothing and NIOSH-approved self-contained breathing apparatus with a full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Avoid release to the environment. Use appropriate personal protective equipment (PPE). Contain spill and collect with absorbent material and transfer into suitable containers. Ventilate enclosed area.

7. Handling And Storage

Handling And Storage Precautions

Keep containers tightly closed. Keep out of reach of children. Not for internal consumption.

Storage Precautions

Store in a dry place.

Work/Hygienic Practices

Wash thoroughly with soap and water after handling.

8. Exposure Controls/Personal Protection

Engineering Controls

Use with adequate general and local exhaust ventilation. Refer to the current edition of "Industrial Ventilation: A Manual of Recommended Practice" published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Eye/Face Protection

Safety glasses with side shields or goggles.

Skin Protection

Chemical-resistant gloves. Lab coat or other work clothing to prevent skin exposure (Long sleeve shirt and long pants). Launder before reuse.



MATERIAL SAFETY DATA SHEET

Sikaflex® 521 UV

HMIS

HEALTH	2
FLAMMABILITY	1
REACTIVITY	0
PERSONAL PROTECTION	C

1. Product And Company Identification

Supplier

Sika Corporation
30800 Stephenson Highway
Madison Heights, MI 48071 U.S.A.

Company Contact: EHS Department
Telephone Number: 201-933-8800
FAX Number: 201-933-9379
Web Site: www.sikaindustry.com

Manufacturer

Sika Corporation
30800 Stephenson Highway
Madison Heights, MI 48071 U.S.A.

Company Contact: EHS Department
Telephone Number: 201-933-8800
FAX Number: 201-933-9379
Web Site: www.sikaindustry.com

Supplier Emergency Contacts & Phone Number

CHEMTREC: 800-424-9300
INTERNATIONAL: 703-527-3887

Manufacturer Emergency Contacts & Phone Number

CHEMTREC: 800-424-9300
INTERNATIONAL: 703-527-3887

Issue Date: 06/18/2004

Product Name: Sikaflex® 521 UV
CAS Number: Not Established
Chemical Family: Filled, reactive PUR-Silane hydrid polymer
MSDS Number: 3238
Product Code: I521521

2. Composition/Information On Ingredients

Ingredient Name	CAS Number	Percent Of Total Weight
SILANE-TERMINATED PREPLOYMER	Trade Secret	

3. Hazards Identification

Eye Hazards

May cause eye irritation.

Skin Hazards

May cause skin irritation.

Ingestion Hazards

May be harmful if swallowed.

Inhalation Hazards

Causes respiratory tract irritation.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

TOXICOLOGY DATA

CAS No.	Ingredient Name			
74-98-6	Propane	LC50 RAT LD50 RAT	4HR	Not Available Not Available
106-97-8	Butane	LC50 RAT LD50 RAT	4HR	Not Available Not Available
108-88-3	Toluene	LC50 RAT LD50 RAT	4HR	4000 ppm 5000 mg/kg
100-41-4	Ethylbenzene	LC50 RAT LD50 RAT	4HR	Not Available 3500 mg/kg
1330-20-7	Xylene	LC50 RAT LD50 RAT	4HR	5000 ppm 4300 mg/kg
64742-94-5	Medium Aromatic Hydrocarbons	LC50 RAT LD50 RAT	4HR	Not Available Not Available
91-20-3	Naphthalene	LC50 RAT LD50 RAT	4HR	Not Available Not Available
67-64-1	Acetone	LC50 RAT LD50 RAT	4HR	Not Available 5800 mg/kg
14807-96-6	Talc	LC50 RAT LD50 RAT	4HR	Not Available Not Available
13463-67-7	Titanium Dioxide	LC50 RAT LD50 RAT	4HR	Not Available Not Available

SECTION 12 — ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL INFORMATION**

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS**WASTE DISPOSAL METHOD**

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION**US Ground (DOT)**

May be classed as Consumer Commodity, ORM-D

UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as Consumer Commodity, ORM-D

UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity

UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, EmS F-D, S-U

SECTION 15 — REGULATORY INFORMATION**SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION**

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	9	
100-41-4	Ethylbenzene	2	
1330-20-7	Xylene	11	
91-20-3	Naphthalene	0.3	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	6.63 lb/gal	794 g/l
SPECIFIC GRAVITY	0.80	
BOILING POINT	<0 - 415° F	<-18 - 212° C
MELTING POINT	Not Available	
VOLATILE VOLUME	89%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
Volatile Weight 54.02%	Less Water and Federally Exempt Solvents	

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

SECTION 4 — FIRST AID MEASURES

- EYES:** Flush eyes with large amounts of water for 15 minutes. Get medical attention.
- SKIN:** Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
- INHALATION:** If affected, remove from exposure. Restore breathing. Keep warm and quiet.
- INGESTION:** Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	EXTINGUISHING MEDIA
Propellant < 0° F	0.8	12.8	Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.
Application to hot surfaces requires special precautions.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

- Remove all sources of ignition. Ventilate the area.
- Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.
During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits.
Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
15	74-98-6	Propane	ACGIH TLV OSHA PEL 2500 PPM 1000 PPM	760 mm
14	106-97-8	Butane	ACGIH TLV OSHA PEL 800 PPM 800 PPM	760 mm
9	108-88-3	Toluene	ACGIH TLV OSHA PEL OSHA PEL 20 PPM 100 ppm (Skin) 150 ppm (Skin) STEL	22 mm
2	100-41-4	Ethylbenzene	ACGIH TLV ACGIH TLV OSHA PEL OSHA PEL 100 PPM 125 PPM STEL 100 PPM 125 PPM STEL	7.1 mm
11	1330-20-7	Xylene	ACGIH TLV ACGIH TLV OSHA PEL OSHA PEL 100 PPM 150 PPM STEL 100 PPM 150 PPM STEL	5.9 mm
2	64742-94-5	Medium Aromatic Hydrocarbons	ACGIH TLV OSHA PEL Not Available Not Available	0.12 mm
0.4	91-20-3	Naphthalene	ACGIH TLV ACGIH TLV OSHA PEL OSHA PEL 10 PPM 15 PPM STEL 10 PPM 15 PPM STEL	1 mm
23	67-64-1	Acetone	ACGIH TLV ACGIH TLV OSHA PEL 500 PPM 750 PPM STEL 1000 PPM	180 mm
3	14807-96-6	Talc	ACGIH TLV OSHA PEL 2 mg/m3 as Resp. Dust 2 mg/m3 as Resp. Dust	
9	13463-67-7	Titanium Dioxide	ACGIH TLV OSHA PEL OSHA PEL 10 mg/m3 as Dust 10 mg/m3 Total Dust 5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary, cardiovascular and reproductive systems.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

HMIS Codes

Health	2*
Flammability	3
Reactivity	0

MATERIAL SAFETY DATA SHEET

DH1604
04 00

DATE OF PREPARATION
Sep 27, 2008

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

DH1604

PRODUCT NAME

DUPLI-COLOR™ High Heat with Ceramic, White

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS CO.
DUPLI-COLOR Products Group
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 247-3270 www.duplicolor.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)	



MATERIAL SAFETY DATA SHEET

This Material Safety Data Sheet meets or exceeds the requirements of the Canadian Controlled Product Regulations (WHMIS)

1. Product and Supplier Identification

Product: Target Glass Abrasive
Vitro Grit

Product Use: Sand Blasting Abrasive

Supplier: Target Products Ltd,
1080 Bradner Road
Abbotsford, BC
V4X 1H8
Telephone: 1.604.856.7976

24-Hour Emergency Response Telephone for Transport Emergencies ONLY:

+1 (613) 996-6666

2. Composition

Product	Ingredients				
	Non-Hazardous Ingredients % (w/w)	Respirable Silica (10µm particle size) % (w/w)	Exposure Limits/ACGIH ¹	LD ₅₀	LC ₅₀
Glass Abrasive	100	None	TLV-TWA: 10 mg/m ³ for nuisance dust	Not applicable	Not applicable
Vitro Grit	100	None	As above	Not applicable	Not applicable

¹ American Conference of Governmental Industrial Hygienists (ACGIH). Exposure limits may vary from time to time and from one jurisdiction to another. Check with local regulatory agency for the exposure limits in your area.

3. Hazards Identification

Routes of Entry:

Skin Absorption: No
Skin Contact: No
Eye Contact: Yes
Ingestion: No
Inhalation: Yes

Emergency Overview:

This product is manufactured from used, washed glass and contains no hazardous chemicals. Since the product consists of crushed/broken glass, there are physical hazards to be concerned with. See Section 7 for details on handling.

Target Products

When abrasive blasting, the abrasive is being used to remove and clean a surface. The substance that has been removed may contain materials that represent health hazards that cannot be addressed in the Material Safety Data Sheet. The employer must ensure that a risk assessment is done before any abrasive blasting activity which may cause release of a harmful level of an air contaminant from a surface or coating containing a toxic heavy metal or asbestos. This blasting abrasive must NOT be reused unless it is being used in a fully enclosed, vented cabinet designed to recirculate the abrasive material.

Acute Health Effects:

Inhalation:

Inhalation of glass particles may cause irritation to the upper respiratory tract. Exposure may cause sore throat, coughing, sneezing, and the production of phlegm in the throat. Nosebleeds may occur in cases of those with sensitive nose membranes due to abrasion of sensitive tissue.

Skin Contact:

This product is mildly abrasive to skin, but may aggravate tender skin causing rash, cuts or sores.

Skin Absorption:

Not applicable

Eye Contact:

Contact with the eye will cause tearing and irritation from the "foreign" object in the eye. Rubbing of the eye may cause abrasion of the cornea.

Ingestion:

No evidence of ill effects from ingestion of this product.

Chronic Health Effects:

The employer must determine the chronic effects of the contaminants which may result from the cleaning/blasting process. Prolonged contact with sand by sensitive skin may result in skin redness, rash and sores.

Medical Conditions Aggravated by Exposure:

Respiratory problems may be aggravated by pre-existing lung disease such as bronchitis, emphysema, or chronic obstructive pulmonary disease.

4. First Aid Measures

Inhalation:

If irritation causes coughing or phlegm, remove to fresh air. Call for medical assistance if coughing doesn't subside.

Skin Contact:

Wash affected area thoroughly. If irritation persists, seek medical attention.

Eye Contact:

Immediately and thoroughly flush eyes with water until the foreign object is flushed out of the eye. If irritation, pain, swelling, or lacrimation exists, get medical attention as soon as possible.

Target Products

Ingestion:

Ingestion of particulate is not considered to be injurious to health. Give fluids to aid in the passing of the product through the digestive system. Do not give anything by mouth to a convulsing or unconscious person. If patient shows discomfort, get immediate medical attention..

General Comments:

Good personal hygiene is essential. Avoid eating, smoking or drinking in work areas.

5. Fire Fighting Measures

Flammability: No

Flash Point: Not applicable

Autoignition Temperature: Not applicable

Lower Explosive Limit: Not applicable

Upper Explosive Limit: Not applicable

Explosion Data:

Sensitivity to Impact: No

Sensitivity to Static Discharge: No

Hazardous Combustion Products: None known

Conditions to Avoid: None

Extinguishing Media: These materials are not flammable and will not contribute to a conflagration.

Fire Fighting Instructions: Evacuate area and fight fire from a safe distance or a protected area. Firefighters must wear self-contained breathing apparatus and full protective clothing.

6. Accidental Release Measures

Personal Protection:

Wear adequate personal protection to prevent inhalation of dusts, contact with skin or eyes. See Section 8 for specific recommendations.

Environmental Precautions:

Prevent from spilling into waterways, sewers.

Cleanup Procedures:

Restrict access to area until completion of cleanup. Only adequately trained personnel, wearing properly selected personal protective equipment and clothing described in Section 8, should be involved in the spill response and cleanup.

7. Handling and Storage

Handling Procedures:

Handle bags in a manner that will ensure minimal generation of dusts. Do not breathe dust, which may generate accidentally. Follow safe work procedures and wear the appropriate personal protective equipment specified in Section 8. The workers must be instructed and trained in the safe work procedures.

Do not rely on sight to determine if dust is in the air. Contaminants may be in the air without a visible dust cloud. If dust cannot be kept below permissible limits, wear a high efficiency respirator approved for abrasive dust.

Used abrasive blasting materials must be removed from the work area at the end of the work shift and dust collection must be used to minimize airborne contaminant. Used abrasive blasting materials must not be dry-swept.

The operating controls for a sandblasting machine or jetting gun must be located near the nozzle in a position where the operator's hands will be when using the device.

Storage:

Store away from incompatible materials. See Section 10.

8. Exposure Controls, Personal Protection

Engineering Controls:

Engineering controls such as an enclosure or local exhaust ventilation with dust collection must be used to maintain airborne contaminations levels below the exposure limits, where practicable.

When an abrasive blasting operation is conducted inside an enclosure or cabinet, the enclosure or cabinet must have exhaust ventilation that maintains air pressure below the air pressure outside the enclosure or cabinet, so as to prevent the escape of air contaminants to other work areas, and minimize worker exposure inside the enclosure.

When abrasive blasting is conducted outside a structure, the process must be restricted to a work zone which is identified by signs or similar means as being contaminated. Only properly protected workers, who are necessary to perform the work, are permitted inside an enclosure or a restricted work zone where abrasive blasting is being conducted.

The operating controls for a abrasive blasting machine or jetting gun must be located near the nozzle in a position where the operator's hands will be when using the device.

Respiratory Protection:

Respirators must be NIOSH approved and properly selected, maintained and used when working with this product. Knowledge of respiratory hazards and respiratory protection is essential to ensure appropriate selection of respirators. Use an approved high efficiency NIOSH dust respirator with a minimum N95 rating. In selecting the appropriate respirator must reflect the contaminant likely to be present in the spent product.

Skin Protection:

Wear clothing to prevent contact with skin.

Eye and Face Protection:

Wear safety glasses to prevent contact with eyes and make immediately available appropriate emergency eye washing equipment (e.g. portable or plumbed) capable of flushing the eyes for at least 15 minutes.

9. Physical and Chemical Properties

	Physical State	Appearance	Odour	Odour Threshold	pH (supernatant)	Vapour Pressure	Vapour Density (Air=1)	Solubility in water	Melting Point	Boiling Point	Specific Gravity (Water=1)	Coefficient of water/oil Distribution	Evaporation Rate (Butyl Acetate=1)
Glass Abrasive	Solid	Clear, green or brown granules	None	None	N. App	N. App	N. App	No	> 1095 °C	> 1095 °C	2.3	N. App	N. App
Vitrogrit	Solid	Transparent or coloured particles	None	None	N. App	N. App	N. App	No	N. Est.	N. Est.	2.5	N. App	N. App

10. Stability and Reactivity

Chemical Stability: This product is stable.

Hazardous Polymerization: Will not occur.

Incompatibility: Yes. Product will react with hydrogen fluoride.

Reactivity: Product components may react with mineral acids such as hydrofluoric acid to produce a corrosive gas, silicon tetrafluoride.

Hazardous Decomposition Products: None

11. Toxicological Information

Effects of Acute Exposure: See Section 3

Effects of Chronic Exposure: See Section 3

Irritancy: Yes. See Section 3.

Skin Sensitization: None reported

Respiratory Sensitization: None reported

Neurotoxicity: No

Carcinogenicity: No

Embryotoxicity: No

Teratogenicity: No

Reproductive Toxicity: No

Mutagenicity: No

Synergistic Products: None reported

12. Ecological Information

Environmental Toxicity: No environmental impact for uncontaminated sand. Determination of sandblasting contamination is required to determine environmental impact.

Biodegradability: No

13. Disposal Considerations

Review federal, provincial or state, and local government requirements prior to disposal. Store material for disposal as indicated in storage conditions. Disposal by controlled incineration may be acceptable.

14. Transport Information

Canadian Transportation of Dangerous Goods Regulations: Not regulated

International Air Transport Association (IATA): Not regulated

International Maritime Organization (IMO): Not regulated

15. Regulatory Information

CANADIAN FEDERAL REGULATIONS:

CEPA, DOMESTIC SUBSTANCES LIST: Listed

WHMIS CLASSIFICATION: Not a WHMIS controlled product.

16. Other Information

Original Preparation Date: July 05, 2005

Prepared by: Kel-Ex Agencies Ltd., P.O. Box 52201, Lynnmour RPO, North Vancouver, BC, Canada, V7J 3V5

Disclaimer: This Material Safety Data Sheet was prepared in accordance with criteria and requirements of the Hazardous Products Act and the Controlled Products Regulations using information provided by the manufacturer and other sources including CCINFO (Chemical Information published by the Canadian Centre for Occupational Health and Safety). The information in the Material Safety Data Sheet is offered for your consideration and guidance when exposed to this product. TARGET PRODUCTS LTD. expressly disclaims all expressed or implied warranties and assumes no responsibilities for the accuracy or completeness of the data contained herein. The data in this MSDS does not apply to use with any other product or in any other process.

This Material Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of TARGET PRODUCTS, LTD.

Revisions: November 01, 2005

Material Safety Data Sheet

Section I. PRODUCT INFORMATION			
Product Name: VitroGrit™	CAS No. 65997-17-3	Chemical Name: Soda-Lime Silicon Dioxide Glass	
Description: Sand manufactured from recycled glass		DOT Identification: Not regulated by DOT	
Section II. HAZARDOUS INGREDIENTS			
Glass sand is not classified as a hazardous material by the criteria of the OSHA Hazard Communication Standard, Title 29, Code of Federal Regulations, Section 1910.1200, <i>Hazard Communication</i> .			
Contains no free (or crystalline) silica; all components are amorphous/non-crystalline			
Nuisance Dust concern only			
Section III. PHYSICAL DATA			
Boiling Point (°F): N/A	Solubility in Water: Insoluble	Specific Gravity: 2.5	
Vapor Pressure: N/A	Evaporation Rate: N/A	% Volatile by Volume: N/A	
Vapor Density: N/A	Appearance & Odor: Odorless, transparent or colored particulate		
Section IV. FIRE & EXPLOSION DATA			
Non-flammable & non-hazardous inorganic material			
Section V. REACTIVITY DATA			
Stability: Material is stable	Hazardous Polymerization: Will not occur		
Materials to Avoid: Hydrofluoric Acid	Hazardous Decomposition Products: None		
Section VI. HEALTH HAZARD DATA			
Nuisance Dust (total): 10 mg/m ³ TLV (units) depends upon particle size			
Nuisance Dust (Respirable): 5 mg/m ³ TLV (units) depends upon particle size			
Routes of Entry:	Lungs (breathing): Yes	Ingestion: No	Skin: No
Health Hazard (Acute & Chronic): Dust in excess of recommended exposure limits may result in irritation to the respiratory tract.			
Carcinogenicity	NTP Not Listed	IARC Monographs: Not Listed	OSHA Regulation: Not Listed
Signs & Symptoms of Exposure: Eye and respiratory irritation may result if recommended exposure limits are exceeded.			
Medical Conditions Generally Aggravated by Exposure: Chronic lung conditions may be aggravated by exposure to high concentrations of dust.			
Emergency & First Aid Procedures: Eyes: Flush thoroughly with water. See a physician if discomfort persists. Respiratory: Remove to fresh air			
Section VII. PRECAUTIONS FOR SAFE HANDLING & USE			
Steps to be taken in case of material spill: Sweep up and discard; avoid excessive dusting			
Waste Disposal Method: Dispose in approved landfill in accordance with federal, state and local regulations.			
Precautions for handling & storing: Spillage may result in slippery conditions. When transferring material, care should be taken to avoid dusting.			
This material is not a SARA Title III reportable substance.			
Section VIII. CONTROL MEASURES			
Respiratory protection: If dust concentrations exceed recommended Permissible Exposure Limits, use NIOSH-approved respirators			
Ventilation: Local exhaust	Protective Gloves: None		
Eye Protection: NIOSH-approved safety glasses or goggles (tight fitting recommended)			
Other Protective Clothing or Equipment: None required.			

Abbreviations:

N/A - Not Applicable
mg/m³ - milligrams per cubic meter
TLV - threshold limit value
NIOSH - National Institute of Safety and Health

This information is furnished without warranty, representation, inducement, or license of any kind, except that it is accurate to the best of TriVitro Corp.'s knowledge or obtained from sources believed by TriVitro Corp. to be accurate, and TriVitro Corp. does not assume any legal responsibility for use or reliance upon same. Customers are encouraged to conduct their own tests, read the product label, and obtain data from sources, which they know to be reliable before using any product.

M A T E R I A L S A F E T Y D A T A S H E E T

TECHNICAL COATINGS COMPANY
57 EAST CENTRE ST.
NUTLEY, NJ 07110

INFORMATION TELEPHONE NO.: 973-667-4900
EMERGENCY TELEPHONE NO.: 800-424-9300
FAX TELEPHONE NO.: 973-667-0622

PRINTED: 07/22/98 PREPARED: 07/22/98 REPLACES MSDS DATED: 07/08/96 PREPARER: AC

SECTION I - PRODUCT IDENTIFICATION

CHAMPION YELLOW H.S. ENAMEL
FLAMMABLE - PAINT UN1263
7GC515

SECTION II - HAZARDOUS INGREDIENTS

CHEMICAL NAME	CAS NUMBER	WT. PERCENT	(TLV-TWA)	OCCUPATIONAL EXPOSURE LIMITS		VAPOR PRESSURE mmHg 20C	KNOWN OR SUSPECTED CARCINOGEN	SEC 313
				(TLV-STEL)	(PEL)			
N-BUTYL ALCOHOL	71-36-3	3%	50 PPM	50 PPM	100 PPM	4.4	NO	YES
ETHYL BENZENE	100-41-4	3%	100 ppm	125 ppm	100 PPM	10.0	YES	YES
4-HYDROXY-4-METHYL-2-PENTANONE	123-42-2	6%	238 mg/m3	NO INFO	50 PPM	0.9	NO	NO
TETRAHYDROFUR	1330-20-7	11%	100 PPM	150 PPM		25.0	NO	YES
XYLENE AROMATIC SOLVENT NAPHTHA	64742-94-5	5%	100 PPM	NO INFO		3.0	NO	NO
N-BUTYL ACETATE 99%	123-86-4	4%	713mg/m3	200 ppm	NO INFO	8.0	NO	NO

THIS PRODUCT CONTAINS ONE OR MORE MATERIALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND THE COMMUNITY RIGHT-TO-KNOW ACTS OF 1986 AND OF 40 CFR 372.

N.A. - NOT APPLICABLE

SECTION III - PHYSICAL DATA

BOILING RANGE	: 148-410 F	VAPOR DENSITY	: IS HEAVIER THAN AIR
ODOR	: CHARACTERISTIC	EVAPORATION RATE:	: IS SLOWER THAN ETHER
APPEARANCE	:	SOLUBILITY	: NOT APPLICABLE
VOLATILE BY WEIGHT:	33.8%	PRODUCT DENSITY	: 10.1 LBS./GAL. (U.S.)
VOLATILE BY VOLUME:	46.7%		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION:

OSHA - FLAMMABLE LIQUID - CLASS IC
 DOT - FLAMMABLE LIQUID OR SOLID

FLASH POINT: 80 F
 (SETAFLASH CLOSED CUP)

LEL: 0.6 %
 UEL: 36.6 %

EXTINGUISHING MEDIA: CARBON DIOXIDE DRY CHEMICAL FOAM ALCOHOL FOAM

UNUSUAL FIRE AND EXPLOSION HAZARDS: EXTREMELY FLAMMABLE! VAPORS FORM AN EXPLOSIVE MIXTURE. CLOSED CONTAINERS MAY EXPLODE IF EXPOSED TO EXTREME HEAT. KEEP CONTAINERS CLOSED AND ISOLATED FROM HEAT, SPARKS AND OPEN FLAME.

SPECIAL FIREFIGHTING PROCEDURES: DO NOT ENTER FIRE AREA WITHOUT N.I.O.S.H. APPROVED SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES. WATER FOG SHOULD BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTOIGNITION OR EXPLOSION. AVOID SPREADING BURNING LIQUID WITH WATER USED FOR COOLING PURPOSES. DO NOT CONTAMINATE STREAMS AND WATERWAYS WITH WATER USED FOR FIREFIGHTING PURPOSES.

SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVER EXPOSURE: INHALATION : VAPORS MAY BE IRRITATING TO THE NOSE, THROAT AND RESPIRATORY TRACT. SKIN CONTACT : POSSIBLE PRIMARY IRRITATION. BUTANOL VAPORS CAN CAUSE SPECIFIC INJURY TO THE CORNEA. BUTANOL IS ESPECIALLY TOXIC IF ASPIRATED. XYLENE CAUSES TO THE FETUS IN LABORATORY ANIMAL STUDIES. EYE CONTACT : CAUSES SEVERE IRRITATION. CONTACT: PRIMARY IRRITATION. REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN DAMAGE NERVOUS SYSTEM DAMAGE AND POSSIBLE CANCER HAZARD. INHALATION OF VAPORS MAY BE HARMFUL!! MAY CAUSE LIVER, KIDNEY, AND OR BLOOD EFFECTS.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: NONE RECOGNIZED.

PRIMARY ROUTE(S) OF ENTRY: DERMAL INHALATION

EMERGENCY AND FIRST AID PROCEDURES: INHALATION : REMOVE VICTIM TO FRESH AIR AND GIVE OXYGEN IF BREATHING IS DIFFICULT. GIVE ARTIFICIAL RESPIRATION IF VICTIM IS NOT BREATHING. GET MEDICAL ATTENTION. SKIN CONTACT : REMOVE CONTAMINATED CLOTHING AND SHOES. WASH SKIN WITH SOAP AND WATER. IF IRRITATION OR REDNESS DEVELOPES AND PERSISTS, SEEK MEDICAL ATTENTION. DO NOT REUSE CLOTHING UNTIL CLEANED. EYE CONTACT : FLUSH EYES WITH LOW PRESSURE WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION. INGESTION : NO HARMFUL EFFECTS EXPECTED.

SECTION VI - REACTIVITY DATA

STABILITY: THIS PRODUCT IS STABLE UNDER NORMAL STORAGE CONDITIONS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR UNDER NORMAL CONDITIONS.

HAZARDOUS DECOMPOSITION PRODUCTS: MAY PRODUCE HAZARDOUS FUMES WHEN SUBJECT TO THERMAL DECOMPOSITION. FUMES MAY CONTAIN SOOT, SMOKE, CARBON DIOXIDE AND/OR CARBON MONOXIDE.

CONDITIONS TO AVOID: ELEVATED STORAGE TEMPERATURE AND INADEQUATE VENTILATION.

SECTION VI - REACTIVITY DATA

INCOMPATABILITY: STRONG OXIDIZING AGENTS

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: AVOID BREATHING VAPOR. REMOVE ALL SOURCES OF IGNITION (FLAMES/HOT SURFACES/ELECTRICAL, STATIC OR FRICTIONAL SPARKS). ENSURE ADEQUATE VENTILATION. SHUT OFF LEAK IF IT CAN BE DONE SAFELY. USE SAND OR EARTH DIKES TO CONTAIN THE SPILL. SPREAD INERT ABSORBENT ON SPILL AREA AND REMOVE TO A METAL CONTAINER USING NON-SPARKING TOOLS. SEAL CONTAINER USING NON-SPARKING TOOLS.

WASTE DISPOSAL METHOD: DISPOSE OF WASTE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.

SECTION VIII - SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION: N.I.O.S.H/O.S.H.A. APPROVED RESPIRATOR SUITABLE FOR MATERIALS LISTED IN SECTION II RECOMMENDED.

VENTILATION: SUFFICIENT VENTILATION, IN VOLUME AND PATTERN, SHOULD BE PROVIDED TO KEEP TLV OF MATERIALS LISTED IN SECTION II BELOW ACCEPTABLE LIMITS AND L.E.L. IN SECTION IV BELOW STATED LIMIT.

TECTIVE GLOVES: GLOVES REQUIRED FOR PROLONGED OR REPEATED CONTACT.

EYE PROTECTION: USE SAFETY EYEWEAR DESIGNED TO PROTECT AGAINST SPLASH OF LIQUID.

OTHER PROTECTIVE EQUIPMENT: CLOTHING ADEQUATE TO PROTECT SKIN REQUIRED. CONVENIENT EGRESS TO EYE BATH AND SAFETY SHOWER RECOMMENDED.

HYGENIC PRACTICES: WASH HANDS BEFORE EATING OR SMOKING. SMOKE ONLY IN DESIGNATED AREAS.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: AVOID PROLONGED OR REPEATED CONTACT WITH SKIN OR BREATHING OF VAPORS. STORE IN A COOL DRY AREA WITH VENTILATION SUITABLE FOR MATERIALS LISTED IN SECTION II.

OTHER PRECAUTIONS:

SECTION X - HMIS RATINGS

HEALTH: 2 FLAMMABILITY: 3 REACTIVITY: 0 PERSONAL PROTECTION: I

TELEFLEX CANADA

Stock # HA5430

Material Safety Data Sheet

WHMIS

Not controlled

SECTION 1 - PRODUCT IDENTIFICATION AND USE

Product Identifier SEASTAR STEERING FLUID		Product Identification Number (PIN): N.Ap.	
Product Use High VI, ISO 15 Hydraulic Oil			
Manufacturer's Name: Teleflex Canada		Supplier's Name: Teleflex Canada	
Street Address: 3831 No. 6 Road		Street Address: 3831 No. 6 Road	
City: Richmond	Province: B.C.	City: Richmond	Province: B.C.
Postal Code: V6V 1P6	Emergency Telephone Number: (604) 270-6899	Postal Code: V6V 1P6	Emergency Telephone Number: (604) 270-6899

SECTION 2 - HAZARDOUS INGREDIENTS

Hazardous Ingredients	% (wt/wt)	CAS Number	LD50 of Ingredient <i>(specify species & route)</i>	LC50 of Ingredient <i>(specify species & route)</i>
Not a controlled product according to WHMIS regulations, I.A.T.A. regulations, D.O.T. regulations or M.O.T. (T.D.G.) regulations				

SECTION 3 - PHYSICAL DATA

Physical State Liquid	Odour & Appearance Clear yellow oil with a faint odour		Odour Threshold (ppm) N.Av.	
Vapour Pressure <i>(mmHg):</i> N.Av.	Vapour Density <i>(air=1):</i> N.Av.	Evaporation Rate N.Ap.	Boiling Point (°C) > 200	Freezing Point (°C) - 41 (pour point)
pH N.Ap.	Specific Gravity 0.847 @ 15.6°C		Coeff. Water/Oil Dist.: < 1	

SECTION 4 - FIRE & EXPLOSION DATA

Flammability: No	If yes, under which conditions?			
Means of extinction: Carbon dioxide, foam, dry chemical, halon				
Flashpoint (°C) and Method: 110 (COC)		Hazardous Combustion Products: Oxides of carbon, smoke and hydrocarbons		
Autoignition Temperature (°C): N.Av.		Upper Flammable Limit <i>(% by volume):</i> N.Av.	Lower Flammable Limit <i>(% by volume):</i> N.Av.	
Explosion Data		Sensitivity to impact: None known		Sensitivity to Static Discharge: None known

SECTION 5 - REACTIVITY DATA

Chemical Stability: Yes	If no, under which conditions?			
Incompatibility with other substances: Yes		If so, which ones? Strong oxidizing agents		
Reactivity, & under what conditions? None known				
Hazardous Decomposition Products? None known				

N. Av. = Not Available

N. Ap. = Not Applicable

Product Identifier SEASTAR STEERING FLUID

SECTION 6 - TOXICOLOGICAL PROPERTIES

Route of entry:
Skin contact () Skin Absorption () Eye contact () Inhalation () Ingestion ()

Effects of Acute Exposure to Product:
None known

Effects of Chronic Exposure to Product:
None known

Exposure Limits: ACGIH-TLV for oil mists(TWA) 5mg/m3 [1mg/m3 in BC]	Irritancy of Product: None known	Sensitization to Product: None known	Carcinogenicity: None known
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Teratogenicity: None known	Reproductive Toxicity: None known	Mutagenicity: None known	Synergistic Products: None known
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SECTION 7 - PREVENTIVE MEASURES

Personal Protective Equipment:

Gloves (specify): Rubber/viton if handling	Respirator (specify): Not normally required	Eye (specify): CSA-approved safety glasses
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Footwear (specify): Normal non-slip industrial footwear	Clothing (specify): Coveralls are normally sufficient	Other (specify): N.Ap.
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Engineering Controls (specify, eg. ventilation, enclosed process):
Maintain oil mists in air below exposure limit by process design, enclosure, ventilation or local extraction.

Leak and Spill Procedure:
Prevent from entering water system. Mop up, soak up, or contain in a closed vessel.

Waste Disposal: Send to a licensed reclaimer/waste disposal facility, incinerate or landfill to meet federal, provincial, state and local regulations.

Handling Procedures and Equipment:
Keep away from incompatible substances. Do not take internally. Avoid contact with skin and eyes.

Storage Requirements:
Store in a tightly closed container.

Special Shipping Requirements: TDG: Not regulated.	HMIS Rating Health - 1; Flammability - 1; Reactivity - 0
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SECTION 8 - FIRST AID MEASURES

Specific measures:

EYES: Wash with water for 15 minutes. Consult a doctor if irritation persists.

SKIN: Wash with soap and water.

INGESTION: Do not induce vomiting. Call a physician.

INHALATION: Product is not volatile in form supplied. Remove person to fresh air.

SECTION 9 - PREPARATION DATE OF MSDS

Prepared by (Group Department, etc.): CHEMICAL SERVICES DEPT.	Phone Number: (604) 270-6899	Date: February 24, 2004
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TEMPO PRODUCTS CO.

A PLASTI-KOTE CO., INC.

1000 LAKE ROAD
 MEDINA, OHIO 44258
 1-330-725-4511

DATE PREPARED: 02/20/87

PRODUCT CLASS: **AEROSOL SPRAY PAINT**

SHIPPING NAME: CONSUMER COMMODITY

ORM-D INT'L UN NO. : 1950

NE = NONE ESTABLISHED

NA = NONE AVAILABLE

HAZARD RATING

- 4 = SEVERE
- 3 = SERIOUS
- 2 = MODERATE
- 1 = SLIGHT
- 0 = MINIMAL

HMS

- HEALTH 1
- FLAMMABILITY 4
- REACTIVITY 0
- PERSONAL PROTECTION E

NEPA

- HEALTH 2
- FLAMMABILITY 4
- REACTIVITY 0
- OTHER --

SECTION II - HAZARDOUS INGREDIENTS

PRODUCT NAME :

Custom Color Universal Blend

PRODUCT# PRODUCT# PRODUCT# PRODUCT#

865

INGREDIENT	CAS NUMBER	ACGIH		OSHA		OTHER	VAPOR	% (v)	% (w)	% (v)	% (w)
		TWA PPM	PEL PPM	TLV PPM	mmHg at 20 C						
ACETONE <i>Shop Supply</i>	67-64-1	750	1000	—	185	—	40-45	This MSDS covers materials added to the can by Plasti-Kote ONLY. Users of this can must also refer to the MSDS of the paint filled into the can.			
ETHYL 3-ETHOXY PROPIONATE	763-89-9	NE	NE	60	.57	0-5					
METHYL ETHYL KETONE	78-93-3	200	200	—	70	10-15					
PROPANE-BUTANE MIXTURE	69476-89-8	NE	1000	—	—	40-45					

SECTION III - PHYSICAL DATA

BOILING RANGE: 133° - 331° F

MELTING POINT: N/A

VAPOR PRESSURE: Unknown for products.

SOLUBILITY IN WATER: Slight to moderate

APPEARANCE AND ODOR: Lacquer Solvent

PERCENT VOLATILE BY VOLUME: 100%

VAPOR DENSITY: Heavier Lighter than air

WEIGHT PER GALLON: 7.0 - 8.0 (PAINT)

SPECIFIC GRAVITY: (H₂O = 1): < 1

EVAPORATION RATE: Faster Slower than other

(Butyl Acetate = 1) Section II products > 1

Propellants > 1 (Propellant gases)

See Section II for volatile hazardous components.

Continue on page 2

"C" STANDARD

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA: IA FLASH POINT: 0° F (-10° C) TCC
(EXTREMELY FLAMMABLE) UNIFORM FIRE CODE: LEVEL 3 AEROSOL (Propellant = -100° F)
EXTINGUISHING MEDIA: ALCOHOL FOAM, CO₂, DRY CHEMICAL LEL 1.0

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Closed containers may explode and/or autoignite when exposed to extreme heat, vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors or other locations distant from material handling point.

SPECIAL FIRE FIGHTING PROCEDURES:
Water spray may be ineffective. Water may be used to cool closed containers to prevent pressure build and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable over solid stream. Self-contained breathing apparatus with full face piece operated in pressure demand or other positive pressure mode.

SECTION V - HEALTH HAZARD DATA

ROUTE(S) OF ENTRY: INHALATION SKIN INGESTION EYES
CARCINOGENICITY: NTP IARC OSHA
Ingredients for product(s) listed in Section I are not found in these agencies list.

SYMPTOMS OF OVEREXPOSURE:

ACUTE: BREATHING - EXCESSIVE INHALATION OF VAPORS CAN CAUSE NASAL AND RESPIRATORY IRRITATION, DIZZINESS, WEAKNESS, FATIGUE, NAUSEA, HEADACHE, POSSIBLE UNCONSCIOUSNESS AND EVEN ASPHYXIATION.
EYE CONTACT - CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, BLURRED VISION.
SWALLOWING - CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, DIARRHEA.
SKIN CONTACT - CAN CAUSE IRRITATION FOR SOME PERSONS.

CHRONIC: None known for product(s) in Section I.

REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE, SEVERE OVEREXPOSURE IN LABORATORY ANIMALS HAS ALSO CAUSED LIVER ABNORMALITIES AND DAMAGE TO KIDNEYS, LUNGS, AND SPLEEN, HEART AND ADRENALS. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

MEDICAL CONDITIONS: Generally Aggravated By Exposure - Can cause respiratory and/or skin reaction.

FIRST AID:

EMERGENCY PROCEDURES: 1. IF BREATHED - REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING IS STOPPED, GIVE ARTIFICIAL RESPIRATION AND SEEK MEDICAL HELP.
2. IF IN EYES - FLUSH WITH WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN.
3. IF SWALLOWED - DO NOT INDUCE VOMITING (ASPIRATION OF MATERIAL INTO LUNGS CAN CAUSE PNEUMONIC, WHICH CAN BE FATAL). KEEP PERSON WARM, QUIET AND GET MEDICAL ATTENTION / POISON CONTROL CENTER.
4. IF ON SKIN - WASH WITH SOAP AND WATER OR VARIOUS HAND CLEANERS, AND WASH CLOTHING.

SECTION VI - REACTIVITY DATA

STABILITY: UNSTABLE STABLE HAZARDOUS POLYMERIZATION: MAY OCCUR WILL NOT OCCUR
CONDITIONS TO AVOID: Heat, Sparks and open flame.
INCOMPATIBILITY (Materials to avoid): Avoid contact with strong oxidizing agents and heat.
HAZARDOUS DECOMPOSITION: May form toxic materials, carbon dioxide / carbon monoxide, various hydrocarbons, nitrogen compounds, etc., when burned.
CONDITIONS TO AVOID: Not applicable.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
ELIMINATE ALL IGNITION SOURCES, VENTILATE AREA, ABSORB LIQUID ON PAPER, VERMICULITE, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND TRANSFER TO A CLOSED CONTAINER.

WASTE DISPOSAL METHOD: MATERIAL COLLECTED ON ABSORBENT MATERIAL MAY BE DEPOSITED IN A POSTED TOXIC SUBSTANCE LANDFILL IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DO NOT PUNCTURE OR INCINERATE. DO NOT STORE IN AREAS ABOVE 120° F, OR IN DIRECT SUNLIGHT, OR NEAR HEAT OR OPEN FLAMES.

OTHER PRECAUTIONS: NONE.

STORAGE CATEGORY: STORE LARGE QUANTITIES IN BUILDING PROTECTED FOR STORAGE OF FLAMMABLE LIQUIDS.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: FOR CASUAL / OCCASIONAL USE - TO AVOID BREATHING VAPORS OR SPRAY MIST, OPEN WINDOWS AND DOORS OR USE OTHER MEANS TO ENSURE FRESH AIR ENTRY DURING APPLICATION AND DRYING. IF YOU EXPERIENCE EYE WATERING, HEADACHE, OR DIZZINESS, INCREASE FRESH AIR, WEAR RESPIRATORY PROTECTION (NIOSH/MSHA TC23C OR EQUIVALENT), OR LEAVE THE AREA.

VENTILATION: FOR REGULAR / CONTINUOUS USE - PROVIDE SUFFICIENT MECHANICAL (GENERAL) AND/OR LOCAL EXHAUST VENTILATION TO MAINTAIN EXPOSURE BELOW TLV'S IN SECTION I.

PROTECTIVE GLOVES: WEAR CHEMICAL RESISTANT GLOVES, SUCH AS NEOPRENE, IF SKIN CONTACT IS TO BE AVOIDED.

EYE PROTECTION: CHEMICAL SPLASH GOGGLES, IN COMPLIANCE WITH OSHA REGULATIONS, ARE ADVISED.

OTHER EQUIPMENT: WHERE SPECIAL OR UNUSUAL CONDITIONS EXIST, SEEK THE EXPERT ASSISTANCE OF AN INDUSTRIAL HYGIENIST.

WORK/HYGIENE PRACTICES: WASH HANDS BEFORE EATING OR USING WASHROOM. AS WITH ALL CHEMICALS, MINIMIZE PERSONAL CONTACT.

THE INFORMATION CONTAINED ABOVE IS BELIEVED TO BE ACCURATE, BUT IS NOT WARRANTED. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO CIRCUMSTANCES.

MSDS SHEET PREPARED BY:

DATE:

REC'D MAR 17 1992

THE MARVEL OIL COMPANY, INC.
331 North Main Street
Port Chester, New York, 10573
914-937-4000

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: Marvel Air Tool Oil
REVISION DATE: June 1, 1991
TRANSPORTATION EMERGENCY NO. 914-937-4000
CHEMICAL NAME: Fuel and Oil additive
NFPA CODE: HEALTH-1, FLAMMABILITY-1, REACTIVITY-0 CAS NO. N/A MIXTURE
HMIS CODE: HEALTH-1, FLAMMABILITY-1, REACTIVITY-0

SECTION 1-HAZARDOUS INGREDIENTS

Solvents-Mineral Spirits-30%-CAS # 64742 47-8
Naphthenic base oil distillate-67%-CAS # 64741 96-4 64742 63-8
OSHA-ACGIH see section 4 - Exposure limit 5 mg/m3

SECTION 2-PHYSICAL DATA

Vapor pressure: 2mm Hg. @ 68 Boiling Point: -313 F
Specific gravity: .9 Viscosity 100 F 58.5 SSU
Water solubility: negligible Viscosity 210 F 35.0 SSU
Percent volatile: not determined Pour Point -60 F
Vapor density: not determined
Evaporation rate: not determined
Odor: Mild
Appearance: red color liquid

SECTION 3-FIRE AND EXPLOSION DATA

Flash point: 140 F
Upper flammable limit: not determined
Lower flammable limit: not determined
Extinguishing media: CO2, dry chemical, foam, water spray, water fog.
Unusual fire & explosion hazards: do not store or mix with strong oxidants

SECTION 4-HEALTH HAZARD /ROUTES OF ENTRY

Eye irritation: mild
Skin irritation: One or more components of this material may cause skin irritation. Prolonged or repeated contact may cause redness, burning and drying and cracking of the skin.
Ingestion: Pulmonary aspiration hazard if swallowed. Do Not Induce Vomiting.
Exposure limits: Threshold Limit Value (TLV) = 5 mg/m3 as a mist.
COMMENT: This material is not known to contain any chemical listed as a carcinogen or suspected carcinogen by IARC or the National Toxicology Program (NTP). In accordance with the current OSHA Hazard Communication Standard criteria, this product does not require a cancer hazard warning.

SECTION 5-EMERGENCY FIRST AID PROCEDURES

Eye: flush with water until irritation subsides
Skin: wash with soap and water
Oral: do not induce vomiting, give milk or water to dilute stomach contents

SECTION 6-STABILITY

Stability: stable
Incompatibility: oxidizing agents
Polymerization: will not occur

SECTION 7-SPILL OR LEAK PROCEDURES

Spill procedures: recover free liquid, add absorbent to spill area.
Waste disposal: keep product out of sewers and watercourses
disposal should be in compliance with federal,
state and local laws

SECTION 8-SPECIAL PROTECTION

Ventilation: mechanical ventilation as needed
Gloves: use chemical resistant gloves if needed to avoid prolonged
or repeated skin contact
Eye protection: product minimally irritating to eyes, use safety
glasses when eye contact may occur
Other: use chemical resistant apron or other impervious clothing
if needed to avoid prolonged or repeated skin contact

SECTION 9-SPECIAL PRECAUTIONS

Keep away from heat and open flame, contains refined petroleum
distillates, if swallowed do not induce vomiting, if ingested
call physician immediately

SECTION 10-TRANSPORTATION INFORMATION

DOT shipping name: petroleum lubricating oil
DOT hazard class: combustible liquid
DOT ID number: NA 1270
UN ID number 1270
NMFC ID number: 155250

ALL INFORMATION, RECOMMENDATIONS, AND SUGGESTIONS APPEARING HEREIN
CONCERNING THIS PRODUCT ARE BASED UPON DATA OBTAINED FROM THE
MANUFACTURER AND/OR RECOGNIZED TECHNICAL SOURCES; HOWEVER, MARVEL
OIL COMPANY, INC. MAKES NO WARRANTY, REPRESENTATION OR GUARANTEE
AS TO THE ACCURACY, SUFFICIENCY OR COMPLETENESS OF THE MATERIAL SET
FORTH HEREIN. IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE SAFETY,
TOXICITY AND SUITABILITY OF HIS OWN USE, HANDLING AND DISPOSAL OF THE
PRODUCT. ADDITIONAL PRODUCT LITERATURE IS AVAILABLE UPON REQUEST.
SINCE ACTUAL USE BY OTHERS IS BEYOND OUR CONTROL, NO WARRANTY, EXPRESS
OR IMPLIED, IS MADE BY MARVEL AS TO THE EFFECTS OF SUCH USE, THE RESULTS
TO BE OBTAINED OR THE SAFETY AND TOXICITY OF THE PRODUCT, NOR DOES
MARVEL ASSUME ANY LIABILITY ARISING OUT OF THE USE BY OTHERS OF THE
PRODUCT REFERRED TO HEREIN. THE DATA IN THIS MSDS RELATE TO THE SPECIFIC
MATERIAL DESIGNATED HEREIN AND DO NOT RELATE TO USE IN COMBINATION
WITH ANY OTHER MATERIAL OR IN ANY PROCESS.

MATERIAL SAFETY DATA SHEET
PREPARED BY: Environmental, Health and Safety Department

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: U.S. PAINT CORPORATION
ADDRESS: 831 S. 21st Street, Littleton, CO 80120-3092
INFORMATION: 314-621-0525
EMERGENCY: CHEMTREC 800-424-9300 OR 703-527-3887
PRODUCT DESCRIPTION: 545 EPOXY PRIMER GRAY BASE
PRODUCT CODE: D1001
HMS:(R) Health= 3*, Flammability= 4, Reactivity= 1

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

1. MAGNESIUMSILICATEHYDRATE CAS# 14807-96-6 TALC HYDROUS MAGNESIUM SILICATE

PCT BY WT: 23.00
ACGIH TLV-TWA: 2 MG/M3 (RESPIRABLE FRACTION OF DUST)
ACGIH TLV-STEL/C: 5 MG/M3 (RESPIRABLE DUST); 10 MG/M3 (TOTAL DUST)
OSHA PEL-TWA: NE
OSHA PEL-STEL: OSHA PEL-CEILING
SKIN DESIGNATION: OSHA PEL-CEILING
LD50 (INGESTION): OSHA PEL-CEILING
ODOR THRESHOLD: NA
LC50 (INHALATION): NA
FLASH POINT: NA
Other Limits: IARC-NO NTP-NO OSHA-NO ACGIH-NO NIOSH-NO

2. POLYMERIC AMIDO AMINE

PCT BY WT: 13.00
ACGIH TLV-TWA: NE
OSHA PEL-TWA: ACGIH TLV-STEL/C
SKIN DESIGNATION: SKIN DESIGNATION
LD50 (INGESTION): SKIN DESIGNATION
ODOR THRESHOLD: NA
LC50 (INHALATION): NA
FLASH POINT: NA
Other Limits: IARC-NO NTP-NO OSHA-NO ACGIH-NO NIOSH-NO

3. 2-PROPANOL CAS# 67-63-0 ISOPROPYL ALCOHOL

PCT BY WT: 8.00 Vapor Pressure: 33.000 MMHG @ 68F LEL: 1.7
ACGIH TLV-TWA: 400 PPM
ACGIH TLV-STEL/C: 500 PPM
OSHA PEL-TWA: 400 PPM
OSHA PEL-STEL: 500 PPM
SKIN DESIGNATION: SKIN DESIGNATION
LD50 (INGESTION): SKIN DESIGNATION
ODOR THRESHOLD: 200 PPM
ODOR THRESHOLD: 5.8 G/KG (ORAL-RAT)
LC50 (INHALATION): 16,000 PPM/8H (RAT)
FLASH POINT: 12 C / 53 F Other Limits: IARC-NO NTP-NO OSHA-NO ACGIH-NO NIOSH-NO

4. BUTYL ETHANOATE CAS# 123-86-4 N-BUTYL ACETATE

PCT BY WT: 6.00 Vapor Pressure: 6.300 MMHG @ 68F LEL: 1.7
ACGIH TLV-TWA: 150 PPM (PROPOSED)
ACGIH TLV-STEL/C: 200 PPM (PROPOSED)
OSHA PEL-TWA: 150 PPM
OSHA PEL-STEL: 200 PPM
SKIN DESIGNATION: SKIN DESIGNATION
LD50 (INGESTION): SKIN DESIGNATION
ODOR THRESHOLD: NA
ODOR THRESHOLD: 2000 PPM/4H (RAT)
LC50 (INHALATION): 26 C / 78 F Other Limits: IARC-NO NTP-NO OSHA-NO ACGIH-NO NIOSH-NO

5. 2-BUTANONE CAS# 78-93-3 METHYL ETHYL KETONE

PCT BY WT: 5.00 Vapor Pressure: 70.000 MMHG @ 68F LEL: 1.8
ACGIH TLV-TWA: 200 PPM
ACGIH TLV-STEL/C: 300 PPM
OSHA PEL-TWA: 200 PPM
OSHA PEL-STEL: 300 PPM
SKIN DESIGNATION: SKIN DESIGNATION
LD50 (INGESTION): SKIN DESIGNATION
ODOR THRESHOLD: NA
ODOR THRESHOLD: 2.7 G/KG (ORAL-RAT)
LC50 (INHALATION): 23.5 G/M3/8H (IHL-RAT)
FLASH POINT: -6 C / 21 F Other Limits: IARC-NO NTP-NO OSHA-NO ACGIH-NO NIOSH-NO

6. ALUMINIUM SILICATE CAS# 1332-58-7 KAOLIN HYDROUS KAOLIN

PCT BY WT: 5.00
ACGIH TLV-TWA: 2 MG/M3 (RESPIRABLE FRACTION OF DUST)
ACGIH TLV-STEL/C: 5 MG/M3 (RESPIRABLE DUST); 10 MG/M3 (TOTAL DUST)
OSHA PEL-TWA: NE
OSHA PEL-STEL: OSHA PEL-CEILING
SKIN DESIGNATION: NE
LD50 (INGESTION): NA
ODOR THRESHOLD: NA
LC50 (INHALATION): NA
FLASH POINT: NA
Other Limits: IARC-NO NTP-NO OSHA-NO

7. 1-BUTANOL CAS# 71-36-3 N-BUTYL ALCOHOL

PCT BY WT: 4.00 Vapor Pressure: 4.400 MMHG @ 68F LEL: 1.4
ACGIH TLV-TWA: NE
ACGIH TLV-STEL/C: 100 PPM
OSHA PEL-TWA: 100 PPM
OSHA PEL-STEL: 100 PPM
SKIN DESIGNATION: SKIN DESIGNATION
LD50 (INGESTION): SKIN DESIGNATION
ODOR THRESHOLD: NA
ODOR THRESHOLD: 2.4 G/KG (ORAL-RAT)
LC50 (INHALATION): NA
FLASH POINT: NA
Other Limits: IARC-NO NTP-NO OSHA-NO ACGIH-NO NIOSH-NO

8. 2-ETHOXY ETHANOL CAS# 110-80-5 ETHYLENE GLYCOL MONOETHYL ETHER

PCT BY WT: 3.00 Vapor Pressure: 4.000 MMHG @ 68F LEL: 1.7
ACGIH TLV-TWA: 5 PPM
ACGIH TLV-STEL/C: 5 PPM
OSHA PEL-TWA: NE
OSHA PEL-STEL: SKIN DESIGNATION
ODOR THRESHOLD: NA
ODOR THRESHOLD: 3 G/KG (ORAL-RAT)
LC50 (INGESTION): NA

LC50 (INHALATION): 1820 PPM/7H (MOUSE)

FLASH POINT: 43 C / 110 F Other Limits: IARC-NO NTP-NO OSHA-NO ACGIH-NO NIOSH-NO

9. ZINC CAS# 7440-66-6 ZINC

PCT BY WT: 3.00
ACGIH TLV-TWA: 10 MG/M3 (TOTAL DUST)
ACGIH TLV-STEL/C: 5 MG/M3 (RESPIRABLE DUST); 10 MG/M3 (TOTAL DUST)
OSHA PEL-TWA: NE
OSHA PEL-STEL: OSHA PEL-CEILING
SKIN DESIGNATION: OSHA PEL-CEILING
LD50 (INGESTION): OSHA PEL-CEILING
ODOR THRESHOLD: NA
LC50 (INHALATION): NA
FLASH POINT: NA
Other Limits: IARC-NO NTP-NO OSHA-NO ACGIH-NO NIOSH-NO

10. DIMETHYL BENZENE CAS# 1330-20-7 XYLENE

PCT BY WT: 1.00 Vapor Pressure: 5.100 MMHG @ 68F LEL: 1.1
ACGIH TLV-TWA: 100 PPM
ACGIH TLV-STEL/C: 100 PPM
OSHA PEL-TWA: OSHA PEL-STEL
OSHA PEL-STEL: OSHA PEL-CEILING
SKIN DESIGNATION: SKIN DESIGNATION
LD50 (INGESTION): LD50 (INGESTION)
ODOR THRESHOLD: 0.05 PPB
ODOR THRESHOLD: 5000 PPM/4H (RAT)
LC50 (INHALATION): 27 C / 80 F Other Limits: IARC-NO NTP-NO ACGIH-NO OSHA-NO

11. CARBON BLACK CAS# 1333-86-4 CARBON BLACK

PCT BY WT: 0.41
ACGIH TLV-TWA: 3.5 MG/M3
ACGIH TLV-STEL/C: 3.5 MG/M3
OSHA PEL-TWA: NE
OSHA PEL-STEL: OSHA PEL-CEILING
SKIN DESIGNATION: SKIN DESIGNATION
LD50 (INGESTION): GREATER THAN 10,000 MG/KG (ORAL-RAT)
LC50 (INHALATION): NA
FLASH POINT: NA
Other Limits: IARC-YES, GROUP 2B NTP-NO OSHA-NO

12. CRYSTALLINE SILICAS CAS# 14808-60-7 CRYSTALLINE SILICA-QUARTZ OR CRISTOBALITE CAS# 14808-60-7

OR 14464-46-1
PCT BY WT: 0.41
ACGIH TLV-TWA: 0.1 MG/M3 (QUARTZ); 0.05 MG/M3 (CRISTOBALITE)
ACGIH TLV-STEL/C: (CARBOE VALUES ARE FOR RESPIRABLE FRACTION OF DUST)
OSHA PEL-TWA: 0.1 MG/M3 (QUARTZ); 0.05 MG/M3 (CRISTOBALITE)
OSHA PEL-STEL: (CARBOE VALUES ARE FOR RESPIRABLE FRACTION OF DUST)
SKIN DESIGNATION: NA
LD50 (INGESTION): NA
ODOR THRESHOLD: NA
ODOR THRESHOLD: NA
LC50 (INHALATION): NA
FLASH POINT: NA
Other Limits: IARC-YES NTP-YES OSHA-NO ACGIH-NO NIOSH-YES

13. PHENYLETHANE CAS# 100-41-4 ETHYL BENZENE

PCT BY WT: 0.33 Vapor Pressure: 10.000 MMHG @ 68F LEL: 1.2
ACGIH TLV-TWA: 100 PPM
ACGIH TLV-STEL/C: 100 PPM
OSHA PEL-TWA: OSHA PEL-STEL
OSHA PEL-STEL: OSHA PEL-CEILING
SKIN DESIGNATION: SKIN DESIGNATION
LD50 (INGESTION): NA
ODOR THRESHOLD: NA
ODOR THRESHOLD: 50 G/M3/2H
LC50 (INHALATION): 15 C / 59 F Other Limits: IARC-YES NTP-NO OSHA-NO ACGIH-NO NIOSH-NO

SECTION 3 - HAZARDS IDENTIFICATION

POTENTIAL ACUTE HEALTH EFFECTS:

EYES: Can cause moderate irritation, redness, tearing, and blurred vision. Can cause severe injury -- damage reversible. Can cause burns.
SKIN: Prolonged or repeated contact can cause moderate irritation, defatting, and dermatitis. Material is readily absorbed through the skin in toxic amounts. Sensitizer -- Can cause allergic skin reaction which may be severe in certain individuals. Persons with pre-existing skin disorders may be more susceptible to the effects of this material.

INHALATION: May cause irritation of the mucous membranes, cough, discomfort, rapid or difficult breathing or shortness of breath. Sensitizer -- may cause allergic respiratory reaction. Can cause CNS effects including fatigue, weakness, headache, dizziness, nausea, vomiting, unconsciousness, coma, respiratory failure and death. Respiratory systems associated with pre-existing lung disorders (e.g., asthma-like conditions) may be aggravated by exposure to this material. Toxic by inhalation. Prolonged exposure can cause hearing impairment.

INGESTION: Single dose oral toxicity is low. Can cause irritation of the digestive tract, nausea, vomiting and diarrhea. May cause signs of nervous system depression including drowsiness, dizziness, loss of coordination, fatigue, headache, nausea and vomiting. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal.

POTENTIAL CHRONIC HEALTH EFFECTS: -- Prolonged and repeated breathing of vapors, spray mist and/or sanding dust over a period of years may cause diseases of the lungs. -- Prolonged overexposure to crystalline silica by inhalation may cause delayed lung injury/disease (silicosis). -- Reports have associated repeated and prolonged occupational overexposure to solvents with brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling this product may be

harmful or fatal. - overexposure can cause fibrosis (silicosis); symptoms can include coughing, difficulty breathing, tightness of chest, hemorrhage, and wheezing. This product or its pregnant components produces fetotoxic and/or teratogenic effects when absorbed through the skin. Women should use caution when handling long term excessive exposures may cause talcosis, pulmonary fibrosis with shortness of breath, chronic cough and respiratory-assisted heart failure. Prolonged exposure to talc can produce a mild symptomatic pneumoconiosis. The adverse chronic health effects associated with crystalline silica include silicosis, cancer, scleroderma, and tuberculosis. CARCINOGENICITY: - contains crystalline silica which can cause cancer based on animal data. (Risk of cancer depends on duration and level of exposure to dust from sanding surfaces or spray mist.) - ethylbenzene has been shown to cause cancer in laboratory animals. The relevance of this finding to humans is uncertain. IARC has classified ethylbenzene as a possible human carcinogen (Group 2B). - Carbon black has been shown to cause cancer in laboratory animals. The relevance of this finding to humans is uncertain. IARC has classified carbon black as a possible human carcinogen (Group 2B) however carbon black is not considered a carcinogen by the U.S. National Toxicology Program (NTP) or OSHA.

TARGET ORGANS: overexposure to this material or its components has been suggested as a cause of the following effects in laboratory animals and/or humans, and may aggravate pre-existing disorders of these organs in humans: Anemia, Birth defects which may include: Fetotoxicity, embryotoxicity, infertility and fetal malformations. Blood disorders, Brain damage, Cardiac abnormality, Liver damage, kidney damage, Ingestion may produce liver, kidney and blood forming organ damage. Liver abnormalities, Lung damage, Menstrual and fertility disorders, Nervous system damage, Skin damage, Spleen damage, Testicular damage, Respiratory system, Central nervous system (CNS), Peripheral nervous system (PNS)

SECTION 4 - FIRST AID MEASURES

PRIMARY ROUTES OF ENTRY (X) SKIN (X) BREATHING (X) SWALLOWING
 IF IN EYES: Flush eyes with water for at least 15 minutes while holding eyelids apart; Seek medical attention.
 IF ON SKIN: Remove contaminated clothing and flush contaminated skin with large amounts of water. If skin is damaged or if symptoms persist seek medical attention. Launder clothing before reuse.
 IF INHALED: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If individual is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.
 IF SWALLOWED: DO NOT induce vomiting unless directed to do so by medical personnel. Aspiration of material into lungs can cause chemical pneumonitis which may be fatal. If individual is drowsy or unconscious, place on their side with head down. Seek medical attention. If possible, do not leave individual unattended.

SECTION 5 - FIRE FIGHTING MEASURES

FIRE AND EXPLOSIVE PROPERTIES OF THE CHEMICAL: (Unless otherwise noted, data are derived from ingredients existing in this formula at concentrations of 1% by weight or greater, i.e., the flashpoint given is the lowest flashpoint of the ingredients listed in section 2.)
 Flashpoint : 51.0 F (10.5 C) (Actual)
 Explosion Level : Low - 1.1 High - 15.6
 Flammability Limits : Lower - 1.1 Higher - -N/A
 AUTO-ignition Temperature : -N/A
 EXTINGUISHING MEDIA: Use carbon dioxide or dry chemical for small fires; alcohol-type aqueous film-forming foam or water spray for large fires. Water may be ineffective but should be used to cool fire-exposed structures and vessels.
 UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep away from heat, sparks, and flame. Do not smoke. Extinguish all pilot lights and turn off all sources of ignition, including heaters, fans and other non-explosion proof electrical equipment, during use and until all vapors are gone. Vapors may ignite explosively. Vapors may spread long distances and beyond closed doors. Prevent build up of vapors by maintaining a continuous flow of fresh air.
 FIRE-FIGHTING PROCEDURES AND EQUIPMENT: Self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode. In case of fire, use dry chemical, foam, CO2 or other approved method for treating a Class B fire. Summon professional firefighters. During a fire, toxic gases and smoke are irritants present from decomposition/combustion. Closed container may explode when exposed to extreme heat.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

CLEAN-UP: SMALL SPILL: Absorb liquid on inert material such as paper, vermiculite, floor absorbent, and transfer to hood. LARGE SPILL: Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, contain area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be absorbed with inert material such as sand, clay, earth, or floor absorbent, and shoveled into containers, with non-sparking tools. Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify the proper authorities as required that a spill has occurred.

SECTION 7 - HANDLING AND STORAGE

HANDLING: SENSITIVITY TO STATIC DISCHARGE - Grounding/Bonding required
 STORAGE: Keep container tight and upright to prevent leakage. Keep container closed when not in use. Do not store above 49 C/120 F. Do not transfer contents to bottles or unlabeled containers. Protect from freezing. Containers of this material may be hazardous when emptied because they retain product residues (vapor, liquid, and/or solid). When empty, may contain explosive vapors. Do not cut, puncture or weld on or near this container. All hazard precautions given in this data sheet must be observed for empty containers.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

RESPIRATORY PROTECTION/VENTILATION: Use only with adequate ventilation. Maintain continuous flow of fresh air. - breathe vapors, spray mists, or sanding dusts. Use air purifying respirators fitted with orga- apor/HEPA cartridges only if air monitoring of the work area demonstrates

solvent and particulate levels do not exceed the respirator maximum use concentration. Use only properly fitted NIOSH approved respirators. Follow respirator manufacturer's instructions for use. Engineering and administrative controls should be implemented to reduce exposure to paint spray and exhaust. A general exhaust system is not recommended. It is advisable to use a respirator. PERSONAL PROTECTIVE EQUIPMENT: Use protective equipment to prevent contact with eyes, skin, or clothing. Use solvent resistant safety eyewear with splash guards. Protective garments such as Tyvek® coveralls by eally used to protect against vapors, splatters, and dust. Tyvek® coveralls recommended for messy applications. Nitrile or natural rubber gloves, Tyvek® used to protect from minor contact. For prolonged contact, neoprene gloves are better and butyl are best.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical Appearance : -N/A Odor : -N/A
 Physical State : LIQUID PH : -N/A
 Vapor Density : 4.00
 Boiling Range : Lower - 175.0 F 79.4 C Higher - 288.0 F 142.2 C
 Freezing Point : -N/A Melting Point : -N/A
 Water Solubility : -N/A Specific Gravity : 1.475
 Formula Weight per Volume : 12.2768 Lb/gal. : 3.526 lbs./gal. or 423 g/l
 Evaporation Rate : -N/A
 Volatility : -N/A % Volatile by weight : 28.7360
 % Volatile by Volume : 50.9244 Coeff of Water-Oil Distribution : -N/A

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID AND INCOMPATIBILITIES: A reaction accompanied by large heat release occurs when the product is mixed with acids. Heat generated may be sufficient to cause vigorous boiling creating a hazard due to splashing or spattering of hot material. Strong mineral acids Hydrofluoric acid, Aluminum Alkalis, Alkanolamines, Aldehydes, Amines, Ammonia, Caustics, Chlorine, Chlorinated compounds, Cleaning solutions, such as chrome (sulfuric acid/dichromate) and aqua regia, halogenated hydrocarbons, Isocyanates, oxidizing agents, Ethylene oxide, This product will dissolve some plastics, rubber, and coatings, Acetaldehyde.
 HAZARDOUS DECOMPOSITION PRODUCTS (including thermal decomposition): Carbon dioxide and carbon monoxide, Toxic fumes, Various hydrocarbons, Nitrogen oxides, Sulfur oxide, Acrid smoke.
 POLYMERIZATION: - Will NOT occur. - Contamination with strong acids, bases, epoxy resins or isocyanates can cause polymerization.
 STABILITY: - Stable under ordinary conditions of use and storage.

SECTION 11 - TOXICOLOGICAL INFORMATION

No additional toxicological data available. Please refer to Sections 2 & 3.

SECTION 12 - ECOLOGICAL INFORMATION

No ecological data available for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Do not incinerate Closed containers.

SECTION 14 - TRANSPORT INFORMATION

DOT Hazard Class: 3
 DOT Label: Flammable Liquid
 DOT Placard: Flammable
 DOT Packing Group: II
 DOT Shipping Name: Paint
 UN/NA Number: 1263

SECTION 15 - REGULATORY INFORMATION

FEDERAL REGULATIONS:
 SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
 ETHYL BENZENE CAS# 100-41-4 PCT BY WT: 2.8910
 XYLENE CAS# 7440-66-6 PCT BY WT: 1.3410
 ETHYLENE GLYCOL MONOETHYL ETHER CAS# 1130-20-7 PCT BY WT: 3.1810
 N-BUTYL ALCOHOL CAS# 110-80-5 PCT BY WT: 4.0950
 METHYL ETHYL KETONE CAS# 71-36-3 PCT BY WT: 5.4110

STATE REGULATIONS: PER CALIFORNIA'S PROPOSITION 65 WARNING: This product contains chemicals known to the State of California to cause birth defects or other reproductive harm. STATE REGULATIONS: PER CALIFORNIA'S PROPOSITION 65 WARNING: This product contains chemicals known to the State of California to cause cancer.

SECTION 16 - OTHER INFORMATION

FOR INDUSTRIAL USE ONLY: This product is for use by professional trained personnel using proper equipment, and is not intended for sale to, or use by, the general public.
 NON-WARRANTY: Any recommendation of U.S. Paint contained herein covering use, utilization, chemical or physical properties and other qualities of the products sold is believed reliable; however, U.S. Paint makes no warranty or representation with respect thereto. Use or application of any U.S. Paint product is at the discretion of the Buyer without liability or obligation whatsoever of U.S. Paint.

THE INFORMATION CONTAINED HEREIN IS INFORMATION RECEIVED FROM OUR RAW MATERIAL SUPPLIERS AND OTHER SOURCES AND IS BELIEVED TO BE RELIABLE. THIS DATA IS NOT TO BE TAKEN AS A REPRESENTATION FOR WHICH U.S. PAINT CORPORATION ASSUMES LEGAL RESPONSIBILITY OR

Date: 06/20/2001

MATERIAL SAFETY DATA SHEET
Environmental, Health and Safety Department
MSDS PREPARATION DATE: 06/20/2001

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER
ADDRESS
U.S. PAINT CORPORATION
831 S. 21st Street
St. Louis, MO 63103-3092
INFORMATION
EMERGENCY
314-621-0525
CHEMTREC 800-424-9300 or 703-527-3887
CONVERTER FOR D1001 AND D8001
TRADE NAME
D3001
PRODUCT CODE
HWIS(R)
Health= 3*, Flammability= 4, Reactivity= 1

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

1 EPOXY RESIN BISPHENOL-A BASED EPOXY RESIN	
Pct by Wt:	35.00 LEL: 1.2
ACGIH TLV-TWA	NE
OSHA PEL-TWA	ACGIH TLV-STEL/C
OSHA PEL-CEILING	OSHA PEL-STEL
ODOR THRESHOLD	NE
LC50 (INHALATION)	NA
FLASH POINT	>5 G/KG (RAT)
Other Limits:	NA
IARC-NO	4 C / 40 F
NTP-NO	NIOSH-NO
OSHA-NO	ACGIH-NO
NIOSH-NO	NIOSH-NO
2 BUTYL ETHANOATE CAS# 123-86-4 N-BUTYL ACETATE	
Pct by Wt:	22.00 Vapor Pressure: 6.300 MMHG @ 68F LEL: 1.7
ACGIH TLV-TWA	150 PPM (PROPOSED)
OSHA PEL-TWA	ACGIH TLV-STEL/C
OSHA PEL-CEILING	OSHA PEL-STEL
ODOR THRESHOLD	NE
LC50 (INHALATION)	NA
FLASH POINT	2000 PPM/4H (RAT)
Other Limits:	26 C / 78 F
IARC-NO	NTP-NO
OSHA-NO	ACGIH-NO
NIOSH-NO	NIOSH-NO
3 2-ETHOXYETHANOL ACETATE CAS# 111-15-9 ETHYLENE GLYCOL MONOETHYL ETHER ACETATE	
Pct by Wt:	15.00 Vapor Pressure: 2.000 MMHG @ 68F LEL: 1.7
ACGIH TLV-TWA	5 PPM
OSHA PEL-TWA	ACGIH TLV-STEL/C
OSHA PEL-CEILING	OSHA PEL-STEL
ODOR THRESHOLD	NE
LC50 (INHALATION)	NA
FLASH POINT	47 C / 117 F
Other Limits:	47 C / 117 F
IARC-NO	NTP-NO
OSHA-NO	ACGIH-NO
NIOSH-NO	NIOSH-NO
4 2-BUTANONE CAS# 78-93-3 METHYL ETHYL KETONE	
Pct by Wt:	13.00 Vapor Pressure: 70.000 MMHG @ 68F LEL: 1.8
ACGIH TLV-TWA	200 PPM
OSHA PEL-TWA	ACGIH TLV-STEL/C
OSHA PEL-CEILING	OSHA PEL-STEL
ODOR THRESHOLD	NE
LC50 (INHALATION)	2.0 PPM
FLASH POINT	-6 C / 21 F
Other Limits:	23.5 G/M3/8H (THL--RAT) AUTOIGNITION TEMP.
IARC-NO	NTP-NO
OSHA-NO	ACGIH-NO
NIOSH-NO	NIOSH-NO
5 METHYL BENZENE CAS# 108-88-3 TOLUENE TOLUOL	
Pct by Wt:	12.00 Vapor Pressure: 22.000 MMHG @ 68F LEL: 1.2
ACGIH TLV-TWA	50 PPM
OSHA PEL-TWA	ACGIH TLV-STEL/C
OSHA PEL-CEILING	OSHA PEL-STEL
ODOR THRESHOLD	300 PPM
LC50 (INHALATION)	8.0 PPM
FLASH POINT	5320 PPM/8H (MOUSE) AUTOIGNITION TEMP.
Other Limits:	7.5 C / 45 F
IARC-NO	NTP-NO
OSHA-NO	ACGIH-NO
NIOSH-NO	NIOSH-NO

This product contains one or more Hazardous Air Pollutants (HAPs) which are regulated under Section 112 of the Clean Air Act.

This product contains no chemicals listed in the NTP Annual Report on Carcinogens, the IARC Monographs, listed by ACGIH, NIOSH or regulated as a carcinogen by OSHA.

This product contains one or more reported reproductive toxins or suspect/ experimental reproductive toxins.

This product contains one or more reported teratogens or suspect/ experimental teratogens. IMPORTANT! This product may be blended with other products prior to use. Read all warnings and precautions on the MSDS and labels of all products being blended as the combination may contain the hazards of each component.

SECTION 3 - HAZARDS IDENTIFICATION

POTENTIAL ACUTE HEALTH EFFECTS:
EYES: May cause moderate irritation, redness, tearing, and blurred vision. Can cause severe injury -- damage reversible.
SKIN: Prolonged or repeated contact can cause moderate irritation, defatting, and dermatitis. Material is readily absorbed through the skin in toxic amounts. Skin contact of high concentrations of vapor may cause irritation and toxic effects, including CNS depression, lung, liver and kidney injury. Symptoms include headache, nausea, vomiting and dizziness. This product has produced fetotoxic and teratogenic effects in laboratory animals when inhaled or absorbed through the skin. Pregnant women should avoid exposure to this product. May be a weak sensitizer. Can cause allergic skin reaction in certain individuals.

INHALATION: Can cause nasal and respiratory tract irritation. Can cause CNS effects including fatigue, weakness, headache, dizziness, nausea, vomiting, unconsciousness, coma, respiratory failure and death.
INGESTION: Slightly toxic by ingestion. Can cause irritation of the digestive tract, nausea, vomiting and diarrhea. May cause signs of nervous system depression, including drowsiness, dizziness, loss of coordination, fatigue, headache, nausea and vomiting.
ASPIRATION OF MATERIAL INTO THE LUNGS CAN CAUSE CHEMICAL PNEUMONITIS, WHICH CAN BE FATAL.
POTENTIAL CHRONIC HEALTH EFFECTS: Prolonged and repeated breathing of vapors, spray mist and/or sanding dust over a period of years may cause diseases of the lungs. Reports have associated repeated and prolonged occupational overexposure to solvents with brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal.

TARGET ORGANS: overexposure to this material or its components has been suggested as a cause of the following effects in laboratory animals and/or humans, and may aggravate pre-existing disorders of these organs in humans:
- Reproductive system abnormalities
- Birth defects which may include: fetotoxicity, embryotoxicity, infertility and fetal malformations.
- Blood disorders
- Brain damage
- Cardiac abnormality
- Eye damage
- Kidney damage
- Liver abnormalities
- Lung damage
- Skin damage
- Spleen damage
- Testicular damage
- Respiratory system
- Gastrointestinal (GI) tract
- Central nervous system (CNS)
- Peripheral nervous system (PNS)

SECTION 4 - FIRST AID MEASURES

PRIMARY ROUTE(S) OF ENTRY (X) SKIN (X) BREATHING (X) SWALLOWING
IF IN EYES: Flush eyes with water for at least 15 minutes while holding eyelids apart; Seek medical attention.
IF ON SKIN: Remove contaminated clothing and flush contaminated skin with large amounts of water. If skin is damaged or if symptoms persist seek medical attention. Launder clothing before reuse.
IF INHALED: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If individual is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.
IF SWALLOWED: DO NOT induce vomiting unless directed to do so by medical personnel. Aspiration of material into lungs can cause chemical pneumonitis which may be fatal. If individual is drowsy or unconscious, place on their side with head down. Seek medical attention. If possible, do not leave individual unattended.

SECTION 5 - FIRE FIGHTING MEASURES

FIRE AND EXPLOSIVE PROPERTIES OF THE CHEMICAL: (Unless otherwise noted, data are derived from ingredients existing in this formula at concentrations of 1% by weight or greater, i.e., the flashpoint given is the lowest flashpoint of the ingredients listed in section 2.)
Flashpoint Level: Low - 47.0 F - 11.2
High - 13.0
Flammability Limits: Lower - -N/A
Higher - -N/A
Auto-ignition Temperature: -N/A

EXTINGUISHING MEDIA: Use carbon dioxide or dry chemical for small fires; alcohol-type aqueous film-forming foam or water spray for large fires. Water may be ineffective but should be used to cool fire-exposed structures and vessels.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep away from heat, sparks, and flame. Do not smoke. Extinguish all pilot lights and turn off all sources of ignition, including heaters, fans and other non-explosion proof electrical equipment, during use and until all vapors are gone. Vapors may ignite explosively. Vapors may spread long distances and beyond closed doors. Prevent build up of vapors by maintaining a continuous flow of fresh air.

FACE-FIGHTING PROCEDURES AND EQUIPMENT: Self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode. In case of fire, use dry chemical, foam, CO₂ or other approved method for treating a Class B fire. Summon professional firefighters. During a fire, toxic gases and smoke are irritants present from decomposition/combustion. Closed container may explode when exposed to extreme heat.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

CLEAN-UP:

SMALL SPILL: Absorb liquid on inert material such as paper, vermiculite, floor absorbent, and transfer to hood.

LARGE SPILL: Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, contain area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be absorbed with inert material such as sand, clay, earth, or floor absorbent, and shoveled into containers, with non-sparking tools. Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify the proper authorities as required that a spill has occurred.

SECTION 7 - HANDLING AND STORAGE

HANDLING: SENSITIVITY TO STATIC DISCHARGE - Grounding/Bonding required

STORAGE: Keep container tight and upright to prevent leakage. Keep container closed when not in use. Do not store above 49 C/120 F. Do not transfer contents to bottles or unlabeled containers. Protect from freezing. Containers of this material may be hazardous when emptied because they retain product residues (vapor, liquid, and/or solid). This empty, may contain explosive vapors. Do not cut, puncture or weld on or near this container. All hazard precautions given in this data sheet must be observed for empty containers.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

RESPIRATORY PROTECTION/VENTILATION: Use only with adequate ventilation. Maintain continuous flow of fresh air. Do not breathe vapors, spray mists, or sanding dusts. Use air purifying respirators fitted with organic vapor/HEPA cartridges only if air monitoring of the work area demonstrates solvent and particulate levels do not exceed the respirator Maximum Use Concentration. Use only properly fitted NIOSH approved respirators. Follow respirator manufacturer's directions for use. Engineering or administrative controls should be implemented to reduce exposure. Paint spray booths, local exhaust, and general exhaust systems are advisable to minimize exposure.

PERSONAL PROTECTIVE EQUIPMENT: Use protective equipment to prevent contact with eyes, skin, or clothing. Use solvent resistant safety eyewear with splash guards. Protective garments such as nylon or Tyvek(R) coveralls typically used to protect from light overspray, splatters, etc. Saranex 23-P(R) coveralls recommended for messy applications. Nitrile or natural rubber gloves typically used to protect from minor contact. For prolonged contact, neoprene gloves are better and butyl are best.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical Appearance	...	-N/A
Odor	...	-N/A
Physical State	...	LIQUID
pH	...	-N/A
Vapor Density	...	4.00
Boiling Range	...	Lower - 175.0 F 79.4 C Higher - 313.0 F 156.1 C ØF ØF
Freezing Point	...	-N/A
Melting Point	...	-N/A
Water Solubility	...	8.1433 LB/GAL 5.147 lbs./gal. or 617 g/l
Specific Gravity000 (n-Butyl Acetate = 1)
Formula weight per Volume	...	-N/A
VOC	...	978
Evaporation Rate	...	63.2188
Viscosity	...	70.1228
% Volatile by Weight	...	-N/A
% Volatile by Volume	...	-N/A
Coeff of Water-01 Distribution	...	-N/A

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID AND INCOMPATIBILITIES: Acids, Strong mineral acids, Alkali's, Alkylamines, Aldehydes, Amines, Ammonia, Strong bases, Caustics, Chlorinated compounds,

Epoxy hardeners under uncontrolled conditions, oxidizing agents, This product will dissolve some plastics, rubbers and coatings. Incompatible with amines and

HAZARDOUS DECOMPOSITION PRODUCTS: (Including Thermal Decomposition): Carbon dioxide and carbon monoxide, organic acids, Acids, Aldehydes, ammonia, formaldehyde, Toxic fumes, various hydrocarbons, Nitrogen oxides, Acryl smoke.

POLYMERIZATION: Will not occur.

STABILITY: Stable under ordinary conditions of use and storage.

SECTION 11 - TOXICOLOGICAL INFORMATION

No additional toxicological data available. Please refer to sections 2 & 3.

SECTION 12 - ECOLOGICAL INFORMATION

No ecological data available for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Do not incinerate closed containers.

SECTION 14 - TRANSPORT INFORMATION

DOT Hazard Class: 3
DOT Label: Flammable Liquid
DOT Placard: Flammable

DOT Packing Group: II
DOT Shipping Name: Paint
UN/NA Number: 1263

SECTION 15 - REGULATORY INFORMATION

FEDERAL REGULATIONS:

SARA 313 INFORMATION This product contains the following substances subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372:

TOLUOL CAS# 108-88-3 PCT BY WT: 11.6800
METHYL ETHYL KETONE CAS# 78-93-3 PCT BY WT: 13.2440
CELLSOLVLE ACETATE CAS# 111-15-9 PCT BY WT: 15.4610

STATE REGULATIONS: PER CALIFORNIA'S PROPOSITION 65 WARNING: This product contains chemicals known to the State of California to cause birth defects or other reproductive harm.

SECTION 16 - OTHER INFORMATION

FOR INDUSTRIAL USE ONLY: This product is for use by professional, trained personnel using proper equipment, and is not intended for sale to, or use by, the general public.
NON-WARRANTY: Any recommendation of U.S. Paint contained herein covering use, utilization, chemical or physical properties and other qualities of the products sold is believed reliable; however, U.S. Paint makes no warranty or representation with respect thereto. Use or application of any U.S. Paint product is at the discretion of the Buyer without liability or obligation whatsoever of U.S. Paint.

THE INFORMATION CONTAINED HEREIN IS INFORMATION RECEIVED FROM OUR RAW MATERIAL SUPPLIERS AND OTHER SOURCES AND IS BELIEVED TO BE RELIABLE. THIS DATA IS NOT TO BE TAKEN AS A WARRANTY OR REPRESENTATION FOR WHICH U.S. PAINT CORPORATION ASSUMES LEGAL RESPONSIBILITY.

Material Safety Data Sheet

TEF-GEL

Date of Preparation: 2/20/99

Revision Date: 08/17/2005

Section 1 – Chemical Product and Company Identification

Product/Chemical Name: Tef-Gel

General Use: Anti-sieze Lubricant

Manufacturer: Ultra Safety Systems

1601 Hill Avenue, Suite C

Mangonia Park Fl 33407

Telephone: (561) 845-1086 (8:00AM – 5:00PM)

Nights and Weekends: (561) 584-0504

Section 2 – Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt or % volume
Polytetrafluoroethylene, PTFE*	9002-84-0	40.0

Product formulation is Proprietary

No Ingredients are known to be hazardous under normal usage.

*Not a hazardous material under normal usage, but PTFE can produce toxic fumes if pyrolyzed.

Ingredients	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
Oil Mist	5 mg/m ³	None Established	5 mg/m ³	None Established	5 mg/m ³	None Established	2500 mg/m ³

Section 3 – Hazards Identification

*****EMERGENCY OVERVIEW*****

HMIS
H 1
F 1
R 0
PPE[†]
[†]Sec. 8

Summary of Risks: May irritate eyes. Prolonged or repeated skin contact may cause irritation. Inhalation of Oil mist or vapors from material at high temperatures may irritate respiratory passages. Polytetrafluoroethylene (PTFE), when thermally decomposed (over 290^oC), may cause polymer fume fever. Thermal decomposition of PTFE (over 290^oC) will generate hydrogen fluoride.

POTENTIAL HEALTH EFFECTS

Eye Contact: May cause irritation.

Skin Contact: Repeated or prolonged skin contact may cause irritation. Thermal decomposition of PTFE (over 290^oC) will generate hydrogen fluoride, which is corrosive, causing burns on contact with skin and other tissue.

Inhalation: Oil Mist and vapors at high temperatures may irritate respiratory passages. Inhalation of decomposition products of PTFE (over 290^oC) may cause polymer fume fever, a temporary flu-like illness accompanied by fever, chills, and sometimes cough, of approximately 24 hours duration. Repeated episodes of polymer fume fever may cause lung damage. Inhalation of fluorine compounds as decomposition products of PTFE (over 290^oC) may cause lung irritation and pulmonary edema.

Ingestion: May cause gastrointestinal irritation.

Primary Route(s) of Entry: Inhalation at high temperatures, eye contact, skin contact.

Target Organs: Respiratory passages at high temperatures, eyes, skin.

Medical Conditions Aggravated by Long-Term Exposure: Individuals with pre-existing diseases of the lungs may have increases susceptibility to the toxicity of excessive exposures from thermal decomposition products.

Carcinogenicity: IARC, NTP, and OSHA do not list TEF-GEL or its ingredients as carcinogens.

Section 4 – First Aid Measures

Eye Contact: Flush thoroughly with water for at least 15 minutes. Get immediate medical attention.

Skin Contact: Remove contaminated clothing. Wash exposed area with soap and water. Get medical attention if symptoms persists.

Inhalation: If symptoms develop, remove affected person from source of exposure into fresh air. Get immediate medical attention.

If person is not breathing, give artificial respiration. If breathing is difficult, administer oxygen if available.

Ingestion: Get immediate medical attention. Do not induce vomiting unless instructed to do so by a physician.

Section 5 – Fire – Fighting Measures

Flash Point: over 400° F (204°C)

Flash Point Method: CC, ASTM D93

Lower Flammable Limit (LFL): N/A

Upper Flammable Limit (UFL): N/A

Extinguishing Media: CO₂, Foam, Dry Chemical, Water Spray

Unusual Fire or Explosion Hazards: None

Hazardous Combustion Products: Hydrogen fluoride, carbonyl fluoride, carbon monoxide and small amount of other toxic fumes

Fire-Fighting Instructions: Wear a NIOSH approved positive pressure self-contained breathing apparatus with full protective clothing. Do not release runoff from fire control methods to sewers or waterways.

Section 6 – Accidental Release Measures

Spill Response: Observe precautions from other sections. Contain any spill with dikes or absorbents to prevent migration and entry into drains, sewers or bodies of water. Wipe or scrape up grease and place it in a proper container for disposal. Wash walking surfaces thoroughly to reduce slipping hazard. Follow applicable OSHA (29 CFR 1910.120), state and local regulations.

Section 7 – Handling and Storage

Handling Precautions: Exercise ordinary care in handling industrial lubricants. Avoid contamination of cigarettes or other tobacco products. Wash hands thoroughly before eating or smoking. Remove contaminated clothing and clean before reuse. Users should be alert to the possibility that very small percentages of the population may display unexpected allergic reactions to otherwise innocuous industrial lubricants and raw materials.

Storage Requirements: Do not store in open or unlabeled containers. Store away from incompatibles.

Section 8 – Exposure Controls / Personal Protection

Eye Protection: Avoid eye contact. Wear safety glasses or chemical goggles in accordance with OSHA 29 CFR 1910.133.

Skin Protection: Avoid skin contact. Wear chemical protective gloves. Depending upon conditions of use, additional protection may be necessary such as a face shield, apron, etc.

Ventilation: Local ventilation is generally not necessary under normal conditions of use with adequate general ventilation.

Ventilation and other forms of engineering controls are preferred means for controlling chemical exposures.

Respiratory Protection: Avoid breathing oil mist. Respiratory protection is generally not necessary under normal condition of use with adequate general ventilation.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Other Precautionary Information: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, using the toilet, or applying cosmetics.

Section 9 – Physical and Chemical Properties

Appearance and Odor: Smooth, white grease with slight odor

Vapor Pressure: Negligible

Vapor Density: Not Determined

Formula Weight: Not Calculated

Specific Gravity (H²O=1, at 4°C): Not Determined

Water Solubility: Insoluble

Boiling Point: Not Volatile

Dropping Point: Non-melting

% Volatile: None

pH: Not Determined

Section 10 – Stability and Reactivity

Stability: Tef-Gel is stable at room temperature in closed containers under normal storage and handling conditions.

Polymerization: This product will not undergo hazardous polymerization.

Chemical Incompatibilities: Strong oxidizing materials.

Conditions to Avoid: Pyrolysis

Hazardous Decomposition Products: Thermal oxidative decomposition of Tef-Gel can produce hydrogen fluoride, carbonyl fluoride, carbon monoxide as well as small amounts of other toxic fumes.

Section 11 – Toxicological Information

Toxicity Data: None Available

Section 12 – Ecological Information

Environmental Fate and Effects: No data has been established for this product.

Section 13 – Disposal Considerations

Disposal: Contact a licensed waste-disposal contractor for detailed recommendations.

Disposal Regulatory Requirements: Many states classify waste lubricants as “hazardous”, which means disposal only by a licensed firm. Follow applicable Federal, state, and local regulations.

Section 14 – Transport Information

DOT Transportation Data (49 CFR 172.101): Not Regulated.

Section 15 – Regulatory Information

TSCA: All components of this product are listed on the TSCA inventory.

EPA Regulations:

SARA 311/312 Hazard Class (40 CFR 370)

Immediate (Acute) Health Hazard	No	Sudden Release of Pressure Hazard	No	Reactive Hazard	No
Delayed (Chronic) Health Hazard	No	Fire Hazard	No		

SARA 313 Toxic Chemicals (40 CFR 372)

No Ingredients Listed

CAS Number %

SARA Extremely Hazardous Substances (40 CFR 355)

No Ingredients Listed

CAS Number %

Threshold Planning Quantity (TPO)

CERCLA Hazardous Substances (40 CFR 302)

No Ingredients Listed

CAS Number %

Reportable Quantity (RO)

Section 16 – Other Information

SHELF LIFE: INDEFINITE or UNLIMITED

Disclaimer: While the information and recommendations set forth herein are believed to be accurate as of the date hereof, Ultra Safety Systems, Inc. makes no warranty with respect thereto and disclaims all liability with respect thereon.

SILICONE SPRAY



ZZ7025 **772199**
 2-3-0B
 (For Internal Use Only)

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION

Product: Silicone Spray Lube, with Heptane
Manufacturer: Valspar Corporation
Address: 411 North Darling, Fremont MI 49412

Code No.:
Telephone: (616)924-3950
SP Code: ZZ7025

SECTION 2 - PRODUCT COMPONENTS

	<u>Component Name</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Wt. %</u>	<u>CAS Number</u>
1)	Solvent naphtha (petroleum), medium aliphatic	100 ppm ¹	100 ppm ¹	60-75	64742-88-7
2)	Siloxanes and silicones, di-Me	---	---	1-10	63148-62-9
3)	Heptane	400 ppm	400 ppm	5-20	142-82-5
4)	Petroleum products, liquefied gas, sweetened	1,000 ppm	800 ppm	15-25	68476-86-8

SECTION 3 - PHYSICAL AND CHEMICAL CHARACTERISTICS⁴

Boiling Point:	161°F IBP	Specific Gravity:	0.778
Vapor Pressure:	ND	Water Soluble:	Nil
Vapor Density (Air = 1):	> 1	Water Reactive:	No
Volume % Volatile:	> 65	pH:	NA
Appearance and Odor:	Clear water white liquid, solvent odor.		

SECTION 4 - FIRE AND EXPLOSION INFORMATION

Flash Point (Method):	Extremely-Flammable Aerosol	Autoignition Temp.:	ND
Flammable Limits, LEL:	ND	UEL:	ND
Flame Extension:	> 18"	Flashback:	Yes
Extinguishing Media:	Foam, dry chemical, CO ₂		
Special Firefighting Procedures:	Use SCBA. Water is not suitable as an extinguishing media, but may be useful for cooling nearby containers.		
Unusual Fire and Explosion Hazards:	Aerosol containers may burst when exposed to temperatures in excess of 120°F.		

SECTION 5 - REACTIVITY DATA

Stable: Yes **Conditions to Avoid:** Heat, sparks, open flame.
Incompatibility: Strong oxidizers like chlorine or concentrated O₂.
Hazardous Decomposition Products: Fumes, smoke, various oxides of carbon
Polymerization: No **Conditions to Avoid:** None Known

ZZ7025
 11/15/01

SILICONE SPRAY LUBE. WITH HEPTANE MATERIAL SAFETY DATA SHEET, CONT.

SECTION 6 - HEALTH HAZARDS

Primary Routes of Entry: Oral: No Carcinogenic Listing: NTP: No
 Inhalation: Yes IARC: No
 Skin Absorb.: Yes ACGIH: No

HMS Rating¹: Health: 2 Flammability: 3 Reactivity: 0

Signs/Symptoms of Exposure: Headache, dizziness, nausea; eye, nose, and throat irritation from inhalation of vapor concentrations. May cause eye and throat irritation from contact.

Emergency First Aid Procedures

Eye Contact: Flush with running water for 15 minutes, holding lid open to expose surface. Contact physician.

Skin Contact: Remove contaminated clothing and shoes. Wash with mild soap and water, apply skin cream for irritation.

Inhalation: Remove to fresh air at once. Apply artificial respiration if necessary, contact physician immediately.

Ingestion: Do not induce vomiting, contact physician immediately.

Chronic Hazards: Health studies have shown that many petroleum hydrocarbons pose human health risks which may vary from person to person. Prolonged or repeated occupational overexposure to solvents has been linked to permanent brain and nervous system damage. Intentional misuse by deliberate concentration and inhalation may be harmful or fatal. As a precaution, exposure to liquids or vapors should be minimized.

SECTION 7 - SPECIAL PRECAUTIONS/SPILL & LEAK PROCEDURES

Precautions for Storage and Handling: Keep containers closed when not in use. Do not use or store near open flame or strong oxidizers.

Other Precautions: Avoid breathing vapors or mists; prolonged or repeated skin contact.

Spill or Leak Precautions: ** DANGER!! LEAKING AEROSOLS ARE AN EXTREME FIRE AND EXPLOSION HAZARD!! Remove ignition sources, check area with gas detector. Move leaking cans outdoors and empty into suitable container by depressing valve button. Small liquid spills may be taken up with absorbent material.

Waste Disposal Method: Comply with all applicable regulations.

SECTION 8 - SPECIAL PROTECTION & PRECAUTIONS

Respiratory Protection: None required in normal use.

Ventilation Type Required: Adequate to maintain level below established standards.

Local Exhaust: Yes Rate: >60 fpm Mech. (General) No³

Gloves: Chemical resistant

ZZ7025
11/15/01

SILICONE SPRAY LUBE, WITH HEPTANE MATERIAL SAFETY DATA SHEET, CONT.

Eye Protection: Face shield or safety glasses recommended.
Other Clothing/Equipment: None required in normal use.
Work/Hygiene Practices: Basic good housekeeping.

SECTION 9 - SHIPPING/LABELING INFORMATION

DOT ID Number: None
DOT Hazard Class: ORM-D
DOT Shipping Name: Consumer Commodity
DOT Precautionary Label: None required
Packing Group: None assigned
IMO/IATA ID Number: UN1950 / UN1950
IMO/IATA Hazard Class: 9 / 2.1
IMO Shipping Name: AEROSOLS
IATA Shipping Name: Aerosols, flammable, n.o.s. (Propane/Isobutane)
IMO/IATA Precautionary Label: AEROSOLS statement / Flammable Gas diamond
IMO/IATA Packing Group: II / None assigned
IMO Page Number: 9022 **Marine Pollutant:** No

In Case of Transportation Emergency, Call Chemtrec 1-800-424-9300

- ¹ Standard for Stoddard Solvent
- ² Values given in this section are for non-aerosolized product
- ³ Recommended

Abbreviations			
NA	Not Applicable	mppcf	Million Parts per Cubic Foot
NAV	Not Available	ppm	Parts per Million
ND	Not Determined	mg/m ³	Milligrams per Cubic Meter
NTP	National Toxicology Program	CAS	Chemical Abstract Service
IBP	Initial Boiling Point	SCBA	Self contained Breathing Apparatus
TCC	Tag Closed Cup	fpm	Feet per Minute, Face Velocity
CCC	Cleveland Open Cup		
IARC	International Agency for Research on Cancer		
OSHA	Occupational Safety and Health Administration		
ACGIH	American Conference of Governmental Hygienists		

The information presented here has been assembled by Guardsman Products based on our own study and on the work of others. It is believed to be correct. However, no warranty, expressed or implied, is given as to the accuracy, completeness, or adequacy of the information is made by Guardsman Products.

Neither the fact that we have furnished these data sheets to you nor any statement of information contained therein extends or grants, or should be construed by you as extending or granting, any license, express or implied, in connection with patents issued or pending which may be our property or the property of others.

Valspar Corporation
 Specialty Products Division
 Fremont, MI USA

Prepared By: Steve Eckert
 Date: 10-4-01
 Revision: C-4

ZZ7025
 11/15/01

*AKR Testing
Gauges*

MATERIAL SAFETY DATA SHEET (MSDS)

This MSDS should be attached or kept with the respective product with which it is associated.

U SAFETY DATA SHEET - A1816

Associated Grainger Items

1A316, 1A317, 1X676, 1X678, 1X680, 1X682, 1X684, 1X686, 1X689, 1X691, 1X694
1X696, 1X698, 1X700, 1X702, 1X704, 1X706, 1X708, 1X710, 1X712, 1X714, 1X716
1X718, 1X720, 1X722, 1X724, 2A211, 2P846, 2P847, 2P848, 2P849, 2P850, 2P851
3A420, 4A370, 4A371, 4A372, 5A041, 5A042, 5A043, 5A044, 5A045, 5HK51, 5HK52
5HK53, 5HK54, 5HK55, 5HK56, 5HK57, 5HK58, 5HK59, 5HK60, 5HK61, 5HK62, 5HK63
5HK64, 5HK65, 5HK66, 5HK67, 5HK68, 5HK69, 5HK70, 5HK71, 5HK72, 5HK75, 5X369
5X370, 5X371

004

07/10/00

GLYCERINE

-----1. PRODUCT NAME -----

PRODUCT NAME: GLYCERINE

MSDS #: DZ08439

EFFECTIVE DATE: 7/10/00

-----2. COMPOSITION/INFORMATION ON INGREDIENTS -----

GLYCERINE, MINIMUM CAS# 000056-81-5 99.7%

-----3. HAZARDS IDENTIFICATION -----

EMERGENCY OVERVIEW:

WATER WHITE LIQUID. ODORLESS. NO SIGNIFICANT HAZARDS FOR EMERGENCY RESPONSE ARE KNOWN.

POTENTIAL HEALTH EFFECTS (SEE SECTION 11 FOR TOXICOLOGICAL DATA.):

EYE:
MAY CAUSE SLIGHT TRANSIENT (TEMPORARY) EYE IRRITATION. CORNEAL INJURY IS UNLIKELY.

SKIN:
PROLONGED OR REPEATED EXPOSURE NOT LIKELY TO CAUSE SIGNIFICANT SKIN IRRITATION. A SINGLE PROLONGED EXPOSURE IS NOT LIKELY TO RESULT IN THE MATERIAL BEING ABSORBED THROUGH SKIN ON HARMFUL AMOUNTS. MAY BE ABSORBED IN POTENTIALLY HARMFUL AMOUNTS WHEN APPLIED IN LARGE QUANTITIES TO SEVERE BURNS (SECOND OR THIRD DEGREE) OVER LARGE AREAS OF THE BODY AS PART OF A CREAM OR TOPICAL APPLICATION. ABSORPTION UNDER SUCH CIRCUMSTANCES CAN ELEVATE

METHOD USED: PHCC

AUTOIGNITION TEMPERATURE: 698F, 370C.

FLAMMABILITY LIMITS:

SERUM OSMOLALITY AND MAY RESULT IN OSMOTIC SHOCK.

INGESTION:

SINGLE DOSE ORAL TOXICITY IS CONSIDERED TO BE EXTREMELY LOW. SMALL AMOUNTS SWALLOWED INCIDENTAL TO NORMAL HANDLING OPERATIONS ARE NOT LIKELY TO CAUSE INJURY; SWALLOWING AMOUNTS LARGER THAN THAT MAY CAUSE INJURY. SIGNS AND SYMPTOMS OF EXCESSIVE EXPOSURE MAY BE CENTRAL NERVOUS SYSTEM EFFECTS AND INCREASED BLOOD SUGAR LEVELS.

INHALATION:

AT ROOM TEMPERATURE, VAPORS ARE MINIMAL DUE TO PHYSICAL PROPERTIES. IF HEATED OR SPRAYED AS AN AEROSOL, AIRBORNE MATERIAL MAY CAUSE UPPER RESPIRATORY IRRITATION.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:

REPEATED EXCESSIVE EXPOSURES MAY CAUSE INCREASED FAT LEVELS IN BLOOD. OBSERVATIONS IN ANIMALS INCLUDE KIDNEY, LIVER, AND GASTROINTESTINAL EFFECTS WITH VERY LARGE ORAL DOSES.

CANCER INFORMATION: DID NOT CAUSE CANCER IN LONG-TERM ANIMAL STUDIES.

TERATOLOGY:

BIRTH DEFECTS ARE UNLIKELY. EXPOSURES HAVING NO ADVERSE EFFECTS ON THE MOTHER SHOULD HAVE NO EFFECT ON THE FETUS.

REPRODUCTIVE EFFECTS:

REPRODUCTIVE EFFECTS SEEN IN FEMALE ANIMALS ARE BELIEVED TO BE DUE TO ALTERED NUTRITIONAL STATUS RESULTING FROM EXTREMELY HIGH DOSES IN THEIR DIETS. SIMILAR EFFECTS HAVE BEEN SEEN IN ANIMALS FED SYNTHETIC DIETS.

-----4. FIRST AID -----

EYES: FLUSH EYES WITH PLENTY OF WATER.

SKIN: WASH OFF IN FLOWING WATER OR SHOWER.

INGESTION:

IF SWALLOWED, SEEK MEDICAL ATTENTION. DO NOT INDUCE VOMITING UNLESS DIRECTED TO DO SO BY MEDICAL PERSONNEL.

INHALATION: REMOVE TO FRESH AIR IF EFFECTS OCCUR. CONSULT A PHYSICIAN.

NOTE TO PHYSICIAN:

NO SPECIFIC ANTIDOTE. SUPPORTIVE CARE. TREATMENT BASED ON JUDGMENT OF THE PHYSICIAN IN RESPONSE TO REACTIONS OF THE PATIENT.

-----5. FIRE FIGHTING MEASURES -----

FLAMMABLE PROPERTIES:

FLASH POINT: 390F, 199C

STORAGE:

GLYCERINE FREEZES AT 64F. GLYCERINE SHOULD BE KEPT ABOVE 64F BUT BELOW 130F.

LFL: NOT DETERMINED.

UFL: NOT DETERMINED.

HAZARDOUS COMBUSTION PRODUCTS:

IF A FIRE, SMOKE MAY CONTAIN THE ORIGINAL MATERIAL IN ADDITION TO UNIDENTIFIED TOXIC AND/OR IRRITATING COMPOUNDS. HAZARDOUS COMBUSTION PRODUCTS MAY INCLUDE AND ARE NOT LIMITED TO: ALDEHYDES, CARBON MONOXIDE, CARBON DIOXIDE.

OTHER FLAMMABILITY INFORMATION:

VIOLENT STEAM GENERATION OR ERUPTION MAY OCCUR UPON APPLICATION OF DIRECT WATER STREAM.

EXTINGUISHING MEDIA:

WATER FOG OR FINE SPRAY, CARBON DIOXIDE, DRY CHEMICAL, FOAM. ALCOHOL RESISTANT FOAMS (AFC TYPE) OR PROTEIN FOAMS MAY FUNCTION, BUT MUCH LESS EFFECTIVELY. DO NOT USE DIRECT WATER STREAM. WILL SPREAD FIRE.

MEDIA TO BE AVOIDED: DO NOT USE DIRECT WATER STREAM.

FIRE FIGHTING INSTRUCTIONS:

KEEP PEOPLE AWAY. ISOLATE FIRE AREA AND DENY UNNECESSARY ENTRY. BURNING LIQUIDS MAY BE MOVED BY FLUSHING WITH WATER TO PROTECT PERSONNEL AND MINIMIZE PROPERTY DAMAGE. BURNING LIQUIDS MAY BE EXTINGUISHED BY DILUTION WITH WATER. DO NOT USE DIRECT WATER STREAM. MAY SPREAD FIRE.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS:

WEAR POSITIVE-PRESSURE SELF-CONTAINED BREATHING APPARATUS (SCBA) AND PROTECTIVE FIRE FIGHTING CLOTHING (INCLUDES FIRE FIGHTING HELMET, COAT, BOOTS, AND GLOVES. IF PROTECTIVE EQUIPMENT IS NOT AVAILABLE OR NOT AVAILABLE, FIGHT FIRE FROM A PROTECTED LOCATION OR SAFE DISTANCE.

-----6. ACCIDENTAL RELEASE MEASURES -----

(SEE SECTION 15 FOR REGULATORY INFORMATION)

PROTECT PEOPLE:

KEEP UNNECESSARY PEOPLE AWAY; ISOLATE HAZARD AREA AND DENY UNNECESSARY ENTRY.

PROTECT THE ENVIRONMENT:

KEEP OUT OF SEWERS, STORM DRAINS, SURFACE WATER AND SOIL.

CLEANUP:

SMALL SPILLS: COVER WITH ABSORBENT MATERIAL, SOAK UP AND SWEEP INTO A DRUM.
LARGE SPILLS: DIKE AROUND SPILL AND PUMP INTO SUITABLE CONTAINERS.

-----7. HANDLING AND STORAGE -----

HANDLING: PRACTICE REASONABLE CARE AND CAUTION.

INCOMPATIBILITY WITH OTHER MATERIALS: OXIDIZING MATERIAL.

HAZARDOUS DECOMPOSITION PRODUCTS: ACOLEIN.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

-----11. TOXICOLOGICAL INFORMATION -----

-----8. EXPOSURE CONTROLS/PERSONAL PROTECTION -----

ENGINEERING CONTROLS:

PROVIDE GENERAL AND/OR LOCAL EXHAUST VENTILATION TO CONTROL AIRBORNE LEVELS BELOW THE EXPOSURE GUIDELINES.

PERSONAL PROTECTIVE EQUIPMENT:

EYE/FACE PROTECTION: USE SAFETY GLASSES.

SKIN PROTECTION:

NO PRECAUTIONS OTHER THAN CLEAN BODY-COVERING CLOTHING SHOULD BE NEEDED.

RESPIRATORY PROTECTION:

FOR MOST CONDITIONS, NO RESPIRATORY PROTECTION SHOULD BE NEEDED; HOWEVER, IF MATERIAL IS HEATED OR SPRAYED, USE AN APPROVED AIR-PURIFYING RESPIRATOR.

EXPOSURE GUIDELINE:

GLYCERIN:

ACGIH TLV IS 10 MG/M3.

OSHA PEL IS 10 MG/M3 TOTAL, 5 MG/M3 RESPIRABLE.

PELS ARE IN ACCORD THOSE RECOMMENDED BY OSHA, AS IN THE 1989 REVISION OF PELs.

-----9. PHYSICAL AND CHEMICAL PROPERTIES -----

APPEARANCE: WATER WHITE LIQUID.

ODOR: ODORLESS

VAPOR PRESSURE: <1.0 mmHg @ 20C

VAPOR DENSITY: 3.1

BOILING POINT: 554F, 290C

SOLUBILITY IN WATER: MISCIBLE

SPECIFIC GRAVITY: 1.2607 @ 25/25 (MIN.)

-----10. STABILITY AND REACTIVITY -----

CHEMICAL STABILITY: STABLE.

CONDITIONS TO AVOID:

AVOID STRONG OXIDIZING AGENT (SUCH AS SODIUM HYPOCHLORITE, HYPOCHLOROUS ACID).

DISPOSAL:

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. ALL DISPOSAL METHODS MUST BE IN COMPLIANCE WITH ALL FEDERAL, STATE/PROVINCIAL AND LOCAL LAWS AND REGULATIONS. REGULATIONS MAY VARY IN DIFFERENT LOCATIONS. WASTE CHARACTERIZATIONS AND COMPLIANCE WITH APPLICABLE LAWS ARE THE RESPONSIBILITY SOLELY OF THE WASTE GENERATOR.

FOR UNUSED & UNCONTAMINATED PRODUCT, THE PREFERRED OPTIONS INCLUDE SENDING

(SEE SECTION 3 FOR POTENTIAL HEALTH EFFECTS. FOR DETAILED TOXICOLOGICAL DATA, WRITE OR CALL THE ADDRESS OR NON-EMERGENCY NUMBER SHOWN IN SECTION 1)

HE LD50 FOR SKIN ABSORPTION IN RABBITS IS >10,000 MG/KG.

INGESTION: THE ORAL LD50 FOR RATS IS 17,000 TO 27,200 MG/KG.

INHALATION: THE LC50 FOR 6 HOURS IN RATS WAS >4 MG/LITER.

MUTAGENICITY: IN VITRO MUTAGENICITY STUDIES WERE NEGATIVE.

-----12. ECOLOGICAL INFORMATION -----

(FOR DETAILED ECOLOGICAL DATA, WRITE OR CALL THE ADDRESS OR NON-EMERGENCY NUMBER SHOWN IN SECTION 1)

ENVIRONMENTAL FATE:

MOVEMENT & PARTITIONING:

BASED LARGELY OR COMPLETELY ON INFORMATION FOR SIMILAR MATERIAL(S), I.E. GLYCERINE. BIOCONCENTRATION POTENTIAL IS LOW (BCF LESS THAN 100 OR LOG POW LESS THAN 3). LOG OCTANOL/WATER COEFFICIENT (LOG POW) IS -1.76.

DEGRADATION & PERSISTENCE:

BASED LARGELY OR COMPLETELY ON INFORMATION FOR SIMILAR MATERIAL(S), I.E. GLYCERINE. BIODEGRADATION UNDER AEROBIC LABORATORY CONDITIONS IS HIGH (BOD20 OR BOD18/THOD GREATER THAN 40%). BIODEGRADATION IS EXPECTED TO BE ACHIEVABLE IN SECONDARY WASTEWATER TREATMENT PLANT. INHIBITORY CONCENTRATION (IC50) IN 5-DAY ACTIVATED SLUDGE RESPIRATION INHIBITION TEST (OECD TEST NO. 209) IS GREATER THAN 1000 MG/L. 5-DAY BIOCHEMICAL OXYGEN DEMAND (BOD5) IS 0.54 P/P. 10-DAY BIOCHEMICAL OXYGEN DEMAND (BOD10) IS 0.98 P/P. 20-DAY BIOCHEMICAL OXYGEN DEMAND (BOD20) IS 1.0 P/P. THEORETICAL OXYGEN DEMAND (THOD) IS CALCULATED TO BE 1.22 P/P.

ECOTOXICITY:

BASED LARGELY OR COMPLETELY ON INFORMATION FOR SIMILAR MATERIAL(S), I.E. GLYCERINE. MATERIAL IS PRACTICALLY NON-TOXIC TO FISH ON AN ACUTE BASIS (LC50 GREATER THAN 100 MG/L). ACUTE LD50 FOR FATHEAD MINNOW (PIPEPHALES PROMELAS) IS 44000 MG/L. ACUTE LD50 FOR GOLDFISH (CARASSIUS AURATUS) IS GREATER THAN 5000 MG/L.

-----13. DISPOSAL CONSIDERATIONS -----

(SEE SECTION 15 FOR REGULATORY INFORMATION)

CONTACT:

MSDS COORDINATOR

VAN WATERS & ROGERS INC.

DURING BUSINESS HOURS, PACIFIC TIME

(425) 889-3400

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TO A LICENSED, PERMITTED, RECYCLER, RECLAIMER, INCINERATOR OR OTHER THERMAL DESTRUCTION DEVICE.

-----14. TRANSPORT INFORMATION -----

U. S. DEPARTMENT OF TRANSPORTATION (DOT):

FOR DOT REGULATORY INFORMATION, IF REQUIRED, CONSULT TRANSPORTATION REGULATIONS, OR PRODUCT SHIPPING PAPERS.

CANADIAN TDG INFORMATION:

FOR TDG REGULATORY INFORMATION, IF REQUIRED, CONSULT TRANSPORTATION REGULATIONS OR PRODUCT SHIPPING PAPERS.

-----15. REGULATORY INFORMATION -----

(NOT MEANT TO BE ALL-INCLUSIVE-SELECTED REGULATIONS REPRESENTED)

NOTICE:

THE INFORMATION HEREIN IS PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE AS OF THE EFFECTIVE DATE SHOWN ABOVE. HOWEVER, NO WARRANTY, EXPRESS OR IMPLIED IS GIVEN. REGULATORY REQUIREMENTS ARE SUBJECT TO CHANGE AND MAY DIFFER FROM ONE LOCATION TO ANOTHER; IT IS THE BUYER'S RESPONSIBILITY TO ENSURE THAT ITS ACTIVITIES COMPLY WITH FEDERAL, STATE OR PROVINCIAL, AND LOCAL LAWS. THE FOLLOWING SPECIFIC INFORMATION IS MADE FOR THE PURPOSE OF COMPLYING WITH NUMEROUS FEDERAL, STATE OR PROVINCIAL, AND LOCAL LAWS AND REGULATIONS. SEE OTHER SECTIONS FOR HEALTH AND SAFETY INFORMATION.

SARA HAZARD CATEGORY:

THIS PRODUCT HAS BEEN REVIEWED ACCORDING TO THE EPA "HAZARD CATEGORIES" PROMULGATED UNDER SECTIONS 311 AND 312 OF THE SUPERFUND AMENDMENT AND REAUTHORIZATION ACT OF 1986 (SARA TITLE III) AND IS CONSIDERED, UNDER APPLICABLE DEFINITIONS, TO MEET THE FOLLOWING CATEGORIES:

NOT TO HAVE MET ANY HAZARD CATEGORY

CANADIAN REGULATIONS:

WHMIS INFORMATION:

THE CANADIAN WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) CLASSIFICATION FOR THIS PRODUCT IS:
THIS PRODUCT IS NOT A "CONTROLLED PRODUCT" UNDER WHMIS.

-----16. OTHER INFORMATION -----

FOR ADDITIONAL INFORMATION:

MSDS AS A PRODUCT SPECIFICATION. FOR PRODUCT SPECIFICATION INFORMATION REFER TO A PRODUCT SPECIFICATION SHEET AND/OR A CERTIFICATE OF ANALYSIS. THESE CAN BE OBTAINED FROM YOUR LOCAL VW&R SALES OFFICE.

ALL INFORMATION APPEARING HEREIN IS BASED UPON DATA OBTAINED FROM THE MANUFACTURER AND/OR RECOGNIZED TECHNICAL SOURCES. WHILE THE INFORMATION IS BELIEVED TO BE ACCURATE, VW&R MAKES NO REPRESENTATIONS AS TO ITS ACCURACY OR SUFFICIENCY. CONDITIONS OF USE ARE BEYOND VW&R CONTROL AND THEREFORE USERS ARE RESPONSIBLE TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS TO DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PARTICULAR PURPOSES AND ASSUME ALL RISKS OF THEIR USE, HANDLING, AND DISPOSAL OF THE PRODUCT, OR FROM THE PUBLICATION OR USE OF, OR RELIANCE UPON, INFORMATION CONTAINED

CONSEQUENTIAL DAMAGES.

HEREIN. THIS INFORMATION RELATES ONLY TO THE PRODUCT DESIGNATED HEREIN, AND DOES NOT RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY OTHER PROCESS.

DO NOT USE INGREDIENT INFORMATION AND/OR INGREDIENT PERCENTAGES IN THIS



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PROPANE MSDS

ProductName: Propane
ChemicalName: Propane
Formula: C₃H₈ 4
ChemicalFamily: Alkane (hydrocarbon) 1 0
Use: Various
Synonyms: Dimethylmethane, LP-Gas, Liquefied petroleum gas (LPG)

◆ ◆

NFPA Fire: 4	HMIS Fire: 4	Acute: No
NFPA Health: 1	HMIS Health: 0	Chronic: No
NFPA Reactivity: 0	HMIS Reactivity: 0	Fire: Yes
NFPA Special Hazard:	Mixture: No	Reactive: No
		Sudden Release Pressure: Yes

02. INGREDIENTS - COMPOSITION & INFORMATION

COMPONENT	CAS No.	PERCENT		EXPOSURE GUIDELINES	
		(BY WT.)		OSHA - TWA	ACGIH - STEL
Propane	74-98-6	99.0%	100.0%	1000	Simple Asphyxiant

LD50: None; LC50: None.

03. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Warning: Flammable liquid gas under pressure.
 Can form explosive mixtures with air.
 May cause frostbite.

Potential Health Effects Information:

Routes of Exposure:

Inhalation: Simple asphyxiant. It should be noted that before suffocation could occur, the lower flammability limit of propane in air would be exceeded; possibly causing both an oxygen-deficient and explosive atmosphere. Exposure to concentrations (> 10%) may cause dizziness. Exposure to atmospheres containing 8-10% or less oxygen will bring about unconsciousness without warning, and so quickly that the individuals cannot help or protect themselves. Lack of sufficient oxygen may cause serious injury or death.

Eye Contact: Contact with liquid or cold vapor can cause freezing of tissue.

Skin Contact: Contact with liquid or cold vapor can cause frostbite.

Chronic Effects: None.

Medical Conditions Aggravated By: None.

Overexposure:

Other Effects Of Overexposure: None.

Carcinogenicity: Propane is not listed by NTP, OSHA or IARC.

04. FIRST AID MEASURES

Inhalation: Persons suffering from lack of oxygen should be removed to fresh air. If victim is not breathing, administer artificial respiration. If breathing is difficult, administer

oxygen. Obtain prompt medical attention.

Eye: Contact with liquid or cold vapor can cause freezing of tissue. Gently flush eyes with lukewarm water. Obtain medical attention immediately.

Skin: Contact with liquid or cold vapor can cause frostbite. Immediately warm affected area with lukewarm water not to exceed 105°F (40°C).

Ingestion: None.

Notes To Physician: None.

05. FIRE FIGHTING MEASURES

Flash Point: -156F (-104C)

Autoignition: 842F (432C)

Flammable Limits - Lower: 2.2%

Flammable Limits - Upper: 9.5%

Extinguishing Media: CO₂, dry chemical, water spray or fog for surrounding area. Do not extinguish until propane source is shut off.

Fire Fighting Instructions: Evacuate all personnel from danger area. Immediately cool container with water spray from maximum distance, taking care not to extinguish flames. If flames are accidentally extinguished, explosive re-ignition may occur. Stop flow of gas if without risk while continuing cooling water spray.

Fire And Explosion Hazards: Propane is easily ignited. It is heavier than air, therefore, it may collect in low areas or travel along the ground where an ignition source may be present. Pressure in a container can build up due to heat, and it may rupture if pressure relief devices should fail to function.

Hazardous Combustion Products: None known.

Sensitivity To Static Discharge: Possible, container should be grounded.

Sensitivity To Mechanical Impact: None.

06. ACCIDENTAL RELEASE MEASURES

Evacuate: Evacuate the immediate area. Eliminate any possible sources of ignition, and provide maximum explosion-proof ventilation. Shut off source of propane, if possible. If leaking from cylinder, or valve, contact your supplier. Never enter a confined space or other area where the concentration is greater than 10% of the lower flammable limit which is 0.22%.

07. HANDLING AND STORAGE

Storage: Specific requirements are listed in NFPA 58. Cylinder storage locations should be well-protected, well-ventilated, dry, and separated from combustible materials. Cylinders should never knowingly be allowed to reach a temperature exceeding 125°F (52°C). Cylinders of propane should be separated from oxygen cylinders or other oxidizers by a minimum distance of 20 ft., or by a barrier of non-combustible material at least 5 ft. high having a fire resistance rating of at least ½ hour. Full and empty cylinders should be segregated. Use a first-in, first-out inventory system to prevent full containers from being stored for long periods of time.

Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling or being knocked over. Protect cylinders from physical damage; do not drag, roll, slide or drop. Use a suitable hand truck for cylinder movement. Post "No Smoking or Open Flames" signs in the storage areas. There should be no sources of ignition. All electrical equipment should be explosion proof in the storage and use areas. Storage areas must meet national electric codes for class 1 hazardous areas.

Handling: Propane is heavier than air and may collect in low areas that are without proper ventilation. Leak check system with leak detection solution, never with flame. If user experiences difficulty operating cylinder valve, discontinue use and contact supplier. Never insert an object (e.g., wrench, screwdriver, pry bar, etc.) into valve cap openings. Doing so may damage valve, causing a leak to occur. Use an adjustable strap wrench to remove over-tight or rusted caps. Non-sparking tools

should be used. Never strike an arc on a compressed gas cylinder or make a cylinder a part of an electrical circuit. Electrically bond and ground cylinder when transferring liquid product. For additional precautions in using propane see Section 16 - Other Information.

08. EXPOSURE CONTROLS - PERSONAL PROTECTION

- Engineering Controls:
 - Ventilation: Natural or mechanical to prevent accumulation in worker's breathing zone above exposure limits. (See Section 2).
- Personal Protective Equipment (PPE):
 - Clothing: Cotton Clothing is recommended for use to prevent static electric buildup.
 - Glasses: Safety glasses are recommended when handling cylinders.
 - Shoes: Safety shoes are recommended when handling cylinders.
 - Gloves: Work gloves are recommended when handling cylinders.
 - Respirator: None required in general use.
 - Emergency Use: Self-contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmosphere. Respirators will not function. Before entering area, you must check for flammable and oxygen deficient atmospheres.

09. PHYSICAL AND CHEMICAL PROPERTIES

- Physical State: Gas
- Color: Colorless
- Odor: Unodorized propane has a slightly sweet odor. If an odorant has been added it will have a strong unpleasant odor.
- Molecular Weight: 44.097
- Boiling Point: -43.67°F (-42.04°C) @ 1 atm
- Specific Gravity: 1.5223 At 70°F (21.1°C) @ 1 atm, Air = 1
- Freezing/Melting Point: -305.84F (-187.69C) at 1 atm
- Vapor Pressure: 109.73 psig, (756.56 kPa) at 70°F (21.2°)
- Vapor Density: 0.110 lb./cu ft (1.1.77kg/CuM), At 70°F (21.1°C) @ 1 atm
- Water Solubility: .065 Vol./Vol. At 100° F (37.8°C)
- Expansion Ratio: 1 to 290 at 70°F (21.1°C)
- pH: Not applicable
- Odor Threshold: 1800 mg/CuM
- Evaporation Rate: Not Applicable - Gas
- Coefficient Of Water/Oil Distribution: Information not available

10. STABILITY AND REACTIVITY

- Chemical Stability: Stable
- Conditions To Avoid: None.
- Incompatibility With Other Materials: Oxidizing agents.
- Hazardous Decomposition Products: None.
- Hazardous Polymerization: Will not occur

11. TOXICOLOGICAL INFORMATION

- Other Studies Relevant To Material: Propane is nontoxic and is a simple asphyxiant, however it does have slight anesthetic properties and higher concentrations may cause dizziness.
- Irritancy Of Material: None.
- Reproductive Effects: None.
- Teratogenicity: None.
- Synergistic Materials: None.
- Sensitization To Material: None.
- Mutagenicity: None.

12. ECOLOGICAL INFORMATION

- ECOTOXICITY: No adverse ecological effects are expected. Propane does not contain any Class I

or Class II Ozone depleting chemicals (40 CFR Part 82). Propane is not listed as a marine pollutant by DOT (49 CFR Part 171).

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Do not attempt to dispose of residual or unused quantities. Return cylinder to supplier.

Residual product within process system may be burned at a controlled rate, if a suitable burning unit (flare stack) is available on site. This shall be done in accordance with federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT/IMO Shipping Name: Propane

HAZARD CLASS: 2.1 (Flammable gas.)

Identification Number: UN 1978*

PIN: 1978

Product RQ: None.

Shipping Label: Flammable Gas.

Placard (When Required): Flammable gas.

Special Shipping Information: Cylinders should be transported in a secure position, in a well ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious hazards and should be discouraged.

Special Shipping Information *For domestic transportation only: The identification number UN 1075 may be used in place of the identification number UN 1978. The identification number used must be consistent on package markings, shipping papers, and emergency response information (Special provision 19 from 49 CFR 172.101).

TOP OF



WOULD YOU LIKE MORE INFORMATION OR LEAVE A MESSAGE

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MATERIAL SAFETY DATA SHEET
VIKING OFFICE 2 PACK DUSTER

HMIS: 1-0-1-1

SECTION I - CHEMICAL INFORMATION

Trade Name: "Dymel" 134a
 Chemical Name: 1,1,1,2-Tetrafluoroethane
 Chemical Manufacturer: DuPont
 Address & Phone #: 1007 Market Street, Wilmington, DE 19898; 1-800-441-7515
 Product Manufacturer: Falcon Safety Products
 Address & Phone #: 25 Chubb Way Branchburg, NJ 08876 908-707-4900
 Emergency Phone #: Chemtrec 1-800-424-9300
 Mfg. Model No.: VPNXL2
 FSPID: 0095

SECTION II - HAZARDOUS INGREDIENTS

Ingredients	CAS #	%	TLV	PEL	UNITS
1,1,1,2-Tetrafluoroethane	811-97-2	100%			

SECTION III - FIRE AND EXPLOSION HAZARD DATA

Flash Point - Will not burn

Flammable Limits

LEL - NA

UEL - NA

HFC-134a is not flammable at ambient temperatures and atmospheric pressure. However, HFC-134a has been shown in tests to be combustible at pressure as low as 5.5 psig at 177 deg C (351 deg F) when mixed with air at concentrations of generally more than 60 volume % air. At lower temperatures, higher pressures are required for combustibility. Experimental data have also been reported which indicate combustibility of HFC-134a in the presence of certain concentrations of chlorine.

Fire and Explosion Hazards - Cylinders may rupture under fire conditions. Decomposition may occur.

Extinguishing Media - As appropriate for combustibles in area.

Special Fire Fighting Procedures - Cool cylinders with water spray. Self-contained breathing apparatus (SCBA) may be required if cylinders rupture or release under fire conditions.

SECTION IV - ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel) - NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Accidental Release Measures: Ventilate area, especially low or enclosed places where heavy vapors might collect. Remove open flames. Use self-contained breathing apparatus (SCBA) if large spill or leak occurs.

Viking Air Duster
Stock# VPNXL2

Falcon Safety Products

Model #DPNXL

SECTION V - HAZARDS IDENTIFICATION

Potential Health Effects - Inhalation of high concentrations of vapor is harmful and may cause heart irregularities, unconsciousness of death. Intentional misuse or deliberate inhalation may cause death without warning. Vapor reduces oxygen available for breathing and is heavier than air. Liquid contact can cause frostbite.

Human Health Effects - Overexposure by inhalation to very high concentrations may cause temporary alteration of the heart's electrical activity with irregular pulse, palpitations, or inadequate circulation. Skin contact may cause frostbite.

Individuals with preexisting diseases of the central nervous or cardiovascular system may have increased susceptibility to the toxicity of excessive exposures.

Carcinogenicity Information - None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

SECTION VI - FIRST AID

Inhalation - If high concentrations are inhaled, immediately remove to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Skin Contact - In cases of contact, immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician. Treat for frostbite if necessary by gently warming affected area. Wash contaminated clothing before reuse.

Eye Contact - In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

Ingestion - Ingestion is not considered a potential route of exposure.

Notes to Physicians - Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used with special caution only in situations of emergency life support.

SECTION VII - STORAGE

Storage - Clean, dry area. Do not heat above 52 deg C (125 deg F).

SECTION VIII - PHYSICAL DATA

Boiling Point	-26.5 C (-15.7F) @ 736 mm Hg
Vapor Pressure	96 psia at 25 deg C (77 deg F)
Vapor Density	3.60 (Air = 1.0) at 25 deg C (77 deg F)
% Volatiles	100 WT %
Solubility in Water	0.15 WT% @ 25 C (77 F) and 14.7 psia
Odor	Slight ethereal
Form	Liquefied gas
Color	Colorless
Density	1.21 g/cc at 25 deg C (77 deg F) - Liquid

Viking Air Duster
Stock# VPNXL2

Falcon Safety Products

Model #DPNXL

SECTION IX - HAZARDOUS REACTIVITY

Chemical Stability - Material is stable. However, avoid open flames and high temperatures.
Incompatibility with Other Materials - Incompatible with alkali or alkaline earth metal - powdered Al, Zn, Be, etc.
Decomposition - Decomposition products are hazardous. This material can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrofluoric acid and possibly carbonyl fluoride.
Polymerization - Polymerization will not occur.

SECTION X - TRANSPORTATION INFORMATION

Shipping Information -
Shipping Containers

DOT
Proper Shipping Name Consumer Commodity ORM-D

PPE-PERSONAL PROTECTIVE EQUIPMENT REQUIRED: NONE

APPROVAL 
Brian S. Ray

Technical Manager
Title

2/26/2002
Revision Date

**Viking Air Duster
Stock# VPNXL2**

AR 9160

M A T E R I A L S A F E T Y D A T A S H E E T

910963.00-16

Page: 1
6/21/2007PRODUCT NAME: **TMP NEW STONE GUARD BLACK**
PRODUCT CODE: 910963.00-16HMIS CODES: H F R P
2*4 2 X

===== SECTION I - MANUFACTURER IDENTIFICATION =====

MANUFACTURER'S NAME: Wesmar Products, Inc
ADDRESS: 1440 NW 45th ST
EMERGENCY PHONE: Seattle, WA 98107
INFORMATION PHONE: (206) 782-8186
NAME OF PREPARER:

===== SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION =====

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE		WEIGHT
		mm Hg @ TEMP		PERCENT
* TOLUENE ACGIH TLV: 20 ppm OSHA PEL: 200 ppm Other: 300 ppm (C)	108-88-3	22	68	30
PROPANE ACGIH TLV: 1000 ppm OSHA PEL: 2500 ppm Other: Asphyxiant	74-98-6	3619	70	16
PETROLEUM NAPHTHA, ALKANES & NAPHTHENES ACGIH TLV: 300 ppm OSHA PEL: 500 ppm.	64742-89-8	80	70	13
N-BUTANE ACGIH TLV: 1000 ppm OSHA PEL: Not Est Other: 1900 mg/m3	106-97-8			8
* PANE ACGIH TLV: 1000 ppm OSHA PEL: Not Est. Other: 800 ppm Asphyxiant	75-28-5			5
HEPTANE ACGIH TLV: 400 ppm OSHA PEL: 500 ppm Other: 1640 mg/m3	142-82-5	40	72	3
ETHYL ALCOHOL ACGIH TLV: 1000 ppm OSHA PEL: 1000 ppm Other: 1880 mg/m3	64-17-5	40	68	2
CARBON BLACK ACGIH TLV: 3.5 mg/m3 OSHA PEL: 3.5 mg/m3	1333-86-4			.96
SILICA, CRYSTALLINE-QUARTZ ACGIH TLV: .025 mg/m3 OSHA PEL: .05 mg/m3 Other: (resp. dust)	14808-60-7			.12
SILICA, CRYSTALLINE-CRISTOBALITE ACGIH TLV: 0.025 mg/m3 OSHA PEL: 0.05 mg/m3 Other: (Resp Dust)	14464-46-1			.12

* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

===== SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS =====

BOILING RANGE: -44 - 240 DEG. F
DENSITY: 6.26 lb/gl
V.O.C.: 4.84 lb/gl 581 g/l (less water and exempt solvents)
4.84 lb/gl 580 g/l (Emitted VOC)
LB HAP/ LB SOLIDS: 1.3
LB VOC/LB SOLIDS: 3.43
IDS % BY WEIGHT: 22.5
OR DENSITY: Heavier than air.
EVAPORATION RATE: Fast (compared to n-butyl acetate)
SOLUBILITY IN WATER: Negligible
APPEARANCE AND ODOR: Solvent odor.

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: -216 DEG. F METHOD USED: theoretical
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1 UPPER: 19
EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL, WATER FOG
SPECIAL FIREFIGHTING PROCEDURES:

Evacuate all unnecessary personnel. Use full protective equipment, including self-contained breathing apparatus. Use water spray, preferably fog, to cool closed containers to prevent pressure build-up and possible explosion. Direct water stream is not recommended for oil base fires. Product may float and reignite on surface of water. Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams or waterways.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Explosive air-vapor mixtures may form which are dangerous when exposed to heat or flame. Vapors are heavier than air and may travel along the ground, or be moved by ventilation, and ignited by pilot lights, stoves, heaters, electric motors, sparks, flame, smoking, static discharge or other ignition sources even at locations distant from material handling site. Product is propelled with flammable propellant. Contents under pressure. Exposure to heat, or prolonged exposure to sun, may cause bursting.

=====
SECTION V - REACTIVITY DATA
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STABILITY:

Stable

CONDITIONS TO AVOID:

High temperature and humidity, ignition sources and vapor build-up.

INCOMPATIBILITY (MATERIALS TO AVOID):

Strong Oxidizing agents Acids Bases Halogenated Hydrocarbons Manganese Trioxide Trifluoride
Carbon Monoxide Carbon Dioxide Hydrocarbons Nitrogen Oxides Formaldehyde Other Organic Compounds Silicon
Tetrafluoride Phosphorous Compounds

HAZARDOUS POLYMERIZATION:

Will not occur.

=====
SECTION VI - HEALTH HAZARD DATA AND SYMPTOMS OF EXPOSURE
=====

PRIMARY ROUTE(S) OF EXPOSURE: Inhalation, skin contact.

INHALATION:

Vapors and mists cause severe irritation to nose, throat and lungs (burning, stinging, coughing). May cause headache, dizziness, nausea, weakness, shortness of breath and loss of coordination. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Exposure to extremely high vapor concentrations may cause unconsciousness and asphyxiation.

EYE CONTACT:

Contact with dusts and particles causes irritation (redness, watering, itching, stinging, blurred vision). Contact with liquid or vapors causes severe irritation (redness, watering, itching, stinging, blurred vision).

SKIN CONTACT:

Contact causes severe irritation (dryness, itching, cracking, rash and swelling).

SKIN ABSORPTION:

May be absorbed through the skin in harmful amounts. Repeated and prolonged contact may have a cumulative effect. Symptoms may include headache, dizziness, nausea, weakness, loss of coordination.

SWALLOWING:

Causes nausea, vomiting, diarrhea and central nervous system depression (headache, dizziness, giddiness, nausea, loss of coordination).

CHRONIC EFFECTS FROM LONG TERM EXPOSURE:

Contains ingredients suspected of causing or known to cause damage to: kidneys, liver, lungs, eyes, brain and nervous system, dermatitis or other skin disorders.
This product contains a form of Crystalline Silica. Long-term exposure to high levels of Crystalline Silica dusts may result in silicosis, a disabling lung disease. Always wear appropriate respiratory protection when exposed to sanding or

M A T E R I A L S A F E T Y D A T A S H E E T

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...ding dusts.

The following statement is required by California Proposition 65. Warning! This product contains a chemical known to the state of California to cause cancer and birth defects, or other reproductive harm .

CARCINOGEN:

Crystalline Silicas are classified by IARC as potential human carcinogens. Inhalation of Crystalline Silica dusts may cause lung tumors. Risk of cancer depends on level and duration of exposure.

NTP CARCINOGEN: Yes

IARC MONOGRAPHS: Yes

OSHA REGULATED: No

MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:

Respiratory tract irritation, nausea, eye disorders, skin disorders, sensitization to chemical substances.

=====**SECTION VII - EMERGENCY AND FIRST AID PROCEDURES**=====

INHALATION:

If affected by breathing odors or vapors, remove to fresh air. Get medical attention if symptoms persist.**EYE CONTACT:** Immediately flush with plenty of water for 15 minutes, while lifting upper and lower eyelids. Get medical attention.

SKIN CONTACT:

Immediately wash with soap and water. Remove contaminated clothing and shoes. Wash or clean thoroughly before reuse. Get medical attention if irritation persists.

SWALLOWING:

In case of accidental ingestion call Poison Control Center (1-800-222-1222) or physician immediately.**OTHER:** Have Material Safety Data Sheet available when calling Poison Control Center (1-800-222-1222) or physician; or when going to the emergency room.

=====**SECTION VIII - SAFE HANDLING AND USE INFORMATION**=====

RESPIRATORY PROTECTION:

Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's instructions for use.

VENTILATION:

USE ONLY WITH ADEQUATE VENTILATION. Provide mechanical ventilation, local exhaust or other appropriate means of ventilation to prevent vapor build-up.

HAND PROTECTION:

Wear gloves to avoid skin contact.**EYE PROTECTION:**

Wear safety glasses, with side shields, designed to protect eyes against liquid splash and mists. Note: Contact lenses may contribute to the severity of an eye injury and should not be worn when working with chemicals.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

Wear protective clothing to avoid skin contact with liquid or mists.

WORK/HYGIENIC PRACTICES:

Eye washes and safety showers are recommended in the workplace. Wash hands after using and before eating, drinking or using tobacco products. Thoroughly clean contaminated clothing and shoes before reuse. Periodically monitor exposure levels to hazardous ingredients listed in section II and review permissible limits.

=====**SECTION IX - SPILL AND LEAK PROCEDURES**=====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Eliminate ignition sources and ventilate area. Evacuate unnecessary personnel. Wear full protective equipment. Dike and contain spill with inert material. Transfer liquid to containers for disposal or recovery. Prevent material from entering storm drains or sanitary sewers and open bodies of water.

WASTE DISPOSAL METHOD:

Empty material and empty containers must be disposed of in accordance with all local, state and federal environmental control regulations. Use only approved waste management facilities.

=====**SECTION X - SPECIAL PRECAUTIONS**=====

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KEEP OUT OF REACH OF CHILDREN.

FOR INDUSTRIAL USE ONLY!

RECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Keep liquid spray and vapors away from heat, sparks and flame. Turn off or remove all sources of ignition. Use proper methods of ventilation to prevent vapor build-up. Avoid spraying hot surfaces. Avoid breathing vapors, spray mists and grinding or grinding dusts. Avoid contact with eyes and skin. Do not take internally. Use adequate methods of ventilation, respiratory and personal protective equipment. Do not reuse, weld, drill or heat empty containers which may contain explosive vapors. Follow label warnings until thoroughly cleaned or sent for disposal. Do not heat, puncture or incinerate containers. Contents are under pressure and may contain explosive vapors, even when empty. Do not remove or deface label.

OTHER CAUTIONS:

Contents under pressure. Do not store above 120 deg. F (50 deg. C) or permit prolonged exposure to sunlight. Protect containers from damage. Store in buildings or areas designed and protected for storage of aerosols. Do not store where contact with incompatible material could occur, even during an accidental spill or release. To avoid spontaneous combustion, soak soiled oily rags and waste in water filled metal containers.

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SECTION XI - DISCLAIMER

DISCLAIMER: THE INFORMATION CONTAINED HEREIN HAS BEEN COMPILED FROM SOURCES CONSIDERED TO BE RELIABLE. TO THE BEST OF OUR KNOWLEDGE AND BELIEF ALL INFORMATION IS ACCURATE AND IS PROVIDED IN GOOD FAITH. HOWEVER, NO GUARANTEE OF ACCURACY IS MADE OR IMPLIED.

WESMAR VLCD CBWPC004G03-U

I. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Wesmar Products
1440 NW 45th ST
Seattle, WA 98107
(206) 782-8186

Emergency telephone number

1-800-ASHLAND
(1-800-274-5263)

Product name	WESMAR VLCD
Product code	CBWPC004G03-U
Product Use Description	No data

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid, fruity, white

WARNING! Moderate skin irritant, Severe eye irritant.

Potential Health Effects

Routes of Exposure
No data

Eye Contact
Can cause severe eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes. Can injure eye tissue.

Skin Contact
May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns.

Ingestion
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

Inhalation
Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful.

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Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions)

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), cough, difficult breathing, lung damage

Target Organs

Studies with rabbits indicate that sustained, occluded skin contact with undiluted surfactant may result in the development of inflammatory changes in the lung. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible liver effects, mild, reversible kidney effects

Carcinogenicity

Based on the available information, this material cannot be classified with regard to carcinogenicity. This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

Reproductive Hazard

There are no data available for assessing risk to the fetus from maternal exposure to this material.

Other Information

When heated to temperatures above 150 degrees C in the presence of air, this product can form formaldehyde vapors. Formaldehyde has been identified as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) and the Occupational Safety and Health Administration (OSHA). Formaldehyde is irritating to the eyes, nose, throat, and airways, and can cause an allergic reaction (causes narrowing of the air passages of the lungs, sweating, flushing, hives, rapid heart rate, and lowered blood pressure). In addition, formaldehyde can cause an allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects). It is harmful if inhaled, swallowed or absorbed through skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Concentration
GLYCERINE	56-81-5	>=1.5-<5%

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SURFACTANT

NJTS# >=1.5-<5%
254504001-
5216

4. FIRST AID MEASURES

Eyes

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to Physician

Hazards: This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 2 - Swallowing) when deciding whether to induce vomiting.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

alcohol-resistant foam, Agents approved for class B hazards or water fog., carbon dioxide (CO₂), dry chemical

Hazardous Combustion Products

May form:, carbon dioxide and carbon monoxide, formaldehyde, hydrogen, silicon oxides, various hydrocarbons

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Precautions for Fire-Fighting

Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). DO NOT direct a solid stream of water or foam into hot, burning pools of liquid since this may cause frothing and increase fire intensity. Frothing can be violent and possibly endanger any firefighter standing too close to the burning liquid.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

For personal protection see section 8. Spills of this material are very slippery.

Environmental Precautions

No data

Methods for Cleaning Up

Absorb liquid on vermiculite, floor absorbent or other absorbent material. Flush area with water. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and shoveled into containers.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. This material is slippery when wet. Ethylene oxide may accumulate in the headspace of shipping and storage containers and in enclosed areas where the product is being handled or used. Ethylene oxide is listed as carcinogenic by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) and the Occupational Safety and Health Administration (OSHA). Warning. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

Storage

Store in closed containers in a dry, well-ventilated area.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

GLYCERINE		56-81-5	
ACGIH	time weighted average	10 mg/m3	Mist.
OSHA Z1	Permissible exposure limit	5 mg/m3	Respirable fraction.
OSHA Z1	Permissible exposure limit	15 mg/m3	Total dust.

General Advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure Controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s). This product may contain small amounts of ethylene oxide which could potentially accumulate in the headspace of shipping and storage containers and in enclosed areas where the product is being handled or used. Provide adequate ventilation to control exposures to within the OSHA permissible exposure limits of 1 ppm (TWA) and 5 ppm (STEL). Provide adequate ventilation to control formaldehyde exposures to within the OSHA permissible exposure limits of 0.75 ppm (TWA) and 2 ppm (STEL) or 0.3 ppm (ACGIH ceiling).

Eye Protection

Chemical splash goggles and face shield (8" min.) in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. (Consult your industrial hygienist.)

Skin and Body Protection

Wear resistant gloves (consult your safety equipment supplier). To prevent skin contact, wear impervious full-body protective clothing. Other protective equipment: eyewash station, emergency shower.

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH-approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Form	No data
Colour	white
Odour	fruity
Boiling point/range	No data
pH	No data
Flash point	No data
Evaporation rate	No data
Explosion limits	No data
Vapour pressure	No data
Vapour density	No data
Density	1.01 g/cm ³ 8.4 lb/gal @ 60.00 °F / 15.56 °C
Solubility	No data
Partition coefficient (n-octanol/water)	No data
Autoignition temperature	No data

10. STABILITY AND REACTIVITY

Stability
Stable.

Conditions to Avoid

Incompatible Products
Avoid contact with:, strong oxidizing agents

Hazardous Decomposition Products
May form:, carbon dioxide, carbon monoxide, formaldehyde, hydrogen, silicon oxides, various hydrocarbons

Hazardous Reactions
Product will not undergo hazardous polymerization.

Thermal Decomposition
No data

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11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity

GLYCERINE	LD 50 Rat: 12,600 mg/kg
SURFACTANT	LD 50 Rat: 3,000 mg/kg

Acute Inhalation Toxicity

GLYCERINE	LC 50 Rat: 570 mg/m3, 1 h
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Acute Dermal Toxicity

GLYCERINE	LD 50 Rabbit: 10 g/kg
SURFACTANT	LD 50 Rabbit: 2,830 mg/kg

12. ECOLOGICAL INFORMATION

Aquatic Toxicity

Acute and Prolonged Toxicity to Fish
No data

Acute Toxicity to Aquatic Invertebrates
No data

Environmental Fate and Pathways
No data

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods

For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.

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14. TRANSPORT INFORMATION

Dangerous goods descriptions may not reflect package size, quantity, end-use or region-specific exceptions that can be applied to shipments. Consult shipping documents for material-specific descriptions.

15. REGULATORY INFORMATION

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

SARA Hazard Classification Acute Health Hazard

SARA 313 Component(s)

OSHA Hazards Moderate skin irritant
Severe eye irritant

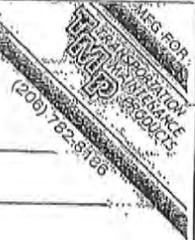
	Health	Flammability	Reactivity	Other
HMIS	2	0	0	
NFPA				No data

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

MATERIAL SAFETY DATA SHEET



Section 1 - Material Identity

Product Name: Vitreo Polymeric Shield Product #: TM 2408	Product Use: Polishing Compound
Manufacturer's Supplier's Name & Address	Telephone Number -
Wesmar Products, Inc. 1440 NW 45 th Street Seattle, WA 98107 (206)782-8186	Days: (607) 753-6893 Nights: CHEMTREC: 800/424-9300
DOT Proper Shipping Name: Cleaning Compound	EPA Hazardous Waste Class: N/A
DOT Shipping ID Number: Not Regulated	

Section 2 - Physical & Chemical Characteristics

Vapor Density (air=1): N/A	Solubility in Water by Weight: Medium	Boiling Point: 760 mmHg N/A
Appearance and Odor: Slightly-Thick purple liquid with coconut odor.	Specific Gravity: 0.80-1.00	Freezing Point: N/A
Vapor Pressure at 20°C: N/A	Percent Volatile by Volume: >50%	Evap. Rate (Butyl Acetate=1): N/A

Section 3 - Ingredients & Specifications

Materials	%	TVL Units	Hazard	CAS Number
Ethyl Acrylate	trace	none	Irritant	140-88-5
Aluminum Silicate	<25	10 mg/m3	dust	66402-68-4
Mineral Spirits	<35	100 ppm	Combustible	64742-48-9

Section 4 - Fire & Explosion Hazard Data

Flash Point & Method: 200 FT..O.C.
Extinguishing Media: Any
Special Fire Fighting Procedures: N/A
Unusual Hazards: N/A
Flammable Limits in Air % by volume: Lower: N/A Upper: N/A

Section 5 - Health Hazard Data

Route of Entry	a) Skin Ingestion
Effects of Acute Exposure:	a) Skin Contact: Mild irritation, avoid contact with abraded skin.
	b) Eye Contact: May cause irritation, redness, tearing.
	c) Swallowing: May cause mild irritation to gastrointestinal tract, vomiting, nausea, diarrhea.
	d) Skin Absorption: N/A
	e) Inhalation: Slight Irritation
Chronic Effects of Overexposure:	N/A
Other Health Hazards:	N/A

Emergency and First Aid Procedures:	a) Skin: Rinse with water. If irritated wash with mild soap and water. Contact physician.
	b) Eyes: Flush immediately with large amount of water for 15 minutes lifting upper and lower lids occasionally. Get medical attention.
	c) Swallowing: Do NOT induce vomiting. Give two (2) glasses of water. Contact physician immediately.
	d) Inhalation: Remove to fresh air. Administer oxygen if breathing is difficult. Contact physician.

Carcinogen Evaluation

Raw material components contained in this product are not known or suspected to be carcinogens.

Section 6 - Reactivity Data

Stability -	Yes
Conditions to Avoid for Stability	See below
Incompatibility (Materials to Avoid) -	Oxidizing Agents
Hazardous Polymerization -	Will not occur
Hazardous Decomposition/Byproducts	Thermal decomposition may yield acrylic monomer

Section 7 - Spill or Leak Procedures

Release/Spill Procedures	Steps to be Taken: Mop up spill for reuse/disposal
	Waste Disposal Method: Above in accordance with local, state and federal regulations

Section 8 - Special Protection Information

Protective Equipment	Eyes: Safety goggles
	Respirator: Not required
	Gloves: Protective gloves
Ventilation	Other: None
	General Mechanical: None required
	Other:

Section 9 - Special Precautions

Handling & Storage	General: N/A
	Other: N/A

Section 10- Other Information

The information contained herein is based on data considered accurate. However, the information is provided without any warranty, expressed or implied, regarding its correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility for personal injury or property damage to endees, users or third parties caused by the material. We also do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

Prepared By: Satellite Chemical Systems, Inc.	New/Revision Date: 09/01/97
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MATERIAL SAFETY DATA SHEET

Westech Aerosol Corporation
Olympic View Industrial Park
5405 Constance Drive SW
Port Orchard, WA 98367

Chemtrec Emergency Phone: 800-424-9300
Westech Emergency Phone: 360-674-2051
Date Prepared: 5-31-01
Date Revised: 3-21-03

Section 1 - Identity (Canisters)

Label Name: WT-NFMP & WT-NFHS
Trade Name: Westech Non Flammable Adhesive

Section 2 - Hazardous Ingredients

Components- Hazardous Components 1% or greater; Carcinogens 0.1% or greater.

Chemical Name	CAS Number	Sara III List	OSHA (PPM)	ACGIH TLV(PPM)	Carcinogen Ref. Source
Trichloroethylene	79-01-6	YES	100	50	NO

Section 3 - Physical and Chemical Characteristics

Propellant: Non- Flammable Proprietary
VOC: 508 g/L for HS, 455 g/L for MP
Boiling Point: 189°F
Specific Gravity: Concentrate Only 1-1.8
Vapor Pressure: 58mm
Evaporation Rate: >1
Solubility in Water: Negligible
Water Reactive: No
Appearance and Odor: Clear, organic solvent odor

Section 4 - Fire and Explosion Hazard Data

Non -Flammable

Limits:

LEL: 8% @ 77°F

UEL: 10.5% @ 77°F

Extinguishing Media: Dry Chemical, CO2

Unusual Fire and Explosion Hazards: At elevated temperatures (over 130F), containers may vent, rupture or burst.

Section 5 - Health Hazard Data

Primary Routes of Entry: Inhalation and Skin
Acute Effects: Liquid is irritating to eyes and Skin. Prolonged exposure to skin can cause a burning sensation. Breathing vapors may cause lightheadedness, dizziness, headache, and nausea in extreme cases unconsciousness and death.
Chronic Effects: Prolonged and repeated exposure may produce depression, fatigue loss of appetite, vomiting, cough, loss of sense of balance, dermatitis and nerve damage.

Medical Conditions generally aggravated by Exposure: Existing eye, skin or upper respiratory conditions.

Emergency and First Aid Procedures:

Eye Contact: Flush with water for 15 minutes, seek medical attention
Skin Contact: Wash with soap and Water, if irritated seek medical attention
Inhalation: Remove to fresh air. Resuscitate if necessary, get medical attention
Ingestion: Do not induce vomiting, get medical attention.

Section 6 - Reactivity Data

Stability: Stable
Hazardous Polymerization: Will not occur
Incompatibility: Strong oxidizing agents
Conditions to Avoid: Open flames and high heat.

Section 7 - Precautions for Safe Handling

Use Respiratory Protection: If vapor concentration exceeds TLV, use respirator approved by NIOSH
Ventilation: Use ventilation to keep vapor concentration below TLV.
Eye Protection: Safety Goggles Recommended
Waste Disposal Method: Dispose of in accordance with all Federal, state, and local regulations.
Steps to be taken in Case Material is Released or Spilled: Remove all sources of ignition. Ventilate spill area to allow solvents to evaporate and collect in suitable containers for disposal. Use appropriate person protective equipment.
Precautions to be taken in Handling and Storage: Store containers in cool, dry area. Do not puncture inaccurate containers.

Section 8 - Control Measures

Respiratory Protection: If workplace exposure is exceeded a NIOSH approved respirator is advised.
Ventilation: Provide sufficient mechanical ventilation to maintain exposure below PEL.
Eye Protection: Use chemical splash goggles

Section 9 - Shipping Information

Proper Shipping Name: Trichloroethylene (mixture) **Hazard Class:** 6.1
Identification Number: UN1710 **Packing Group:** III
Supplemental Info: Adhesive

We believe the statements, technical information and recommendations contained herein are reliable, they are given without warranty or guarantee of any kind.

MATERIAL SAFETY DATA SHEET

LACQUER THINNER

HEALTH	2
FLAMMABILITY	2
PHYSICAL HAZ	1
PPE	G



Printed: 12/13/2005
Revision: 06/16/2005
Supersedes Revision: 05/24/2005
Date Created: 05/24/2005

1. Product and Company Identification

Product Code: CLW202
Product Name: LACQUER THINNER
Reference #: 1607.4
Manufacturer Information
Company Name: W. M. Barr
 2105 Channel Avenue
 Memphis, TN 38113
Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892
Web site address: www.wmbarr.com

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Percentage	OSHA TWA	ACGIH TWA	Other Limits
1. Methanol	67-56-1	15.0 -20.0 %	200 ppm	200 ppm	No data.
2. Toluene	108-88-3	40.0 -50.0 %	200 ppm	50 ppm	No data.
3. Acetone	67-64-1	50.0 -60.0 %	1000 ppm	500 ppm	No data.
4. Acetic acid, Ethyl ester	141-78-6	1.0 -5.0 %	400 ppm	400 ppm	No data.
5. Hexane, Light aliphatic naphtha	64742-89-8	15.0 -25.0 %	No data.	No data.	No data.
6. Methyl ethyl ketone	78-93-3	1.0 -5.0 %	200 ppm	200 ppm	No data.
Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Methanol	PC1400000	No data.	No data.	250 ppm	No data.
2. Toluene	XS5250000	500 ppm/(10min)	300 ppm	No data.	No data.
3. Acetone	AL3150000	No data.	No data.	750 ppm	No data.
4. Acetic acid, Ethyl ester	AH5425000	No data.	No data.	No data.	No data.
5. Hexane, Light aliphatic naphtha	NA	No data.	No data.	No data.	No data.
6. Methyl ethyl ketone	EL6475000	No data.	No data.	300 ppm	No data.

3. Hazards Identification

Emergency Overview

Danger! Extremely flammable. Keep away from heat, sparks, flame and all other sources of ignition. Vapors may cause flash fire or ignite explosively. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition during use and until all vapors are gone. Beware of static electricity that may be generated by synthetic clothing and other sources.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

Health Hazards (Acute and Chronic)

Inhalation Acute Exposure Effects:

Vapor harmful. May cause dizziness; headache; watering of eyes; irritation of respiratory tract; weakness; drowsiness; nausea; numbness in fingers, arms and legs; depression of central nervous system; loss of appetite; fatigue; hallucinations; light headedness; visual disturbances; giddiness and intoxication; sleepiness; cough and dyspnea; cold, clammy extremities; diarrhea; vomiting; dilation of pupils; spotted vision. Severe overexposure may cause convulsions; unconsciousness; coma; and death. Intentional misuse of this product by deliberately concentrating and inhaling can be harmful or fatal.

Skin Contact Acute Exposure Effects:

May be absorbed through the skin. May cause irritation; numbness in the fingers and arms; drying of skin; and

MATERIAL SAFETY DATA SHEET

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dermatitis. May cause increased severity of symptoms listed under inhalation.

Eye Contact Acute Exposure Effects:

This material is an eye irritant. May cause irritation; burns; conjunctivitis of eyes; and corneal ulcerations of the eye. Vapors may irritate eyes.

Ingestion Acute Exposure Effects:

Poison. Cannot be made non-poisonous. May be fatal or cause blindness. May cause dizziness; headache; nausea; vomiting; burning sensation in mouth, throat, and stomach; loss of coordination; depression of the central nervous system; narcosis; stupor; gastrointestinal irritation; liver, kidney, and heart damage; diarrhea; loss of appetite; coma and death. May produce symptoms listed under inhalation.

Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged or repeated contact may cause dermatitis. Prolonged skin contact may result in absorption of a harmful amount of this material. May cause conjunctivitis; gastric disturbances; insomnia; dizziness; headache; weakness; fatigue; nausea; heart palpitations; skin irritation; numbness in hands and feet; permanent central nervous system changes; some loss of memory; pancreatic damage; giddiness; visual impairment or blindness; kidney or liver damage; and death. May cause symptoms listed under inhalation.

Signs and Symptoms Of Exposure

Primary Routes of Exposure:

Inhalation, ingestion and dermal.

Medical Conditions Generally Aggravated By Exposure

Diseases of the skin, eyes, liver, kidneys, central nervous system and respiratory system.

OSHA Hazard Classes:

HEALTH HAZARDS : N/E

PHYSICAL HAZARDS : N/E

TARGET ORGANS & EFFECTS: N/E

4. First Aid Measures

Emergency and First Aid Procedures

Inhalation:

If user experiences breathing difficulty, move to air free of vapors, Administer oxygen or artificial medical assistance can be rendered.

Skin Contact:

Wash with soap and large quantities of water and seek medical attention if irritation from contact persists.

Eye Contact:

Flush with large quantities of water for at least 15 minutes and seek immediate medical attention.

Ingestion:

Call your local poison control center, hospital emergency room or physician immediately for instructions to induce vomiting.

Note to Physician

Poison. This product contains methanol. Methanol is metabolized to formaldehyde and formic acid. These metabolites may cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used as an antidote. Methanol is effectively removed by hemodialysis. Call your local poison control center for further information.

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5. Fire Fighting Measures

Flammability Classification: Class IB
Flash Pt: 4.00 F Method Used: TOC
Explosive Limits: LEL: 1.00 UEL: No data.
Autoignition Pt: No data.

Special Fire Fighting Procedures

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Unusual Fire and Explosion Hazards

No data available.

Extinguishing Media

Use carbon dioxide, dry powder, or foam.

Unsuitable Extinguishing Media

No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Clean up:

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area.

Small spills:

Take up with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large spills:

Dike far ahead of spill for later disposal.

Waste Disposal:

Dispose in accordance with applicable local, state and federal regulations.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.

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Eye Protection

Safety glasses, goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

Other Protective Clothing

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after use. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

Ventilation

Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering - Stop - ventilation is inadequate. Leave area immediately.

9. Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas	<input checked="" type="checkbox"/> Liquid	<input type="checkbox"/> Solid
Melting Point:	No data.		
Boiling Point:	> 133.00 F		
Autoignition Pt:	No data.		
Flash Pt:	4.00 F Method: TOC		
Explosive Limits:	LEL: 1.00	UEL: No data.	
Specific Gravity:	No data.		
Bulk Density:	6.829 LB/GA		
Vapor Pressure:	No data.		
Vapor Density:	No data.		
Evaporation Rate:	No data.		
Solubility in Water:	No data.		
Percent Volatile:	100.0 % by weight.		
VOC / Volume:	748.0000 G/L		
Corrosion Rate:	No data.		
pH:	No data.		
Appearance and Odor	No data available.		

10. Stability and Reactivity

Stability: Unstable Stable

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents, strong caustics, hydrogen peroxide, and nitrates.

Hazardous Decomposition Or Byproducts

Decomposition may produce carbon monoxide; carbon dioxide; formaldehyde; and unidentified organic compounds in black smoke.

Hazardous Polymerization: Will occur Will not occur

Conditions To Avoid - Hazardous Polymerization

No data available.

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11. Toxicological Information

Toxicological Information

No data available.

Carcinogenicity/Other Information

No data available.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

Ecological Information

No data available.

13. Disposal Considerations

Waste Disposal Method

Dispose in accordance with local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name

No data available.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Methanol	67-56-1	No	Yes 5000 LB	Yes	No
2. Toluene	108-88-3	No	Yes 1000 LB	Yes	Yes
3. Acetone	67-64-1	No	Yes 5000 LB	No	Yes
4. Acetic acid, Ethyl ester	141-78-6	No	Yes 5000 LB	No	No
5. Hexane, Light aliphatic naptha	64742-89-8	No	No	No	No
6. Methyl ethyl ketone	78-93-3	No	Yes 5000 LB	Yes	Yes

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Methanol	67-56-1	HAP	No	No	No
2. Toluene	108-88-3	HAP	Yes	8A CAIR	Yes
3. Acetone	67-64-1	No	No	No	No
4. Acetic acid, Ethyl ester	141-78-6	No	No	No	No
5. Hexane, Light aliphatic naptha	64742-89-8	No	No	No	No
6. Methyl ethyl ketone	78-93-3	HAP	No	No	No

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

- Sec.302: EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.
- Sec.304: EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.
- Sec.313: EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.
- Sec.110: EPA SARA 110 Superfund Site Priority Contaminant List

TSCA (Toxic Substances Control Act) Lists:

- 5A(2): Chemical Subject to Significant New Rules (SNURS)
- 6A: Commercial Chemical Control Rules
- 8A: Toxic Substances Subject To Information Rules on Production

MATERIAL SAFETY DATA SHEET

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8A CAIR: Comprehensive Assessment Information Rules - (CAIR)
8A PAIR: Preliminary Assessment Information Rules - (PAIR)
8C: Records of Allegations of Significant Adverse Reactions
8D: Health and Safety Data Reporting Rules
8D TERM: Health and Safety Data Reporting Rule Terminations

Other Important Lists:

CWA NPDES: EPA Clean Water Act NPDES Permit Chemical
CAA HAP: EPA Clean Air Act Hazardous Air Pollutant
CAA ODC: EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)
CA PROP 65: California Proposition 65

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

- Yes No Acute (immediate) Health Hazard
- Yes No Chronic (delayed) Health Hazard
- Yes No Fire Hazard
- Yes No Reactive Hazard
- Yes No Sudden Release of Pressure Hazard

16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

MATERIAL SAFETY DATA SHEET

Denatured Alcohol

HEALTH	1	1
FLAMMABILITY	3	3
PHYSICAL HAZ	0	0
PPE	G	



Printed: 12/14/2005
Revision: 06/13/2005

Date Created: 06/13/2005

1. Product and Company Identification

Product Code: CSL26
Product Name: Denatured Alcohol
Reference #: 1625.5
Manufacturer Information
Company Name: W. M. Barr
 2105 Channel Avenue
 Memphis, TN 38113
Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892
Web site address: www.wmbarr.com

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Percentage	OSHA PEL	ACGIH TWA	Other Limits
1. Ethyl alcohol	64-17-5	45.0 -50.0 %	1000 ppm	1000 ppm	No data.
2. Methanol	67-56-1	45.0 -50.0 %	200 ppm	200 ppm	No data.
3. Methyl isobutyl ketone	108-10-1	1.0 -4.0 %	100 ppm	50 ppm	No data.
Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Ethyl alcohol	KQ6300000	No data.	No data.	No data.	No data.
2. Methanol	PC1400000	No data.	No data.	250 ppm	No data.
3. Methyl isobutyl ketone	SA9275000	No data.	No data.	75 ppm	No data.

3. Hazards Identification

Emergency Overview

Danger! Flammable! Keep away from heat, sparks, flame, and all other sources of ignition. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition during use and until all vapors are gone. Beware of static electricity that may be generated by synthetic clothing and other sources.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic)

Inhalation Acute Exposure Effects:

Vapor harmful. May cause dizziness, headache, watering of eyes, irritation of respiratory tract, irritation to the eyes, drowsiness, nausea, other central nervous system effects, spotted vision, dilation of pupils, and convulsions.

Skin Contact Acute Exposure Effects:

May cause irritation, drying of skin, redness, and dermatitis. May cause symptoms listed under inhalation. May be absorbed through damaged skin.

Eye Contact Acute Exposure Effects:

May cause irritation.

Ingestion Acute Exposure Effects:

Poison. Cannot be made non-poisonous. May be fatal or cause blindness. May produce fluid in the lungs and pulmonary edema. May cause dizziness, headache, nausea, drowsiness, loss of coordination, stupor, reddening of face and or neck, liver, kidney and heart damage, coma, and death. May produce symptoms listed under inhalation.

MATERIAL SAFETY DATA SHEET

Denatured Alcohol

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Printed: 12/14/2005
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Chronic Exposure Effects:

May cause symptoms listed under inhalation, dizziness, fatigue, tremors, permanent central nervous system changes, blindness, pancreatic damage, and death.

Signs and Symptoms Of Exposure

No data available.

Medical Conditions Generally Aggravated By Exposure

Diseases of the liver.

OSHA Hazard Classes:

HEALTH HAZARDS : N/E

PHYSICAL HAZARDS : N/E

TARGET ORGANS & EFFECTS: N/E

4. First Aid Measures

Emergency and First Aid Procedures

Inhalation:

If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

Skin Contact:

Wash with soap and water.

Eye Contact:

Flush with large quantities of water for at least 15 minutes. If irritation from contact persists, get medical attention.

Ingestion:

Call your poison control center, hospital emergency room or physician immediately for instructions to induce vomiting.

Note to Physician

Poison. This product contains methanol. Methanol is metabolized to formaldehyde and formic acid. These metabolites may cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used as an antidote. Methanol is effectively removed by hemodialysis. Call your local poison control center for further instructions.

5. Fire Fighting Measures

Flammability Classification:	OSHA Class IB
Flash Pt:	45.00 F Method Used: SCC
Explosive Limits:	LEL: 1.00 UEL: No data.
Autoignition Pt:	No data.

Fire Fighting Instructions

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined area. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards

No data available.

Extinguishing Media

Use carbon dioxide, dry powder, or foam.

Unsuitable Extinguishing Media

No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Clean-up:

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources, keep flares, smoking or flames out of hazard area.

Small spills:

Take up liquid with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large spills:

Dike far ahead of spill for later disposal.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.

Eye Protection

Safety glasses, chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

Other Protective Clothing

Various application methods can dictate the use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after use. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

Engineering Controls (Ventilation etc.)

Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering -- Stop -- ventilation is inadequate. Leave area immediately.

9. Physical and Chemical Properties

Physical States: [] Gas [X] Liquid [] Solid
Melting Point: No data.
Boiling Point: 147.00 F
Autoignition Pt: No data.
Flash Pt: 45.00 F Method: SCC
Explosive Limits: LEL: 1.00 UEL: No data.
Specific Gravity (Water = 1): No data.
Bulk Density: 6.61 LB/GA
Vapor Pressure (vs. Air or mm Hg): No data.
Vapor Density (vs. Air = 1): No data.
Evaporation Rate (vs Butyl Acetate=1): No data.
Solubility in Water: No data.
Percent Volatile: 100.0 % by weight.
VOC / Volume: 792.0000 G/L
Corrosion Rate: No data.
pH: No data.
Appearance and Odor
No data available.

10. Stability and Reactivity

Stability: Unstable [] Stable [X]
Conditions To Avoid - Instability
No data available.
Incompatibility - Materials To Avoid
Incompatible with strong oxidizing agents.
Hazardous Decomposition Or Byproducts
Decomposition may produce carbon monoxide and carbon dioxide.
Hazardous Polymerization: Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Polymerization
No data available.

11. Toxicological Information

Toxicological Information
No data available.
Carcinogenicity/Other Information
No data available.
Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

Ecological Information
No data available.

13. Disposal Considerations

Waste Disposal Method
Dispose in accordance with applicable local, state, and federal regulations.

14. Transport Information

AND TRANSPORT (US DOT)

DOT Proper Shipping Name

No data available.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Ethyl alcohol	64-17-5	No	No	No	No
2. Methanol	67-56-1	No	Yes 5000 LB	Yes	No
3. Methyl isobutyl ketone	108-10-1	No	Yes 5000 LB	Yes	Yes

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Ethyl alcohol	64-17-5	No	No	No	No
2. Methanol	67-56-1	HAP	No	No	No
3. Methyl isobutyl ketone	108-10-1	HAP	No	No	No

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

- Sec.302:** EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.
- Sec.304:** EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.
- Sec.313:** EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.
- Sec.110:** EPA SARA 110 Superfund Site Priority Contaminant List

TSCA (Toxic Substances Control Act) Lists:

- 5A(2):** Chemical Subject to Significant New Rules (SNURS)
- 6A:** Commercial Chemical Control Rules
- 8A:** Toxic Substances Subject To Information Rules on Production
- 8A CAIR:** Comprehensive Assessment Information Rules - (CAIR)
- 8A PAIR:** Preliminary Assessment Information Rules - (PAIR)
- 8C:** Records of Allegations of Significant Adverse Reactions
- 8D:** Health and Safety Data Reporting Rules
- 8D TERM:** Health and Safety Data Reporting Rule Terminations

Other Important Lists:

- CWA NPDES:** EPA Clean Water Act NPDES Permit Chemical
- CAA HAP:** EPA Clean Air Act Hazardous Air Pollutant
- CAA ODC:** EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)
- CA PROP 65:** California Proposition 65

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

- Yes No Acute (immediate) Health Hazard
- Yes No Chronic (delayed) Health Hazard
- Yes No Fire Hazard
- Yes No Reactive Hazard
- Yes No Sudden Release of Pressure Hazard

16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

MATERIAL SAFETY DATA SHEET

Klean-Strip Acetone

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HEALTH		1
FLAMMABILITY		3
PHYSICAL HAZ.		0
PPE		



Printed: 12/30/2008
Revision: 11/13/2008
Supersedes Revision: 03/13/2006
Date Created: 05/18/2005

1. Product and Company Identification

Product Code: 1640.1
Product Name: Klean-Strip Acetone
Reference #: 1640.1
Manufacturer Information
Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113
Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892
Web site address: www.wmbarr.com
Preparer Name: W.M. Barr EHS Department (901)775-0100
Synonyms

CAC18, DAC18, GAC18, GAC718, QAC18, QAC18L, QAC718, QAC18L

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	OSHA PEL	ACGIH TWA	ACGIH STEL
1. Acetone	67-64-1	100.0 %	1000 ppm	500 ppm	750 ppm

3. Hazards Identification

Emergency Overview

Danger! Extremely Flammable. Keep away from heat, sparks, flame and all other sources of ignition. Vapors may cause flash fire or ignite explosively. Vapors may travel long distances to other areas and rooms away from the work site. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition anywhere in the structure, dwelling, or building during use and until all vapors are gone from the work site. Keep away from electrical outlets and switches. Beware of static electricity that may be generated by synthetic clothing and other sources.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic)

Inhalation Acute Exposure Effects:

Vapor harmful. May cause dizziness, headache, watering of eyes, irritation of respiratory tract, drowsiness, nausea, and numbness in fingers, arms and legs.

Skin Contact Acute Exposure Effects:

May cause drying of skin, and numbness in fingers and arms. Liquid is absorbed readily.

Eye Contact Acute Exposure Effects:

This material is an eye irritant.

Ingestion Acute Exposure Effects:

Harmful if swallowed. May cause dizziness, headache, nausea, and irritation of the mouth, throat, and stomach.

Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other

Klean-Strip Acetone

Printed: 12/30/2008

Revision: 11/13/2008

Supersedes Revision: 03/13/2006

physiological damage. May cause weakness, fatigue, skin irritation, and numbness in hands and feet.

Signs and Symptoms Of Exposure

Primary Routes of Exposure:

Inhalation, ingestion, and dermal.

Medical Conditions Generally Aggravated By Exposure

Skin, eye, lung (asthma-like conditions)

4. First Aid Measures

Emergency and First Aid Procedures

Inhalation:

If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be reached.

Skin Contact:

Wash with soap and water.

Eye Contact:

Flush with large quantities of water for at least 15 minutes and seek immediate medical attention.

Ingestion:

Call your poison control center, hospital emergency room, or physician immediately for instructions.

Note to Physician

Call your local poison control center for further instructions.

5. Fire Fighting Measures

Flammability Classification:

Class IB

Flash Pt:

-4.00 F Method Used: TAG Closed Cup

Explosive Limits:

LEL: 2.5 % at 77.0 F UEL: 13.0 % at 77.0 F

Autoignition Pt:

869.00 F

Fire Fighting Instructions

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards

Extremely Flammable!

Hazardous Combustion Products

carbon monoxide, carbon dioxide

Extinguishing Media

Use carbon dioxide, dry powder, or foam.

Unsuitable Extinguishing Media

No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Clean Up:

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area. For small spills, take up liquid with sand, earth, or other noncombustible absorbent material and place in a container for disposal. For large spills, dike far ahead of spill and use sand, earth, or other noncombustible absorbent material and then place material in a container for disposal.

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Waste Disposal:

Dispose in accordance with applicable local, state, and federal regulations.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations.

Do not reuse the container.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.

Eye Protection

Safety glasses, chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear chemical resistant gloves suited for use with acetone. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

Other Protective Clothing

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure.

Engineering Controls (Ventilation etc.)

Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or your experience slight dizziness, headache, nausea, or eye-watering - STOP - ventilation is inadequate. Leave area immediately.

Work/Hygienic/Maintenance Practices

A source of clean water should be available in the work area for flushing eyes and skin.

Do not eat, drink, or smoke in the work area.

Wash hands thoroughly after use.

Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use.

Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

9. Physical and Chemical Properties

Physical States:	[] Gas [X] Liquid [] Solid
Melting Point:	No data.
Boiling Point:	> 131.00 F
Autoignition Pt:	869.00 F
Flash Pt:	-4.00 F Method Used: TAG Closed Cup
Explosive Limits:	LEL: 2.5 % at 77.0 F UEL: 13.0 % at 77.0 F
Specific Gravity (Water = 1):	0.789
Density:	6.572 LB/GA at 77.0 F
Vapor Pressure (vs. Air or mm Hg):	213 MM HG at 77.0 F

Vapor Density (vs. Air = 1): No data.
Evaporation Rate (vs Butyl Acetate=1): No data.
Solubility in Water: No data.
Percent Volatile: 100.0 % by weight.
Corrosion Rate: No data.
pH: No data.

Appearance and Odor

Clear colorless liquid with a characteristic ketone odor.

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

May form explosive mixtures with chromic anhydride, chromyl alcohol, hexachloromelamine, hydrogen peroxide, permonosulfuric acid, potassium tertbutoxide, and thioglycol. Strong oxidizers.

Hazardous Decomposition Or Byproducts

Decomposition may produce carbon monoxide, carbon dioxide, and other asphyxiants.

Hazardous Polymerization: Will occur [] Will not occur [X]

Conditions To Avoid - Hazardous Polymerization

No data available.

11. Toxicological Information

LD50 Rat oral 10.7 mL/kg (=8450 mg/kg bw); acetone given by gastric intubation to groups of five non-fasted Carworth-Wistar female rats
 LD50 Rat oral 9800 mg/kg/ bw
 LD50 Rat oral 5800 mg/kg bw
 LD50 Mouse oral 3000 mg/kg bw
 LD50 Rabbit oral 5340 mg/kg bw
 LC50 Rat inhalation exposure 76 mg/L/4 hr
 LC50 Rat inhalation 50.1 mg/L/8 hr
 LD50 Rabbit dermal 20 mg/kg bw
 LD50 Rabbit dermal 20,000 mg/kg bw
 LD50 Mouse ip 1,297 mg/kg bw
 LD50 Rat iv 5500 mg/kg bw
 LD50 Mouse oral 5.2 g/kg

Carcinogenicity/Other Information

No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Acetone	67-64-1	n.a.	n.a.	A4	n.a.

12. Ecological Information

No data available.

13. Disposal Considerations

Waste Disposal Method

Dispose in accordance with applicable local, state and federal regulations.

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14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name Acetone

DOT Hazard Class: 3
DOT Hazard Label: FLAMMABLE LIQUID
UN/NA Number: UN1090
Packing Group: II

Additional Transport Information

For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

The supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Acetone	67-64-1	No	Yes 5000 LB	No	Yes

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

Sec.302: EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.

Sec.304: EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.

Sec.313: EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.

Sec.110: EPA SARA 110 Superfund Site Priority Contaminant List

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

Yes No Acute (immediate) Health Hazard
 Yes No Chronic (delayed) Health Hazard
 Yes No Fire Hazard
 Yes No Sudden Release of Pressure Hazard
 Yes No Reactive Hazard

16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

MATERIAL SAFETY DATA SHEET

Klean-Strip Lacquer Thinner

HEALTH	2
FLAMMABILITY	2
PHYSICAL HAZ.	1
PPE	G



Printed: 03/30/2006
Revision: 03/15/2006

Date Created: 12/13/2005

1. Product and Company Identification

Product Code: QML170
Product Name: Klean-Strip Lacquer Thinner
Reference #: 1605.34
Manufacturer Information
Company Name: W. M. Barr
 2105 Channel Avenue
 Memphis, TN 38113

Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892
Web site address: www.wmbarr.com
Preparer Name: W.M. Barr and Company, Inc. (901)775-0100

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Percentage	OSHA TWA	ACGIH TWA	Other Limits
1. Methanol	67-56-1	20.0 -25.0 %	200 ppm	200 ppm	
2. Toluene	108-88-3	5.0 -10.0 %	200 ppm	50 ppm	
3. Acetone	67-64-1	5.0 -20.0 %	1000 ppm	500 ppm	
4. Acetic acid, Ethyl ester	141-78-6	5.0 -15.0 %	400 ppm	400 ppm	
5. Hexane, Light aliphatic naptha	64742-89-8	30.0 -50.0 %			
6. Methyl ethyl ketone	78-93-3	5.0 -10.0 %	200 ppm	200 ppm	
7. Ethanol, 2-Butoxy-	111-76-2	1.0 -5.0 %	50 ppm	20 ppm	
Hazardous Components (Chemical Name)	CAS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Methanol	67-56-1			250 ppm	
2. Toluene	108-88-3	500 ppm/(10min)	300 ppm		
3. Acetone	67-64-1			750 ppm	
4. Acetic acid, Ethyl ester	141-78-6				
5. Hexane, Light aliphatic naptha	64742-89-8				
6. Methyl ethyl ketone	78-93-3			300 ppm	
7. Ethanol, 2-Butoxy-	111-76-2				

3. Hazards Identification

Emergency Overview

Danger! Extremely flammable. Keep away from heat, sparks, flame and all other sources of ignition. Vapors may cause flash fire or ignite explosively. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition during use and until all vapors are gone. Beware of static electricity that may be generated by synthetic clothing and other sources.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic)

Inhalation Acute Exposure Effects:

Vapor harmful. May cause dizziness; headache; watering of eyes; irritation of respiratory tract; weakness; drowsiness; nausea; numbness in fingers, arms and legs; depression of central nervous system; loss of appetite; fatigue; hallucinations; light headedness; visual disturbances; giddiness and intoxication; sleepiness; cough and dyspnea; cold, clammy extremities; diarrhea; vomiting; dilation of pupils; spotted vision. Severe overexposure may cause convulsions; unconsciousness; coma; and death. Intentional misuse of this product by deliberately concentrating and inhaling can be harmful or fatal.

Skin Contact Acute Exposure Effects:

May be absorbed through the skin. May cause irritation; numbness in the fingers and arms; drying of skin; and dermatitis. May cause increased severity of symptoms listed under inhalation.

Eye Contact Acute Exposure Effects:

This material is an eye irritant. May cause irritation; burns; conjunctivitis of eyes; and corneal ulcerations of the eye. Vapors may irritate eyes.

MATERIAL SAFETY DATA SHEET

Klean-Strip Lacquer Thinner

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Ingestion Acute Exposure Effects:

Poison. Cannot be made non-poisonous. May be fatal or cause blindness. May cause dizziness; headache; nausea; vomiting; burning sensation in mouth, throat, and stomach; loss of coordination; depression of the central nervous system; narcosis; stupor; gastrointestinal irritation; liver, kidney, and heart damage; diarrhea; loss of appetite; coma and death. May produce symptoms listed under inhalation.

Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged or repeated contact may cause dermatitis. Prolonged skin contact may result in absorption of a harmful amount of this material. May cause conjunctivitis; gastric disturbances; insomnia; dizziness; headache; weakness; fatigue; nausea; heart palpitations; skin irritation; numbness in hands and feet; permanent central nervous system changes; some loss of memory; pancreatic damage; giddiness; visual impairment or blindness; kidney or liver damage; and death. May cause symptoms listed under inhalation.

Signs and Symptoms Of Exposure

Medical Conditions Generally Aggravated By Exposure

Diseases of the skin, eyes, liver, kidneys, central nervous system and respiratory system.

4. First Aid Measures

Emergency and First Aid Procedures

Inhalation:

If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial medical assistance can be rendered.

Skin Contact:

Wash with soap and large quantities of water and seek medical attention if irritation from contact persists.

Eye Contact:

Flush with large quantities of water for at least 15 minutes and seek immediate medical attention.

Ingestion:

Call your local poison control center, hospital emergency room or physician immediately for instructions to induce vomiting.

Note to Physician

Poison. This product contains methanol. Methanol is metabolized to formaldehyde and formic acid. These metabolites may cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used as an antidote. Methanol is effectively removed by hemodialysis. Call your local poison control center for further information.

5. Fire Fighting Measures

Flammability Classification: Class IB
Flash Pt: 4.00 F Method Used: TOC
Explosive Limits: LEL: 1.00 UEL:

Fire Fighting Instructions

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards

Extinguishing Media

Use carbon dioxide, dry powder, or foam.

Unsuitable Extinguishing Media

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Clean up:

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area.

Small spills:

Take up with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

MATERIAL SAFETY DATA SHEET

Klean-Strip Lacquer Thinner

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Large spills:

Dike far ahead of spill for later disposal.

Waste Disposal:

Dispose in accordance with applicable local, state and federal regulations.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.

Eye Protection

Safety glasses, goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

Other Protective Clothing

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after use. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

Engineering Controls (Ventilation etc.)

Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering - Stop - ventilation is inadequate. Leave area immediately.

9. Physical and Chemical Properties

Physical States: [] Gas [X] Liquid [] Solid
Flash Pt: 4.00 F Method: TOC
Explosive Limits: LEL: 1.00 UEL:
Specific Gravity (Water = 1): 0.7642 - 0.7829
Percent Volatile: 100.0 % by weight.
VOC / Volume: 697.0000 G/L

Appearance and Odor

Water White / Free and Clear

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability

Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents, strong caustics, hydrogen peroxide, and nitrates.

Hazardous Decomposition Or Byproducts

Decomposition may produce carbon monoxide; carbon dioxide; formaldehyde; and unidentified organic compounds in black smoke.

Hazardous Polymerization: Will occur [] Will not occur [X]

MATERIAL SAFETY DATA SHEET
Klean-Strip Lacquer Thinner

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Conditions To Avoid - Hazardous Polymerization

11. Toxicological Information

Toxicological Information

Carcinogenicity/Other Information

Carcinogenicity:

NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

Ecological Information

13. Disposal Considerations

Waste Disposal Method

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name

Additional Transport Information

For DOT information, contact W.M. Barr Technical Services.

15. Regulatory Information

No data available.

16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

MATERIAL SAFETY DATA SHEET
METHYL ETHYL KETONE

HEALTH	2
FLAMMABILITY	3
PPE	G



Printed: 12/13/2005
Revision: 06/10/2005
Supercedes Revision: 10/17/2002

1. Product and Company Identification

Product Code: CME71
Product Name: METHYL ETHYL KETONE
Reference #: 1635
Manufacturer Information
Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113
Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892
Web site address: www.wmbarr.com

2. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Percentage	OSHA PEL	ACGIH TWA	Other Limits
1. Methyl ethyl ketone	78-93-3	95.0 -100.0 %	200 ppm	200 ppm	No data.
Hazardous Components (Chemical Name)	RTECS #	OSHA STEL	OSHA CEIL	ACGIH STEL	ACGIH CEIL
1. Methyl ethyl ketone	EL6475000	No data.	No data.	300 ppm	No data.

3. Hazards Identification

Emergency Overview

Danger! Flammable. Keep away from heat, sparks, flame and all other sources of ignition. Vapors may cause flash fire or ignite explosively. Vapors may travel long distances to other areas and rooms away from work site. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition anywhere in the structure, dwelling or building during use and until all vapors are gone from the work site and all areas away from the work site. Keep away from electrical outlets and switches. Beware of static electricity that may be generated by synthetic clothing and other sources.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

Health Hazards (Acute and Chronic)

Inhalation Acute Exposure Effects:

Vapor harmful. May cause dizziness, headache, watering of eyes, irritation of respiratory tract, drowsiness, nausea, and numbness in fingers, arms, and legs.

Skin Contact Acute Exposure Effects:

May cause drying of skin, and numbness in fingers and arms. Liquid is absorbed readily.

Eye Contact Acute Exposure Effects:

This material is an eye irritant. May cause irritation and pain, conjunctivitis of eyes, burns, corneal ulcerations of the eye, stinging, redness, and tearing. Vapors or mist can irritate eyes.

Ingestion Acute Exposure Effects:

Harmful if swallowed. May cause dizziness, headache, nausea, and irritation of mouth, throat, and stomach.

Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. May cause weakness, fatigue, skin irritation, and numbness in hands and feet.

Signs and Symptoms Of Exposure

No data available.

Medical Conditions Generally Aggravated By Exposure

None known.

OSHA Hazard Classes:

HEALTH HAZARDS : N/E

PHYSICAL HAZARDS : N/E

TARGET ORGANS & EFFECTS: N/E

4. First Aid Measures

Emergency and First Aid Procedures

Inhalation:

If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

Skin Contact:

Irritation may result. Immediately wash with soap and water.

Eye Contact:

Immediately flush with water, remove any contact lenses, continue flushing with water for at least 15 minutes, then get medical attention.

Ingestion:

Call you local poison control center, hospital emergency room, or physician immediately for instructions.

Note to Physician

Call your local poison control center for further information.

5. Fire Fighting Measures

Flammability Classification: OSHA Class IB
Flash Pt: 21.00 F Method Used: TCC
Explosive Limits: LEL: 1.80 UEL: No data.
Autoignition Pt: No data.

Special Fire Fighting Procedures

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spay to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Unusual Fire and Explosion Hazards

No data available.

Extinguishing Media

Use carbon dioxide, dry powder, or foam.

Unsuitable Extinguishing Media

No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Cleanup:

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area.

Small Spills:

Take up liquid with sand, earth or other noncombustible absorbent material and place in a plastic container where

applicable.

Large Spills:

Dike far ahead of spill for later disposal.

7. Handling and Storage

Precautions To Be Taken in Handling

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations.

Do not reuse this container.

Precautions To Be Taken in Storing

Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

8. Exposure Controls/Personal Protection

Respiratory Equipment (Specify Type)

For OSHA controlled work place and other regular users --Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provided protection against vapors.

Eye Protection

Safety glasses, chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves

Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

Other Protective Clothing

Various application methods can dictate the use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after use. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

Ventilation

Use only with adequate ventilation to prevent buildup of vapors. Do not use in areas where vapors can accumulate and concentrate such as basements, bathrooms, or small enclosed areas. Whenever possible, use outdoors in an open area. If using indoors, open all windows and doors and maintain a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea or eye-watering -- Stop -- ventilation is inadequate. Leave area immediately. If the work area is not well ventilated, then do not use this product. A dust mask does not provide protection against vapors.

9. Physical and Chemical Properties

Physical States:	[] Gas	[X] Liquid	[] Solid
Melting Point:	No data.		
Boiling Point:	175.00 F		
Autoignition Pt:	No data.		
Flash Pt:	21.00 F Method: TCC		
Explosive Limits:	LEL: 1.80	UEL: No data.	
Specific Gravity:	0.000000		
Bulk Density:	6.689 LB/GA		

MATERIAL SAFETY DATA SHEET
METHYL ETHYL KETONE

Vapor Pressure: No data.
Vapor Density: No data.
Evaporation Rate: No data.
Solubility in Water: No data.
Percent Volatile: 99.999 % by weight.
VOC / Volume: 825.0000 G/L
Corrosion Rate: No data.
pH: No data.
Appearance and Odor
No data available.

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability

No data available.

Incompatibility - Materials To Avoid

Incompatible with strong oxidizing agents, strong caustics, and hydrogen peroxide.

Hazardous Decomposition Or Byproducts

Decomposition may produce carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will occur [] Will not occur [X]

Conditions To Avoid - Hazardous Polymerization

No data available.

11. Toxicological Information

Toxicological Information

No data available.

Carcinogenicity/Other Information

No data available.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

Ecological Information

No data available.

13. Disposal Considerations

Waste Disposal Method

Dispose in accordance with local, state, and federal regulations.

RCRA Waste ID Code: D035

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name

No data available.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Methyl ethyl ketone	78-93-3	No	Yes 5000 LB	Yes	Yes

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Methyl ethyl ketone	78-93-3	HAP	No	No	No

MATERIAL SAFETY DATA SHEET

METHYL ETHYL KETONE

Page: 5
Printed: 12/13/2005
Revision: 06/10/2005
Supersedes Revision: 10/17/2002

SARA (Superfund Amendments and Reauthorization Act of 1986) Lists:

Sec.302: EPA SARA Title III Section 302 Extremely Hazardous Chemical with TPQ. * indicates 10000 LB TPQ if not volatile.

Sec.304: EPA SARA Title III Section 304: CERCLA Reportable + Sec.302 with Reportable Quantity. ** indicates statutory RQ.

Sec.313: EPA SARA Title III Section 313 Toxic Release Inventory. Note: -Cat indicates a member of a chemical category.

Sec.110: EPA SARA 110 Superfund Site Priority Contaminant List

TSCA (Toxic Substances Control Act) Lists:

5A(2): Chemical Subject to Significant New Rules (SNURS)

6A: Commercial Chemical Control Rules

8A: Toxic Substances Subject To Information Rules on Production

8A CAIR: Comprehensive Assessment Information Rules - (CAIR)

8A PAIR: Preliminary Assessment Information Rules - (PAIR)

8C: Records of Allegations of Significant Adverse Reactions

8D: Health and Safety Data Reporting Rules

8D TERM: Health and Safety Data Reporting Rule Terminations

Other Important Lists:

CWA NPDES: EPA Clean Water Act NPDES Permit Chemical

CAA HAP: EPA Clean Air Act Hazardous Air Pollutant

CAA ODC: EPA Clean Air Act Ozone Depleting Chemical (1=CFC, 2=HCFC)

CA PROP 65: California Proposition 65

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

Yes No Acute (immediate) Health Hazard

Yes No Chronic (delayed) Health Hazard

Yes No Fire Hazard

Yes No Reactive Hazard

Yes No Sudden Release of Pressure Hazard

16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

KLEAN-STRIP GILLESPIE KWIK DUFFY'S EL FICO P&D

MATERIAL SAFETY DATA SHEET

DATE PRINTED: 9/17/2003

MSDS NO. LL1818

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

MANUFACTURER'S NAME
W.M. BARR & COMPANY, INC.

ADDRESS
2105 Channel Ave.
Memphis, TN 38113 USA

EMERGENCY TELEPHONE #1
901-725-0100

EMERGENCY CONTACT
W.M. Barr Technical Services

EMERGENCY INFORMATION
24 HOUR MEDICAL EMERGENCY #, 800 451-8346
SEE SECTION 5 FOR ADDITIONAL EMERGENCY INFORMATION

INVENTORY ITEM #
CCCL11

CHEMICAL FORMULA
LL1818

PRODUCT NAME
NAKED GUN GOLD AUTO GUN CLNR

REVISION DATE
9/12/2003

REVISION DATE
9/12/2003

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE DESCRIPTION	PERCENT	CAS#	NTP	ACGIH	OSHA	IARC	CARCINOGENICITY
ACETONE	90-95	67-64-1	N	N	N	N	
METHYL ETHYL KETONE	5-10	78-93-3	N	N	N	N	
WATER	1-5	7732-18-5	N	N	N	N	

SECTION 3. REGULATORY INFORMATION

EXPOSURE LIMITS/REGULATORY INFORMATION

SUBSTANCE DESCRIPTION	REG. AGENCY	TWA	STEL	CEIL	SKIN	PEL
ACETONE	ACGIH OSHA	500.00 N/E	750.00 N/E	N/E N	N N	N/E 1000.00 N/E
METHYL ETHYL KETONE	ACGIH OSHA	200.00 200.00	300.00 300.00	N/E N	N N	N/E 200.00 N/E
WATER	ACGIH OSHA	N/E N/E	N/E N/E	N/E N	N N	N/E N/E

ADDITIONAL REGULATORY INFO

The time weighted average (TWA) value described herein is a threshold limit value (TLV) as established by ACGIH. The permissible exposure limit (PEL) is a value established by OSHA.

CALIFORNIA (PROPOSITION #65)

Ingredients in this product are not listed on California's Prop 65 list: "Chemicals known to the state to cause cancer or reproductive toxicity."

SEC. 313 SUPPLIER NOTIFICATION

The following information must be included in all MSDS that are copied and distributed for this material.

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40CFR 372):

DATE PRINTED: 9/15/88 SOLUTIONS/ARD R889 NO. 111818

SECTION 3. REACTIVITY INFORMATION

SUBSTANCE DESCRIPTION PERCENT BY WEIGHT CAS#
ACETONE (UPPER LIMIT) 67-64-1
METHYL ETHYL KETONE 10 78-93-3

CLEAN AIR ACT
This formula contains no known ozone depleting chemicals.

HAZARD COMMUNICATION STANDARD
This document is prepared in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200). This MSDS contains thirteen (13) sections.

The following effects and/or symptoms are not expected to be experienced by persons who use this product properly and according to all instructions, precautions, and warnings. However, should the product user experience any questionable effects or symptoms, the product user should immediately seek medical attention.

SECTION 4. HAZARDS IDENTIFICATION

INHALATION ACUTE EXPOSURE EFFECTS
Vapor harmful. May cause dizziness, headache, watering of eyes, irritation of respiratory tract, drowsiness, nausea, and numbness in fingers, arms and legs.

SKIN CONTACT ACUTE EXPOSURE EFFECTS
May cause drying of skin, and numbness in fingers and arms. Liquid is absorbed readily.

EYE CONTACT ACUTE EXPOSURE EFFECTS
This material is an eye irritant.

INGESTION ACUTE EXPOSURE EFFECTS
Harmful if swallowed. May cause dizziness, headache, nausea, and irritation of mouth, throat and stomach.

CHRONIC EXPOSURE EFFECTS
Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. May cause weakness, fatigue, skin irritation, and numbness in hands and feet.

MEDICAL CONDITIONS AGGRAVATED
None known.

PRIMARY ROUTE OF EXPOSURE
Inhalation, ingestion, and dermal.

SECTION 5. FIRST AID MEASURES

INHALATION
If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

SKIN CONTACT
Irritation may result. Immediately wash with soap and water.

EYE CONTACT
Immediately flush with water, remove any contact lens, continue flushing with water for at least 15 minutes, then get medical attention.

SECTION 5 FIRST AID MEASURES
(CONTINUED)

INGESTION
Call your poison control center, hospital emergency room, or physician immediately for instructions.

NOTE TO PHYSICIAN
This formula is registered with POISINDEX.
Call your local poison control center for further information.

SECTION 6. FIRE FIGHTING MEASURES

HAZARD RATING SOURCE	HMS	NFPA
HEALTH		2
FLAMMABILITY		3
REACTIVITY		0
OTHER		NA

FLASH METHOD
ICC

FLASH POINT
.00 F -17.77 C

LOWER EXPLOSION LIMIT
2.60

GENERAL COMMENTS
OSHA Flammability: Class IB

EXTINGUISHING METHOD

Use carbon dioxide, dry powder, or foam.

FIRE FIGHTING PROCEDURES

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

FIRE AND EXPLOSION HAZARDS

IS EXTREMELY FLAMMABLE. KEEP AWAY FROM HEAT, SPARKS, FLAME OR DANGER! ALL OTHER SOURCES OF IGNITION. VAPORS MAY CAUSE FLASH FIRE OR AND ALL OTHER SOURCES OF IGNITION. VAPORS MAY TRAVEL LONG DISTANCES TO OTHER AREAS AND ROOMS AWAY FROM WORK SITE. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and all other sources of ignition anywhere in the structure dwelling or building during use and until all vapors are gone from the work site. Keep away from electrical outlets and switches. Beware of static electricity that may be generated by synthetic clothing and other sources.

SECTION 7. ACCIDENTAL RELEASE MEASURES

CLEAN-UP

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep smoking or flames out of hazard area. **SMALL SPILLS:** take up liquid with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable. **LARGE SPILLS:** dike far ahead of spill for later disposal.

SECTION 7. ACCIDENTAL RELEASE MEASURES
(CONTINUED)

For transportation related spills contact Chemtrec at 1-800-424-9300 for emergency assistance.

WASTE DISPOSAL

Dispose in accordance with applicable local, state and federal regulations.

SECTION 8. HANDLING AND STORAGE

STORAGE
Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

HANDLING

Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

SECTION 9. TRANSPORT INFORMATION

TRANSPORTATION

For D.O.T. information, contact W.M. Barr Technical Services Department.

SECTION 10. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION PROTECTION
USE ONLY WITH ADEQUATE VENTILATION TO PREVENT BUILDUP OF VAPORS. Do not use in areas where vapors can accumulate and concentrate such as basements, bathrooms or small enclosed areas. Whenever possible use outdoors in an open air area. If using indoors open all windows and doors and maintain a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea or eye-watering - STOP - ventilation is inadequate. Leave area immediately. IF THE WORK AREA IS NOT WELL VENTILATED, DO NOT USE THIS PRODUCT. A dust mask does not provide protection against vapors.

RESPIRATORY PROTECTION

For OSHA controlled work place and other regular users - Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.

SKIN PROTECTION

Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

EYE PROTECTION

Safety glasses, chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

OTHER PROTECTION

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc, to minimize exposure. A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink or smoke in the work area. Wash hands thoroughly after use. Before reuse, has been thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves

DATE REPRINTED: 9/13/88 SOLUTIONS/ARD MSDS NO. 111818

SECTION 10. EXPOSURE CONTROLS/PERSONAL PROTECTION

or shoes.

SECTION 11. PHYSICAL AND CHEMICAL PROPERTIES

VOLATILE &
100.000
by weight

BOILING POINT
GT 133.00 F 55.00 C

VAPOR DENSITY (AIR = 1.0)
Heavier than air

EVAPORATION RATE
Slower than ether

BULK DENSITY
8.618
lbs/gal at 75 F

PH FACTOR N/E

PHOTOCHEMICALLY REACTIVE

NO

MAX V.O.C.
550 grams per liter

MAX VAPOR PRESSURE
(at the V.O.C.) 26mm Hg at 20 degrees C

SECTION 12. STABILITY AND REACTIVITY

INCOMPATIBILITIES

Incompatible with strong oxidizing agents and hydrogen peroxide.

DECOMPOSITION

Decomposition may produce carbon monoxide and carbon dioxide.

POLYMERIZATION

Will not occur.

STABILITY

Stable.

SECTION 13. ADDITIONAL INFORMATION

IMPORTANT NOTE

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

LEGEND:

PPM = parts per million

KLEAN-STRIP GILLESPIE KWIK DUFFY EL PICO P&D

MATERIAL SAFETY DATA SHEET

DATE PRINTED: 9/13/2000 SOLUTIONS/ARD MSDS NO. LL1616

SECTION 11. ADDITIONAL INFORMATION
(CONTINUED)

MG/M3 = milligrams per cubic meter
N/E or NE = none established
Gt = greater than
N/A or NA = not applicable
TCC = tag closed cup
TOC = tag open cup
PMCC = Pensky-Martens closed cup
IDLH = Immediately Dangerous to Life and Health

END OF MSDS

PRODUCT CODE: AR 8000
 PRODUCT NAME: MET BLACK
 TYPE OF PRODUCT: AEROSOL PRIMER
 DOT CLASS: AEROSOLS, 2.1, UN 1950, LIMITED QUANTITY
 SECTION I - MANUFACTURER'S IDENTIFICATION

HMIS CODES: H F R P
 2, 4 0 J

PACKAGED PRODUCT FLAME EXTENSION: 26"
 FLAMMABLE LIMITS IN AIR BY VOLUME: - LOWER: 1.0% UPPER: 12.6%

MANUFACTURED BY: WESMAR PRODUCTS
 1440 NW 45th ST SEATTLE, WA 98107
 INFORMATION PHONE: (206)782-8186 24 HOUR EMERGENCY PHONE:
 (SPILL, LEAK, FIRE, ACCIDENT)
 CALL CHEMTREC 1-800-424-9300

EXTINGUISHING MEDIA:
 FOAM, CO2, DRY CHEMICAL, WATER FOG

DOT/CERCLA:
 The DOT/CERCLA reportable quantity (RQ) for this product is 652 gallons
 based on TOLUENE RQ 1000 lbs.

DATE PREPARED/REVISED: 03/21/1996 NAME OF PREPARER: WESMAR PRODUCTS
 REASON REVISED: ORIGINAL M.S.D.S.

SPECIAL FIREFIGHTING PROCEDURES: Evacuate all unnecessary personnel. Use full protective equipment, including self-contained breathing apparatus. Use water spray, preferably fog, to cool closed containers to prevent pressure build-up and possible explosion. Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams, or waterways.

SECTION IIA - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

CAS NUMBER DESCRIPTION	WEIGHT PERCENT		OCCUPATIONAL EXPOSURE LIMITS		VAPOR PRESSURE mm Hg @ 70°F
	OSHA PEL **	ACGIH TLV	OTHER	OTHER	
74742-68-8 PETROLEUM NAPHTHA, ALKANES & NAPHTHENES	13	Not Est.	300 ppm	32 mg/m ³	60 @ 70
2071-43-2 BENZENE	* trace	10 ppm	10 ppm	1000 ppm	75 @ 68
2074-98-6 PROPANE		Simple	Aphyxiant	(estimate)	3619 @ 70
2075-28-5 ISOBUTANE	15	Not Est.	800 ppm		
101019108-88-3 TOLUENE	14	100 ppm	50 ppm	188 mg/m ³	22 @ 68
6888-68-7 SILICA, CRYSTALLINE-QUARTZ	.10	0.1 mg/m ³	0.1 mg/m ³	(Resp Dust)	
20057-64-1 ACETONE	21	750 ppm	750 ppm	1720 mg/m ³	181 @ 68

**PELs represent lowered 1989 limits and may not be enforceable by Federal OSHA.
 *Trace quantities less than 0.1% and greater than 0.02%

UNUSUAL FIRE AND EXPLOSION HAZARDS: Explosive air-vapor mixtures may form which are dangerous when exposed to heat or flame. Vapors are heavier than air and may travel along the ground, or be moved by ventilation, and ignited by pilot lights, stoves, heaters, electric motors, sparks, flame, smoking, static discharge or other ignition sources even at locations distant from material handling site. Contents under pressure. Exposure to heat or prolonged exposure to sun may cause bursting.

SECTION IIB - OTHER REGULATORY INFORMATION

CAS NUMBER DESCRIPTION	CARCINOGEN NTP IARC OSHA	SARA TITLE III 302 313	CALIFORNIA P65 I II
74742-68-8 PETROLEUM NAPHTHA, ALKANES & NAPHTHENES	X	X	X X
2071-43-2 BENZENE		X	X X
2074-98-6 PROPANE			X
2075-28-5 ISOBUTANE			X
101019108-88-3 TOLUENE			X
6888-68-7 SILICA, CRYSTALLINE-QUARTZ			
20057-64-1 ACETONE			

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, Carbon dioxide, Irritating fumes, Hydrocarbons, Water vapors, Ammonia fumes, Toxic materials.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizing agents, Acids, Alkalis, Chlorinated compounds, Ammonia, Aldehydes, Amines, Isobutylene.

STABILITY: Stable.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: High temperature and humidity, ignition source, vapor build-up.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

OILING RANGE: -44 to 232 DEG F.
 APOR DENSITY: HEAVIER THAN AIR
 ALGULATED V.O.C.: 4.68LB/GI (562GR/LT) (n-Butyl acetate-MEDIAN)
 SOLUBILITY IN WATER: NON-SOLUBLE
 APPEARANCE AND ODOR: LACK PIGMENTED LIQUID, SWEET ODOR

SECTION V - REACTIVITY DATA

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, Carbon dioxide, Irritating fumes, Hydrocarbons, Water vapors, Ammonia fumes, Toxic materials.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizing agents, Acids, Alkalis, Chlorinated compounds, Ammonia, Aldehydes, Amines, Isobutylene.

STABILITY: Stable.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: High temperature and humidity, ignition source, vapor build-up.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

SHA FLAMMABILITY CLASS: Flammable Liquid - Class 1A

ULK PRODUCT FLASH POINT: -4 DEG F.
 ULK PROPELLANT FLASH POINT: -156 DEG F.

SECTION VI - HEALTH HAZARD DATA

PRIMARY ROUTE(S) OF EXPOSURE: Inhalation, skin contact.

ACUTE EFFECTS FROM SHORT TERM EXPOSURE:
 INHALATION: Vapors and mists cause severe irritation to nose, throat and lungs (burning, stinging, coughing). May cause headache, dizziness, nausea, weakness, shortness of breath and loss of coordination. Exposure to extremely high vapor concentrations may cause unconsciousness and asphyxiation. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.
 EYES: Contact with liquid or vapors causes severe irritation (redness, watering, itching, stinging, blurred vision).
 SKIN: Contact causes severe irritation (dryness, itching, cracking, rash and swelling).
 SKIN ABSORPTION: None known.
 SWALLOWING: Causes nausea, vomiting and diarrhea.

CHRONIC EFFECTS FROM LONG TERM/REPEATED EXPOSURE: Long-term or repeated overexposure, without proper ventilation or personal protection, may cause damage to the kidneys, liver, eyes, brain and nervous system. (Note: Toluene has been included on the Calif. Prop 65 list, for developmental toxicity, and requires the following statement: Warning: This product contains a chemical known to the State of Calif. to cause birth defects or other reproductive harm.).

OTHER: This product contains a form of Crystalline Silica. Long term exposure to Silica or Crystalline Silica DUSTS may result in silicosis, a disabling lung disease. Always wear appropriate respiratory protection when exposed to sanding or grinding dusts.

SECTION V - REACTIVITY DATA

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, Carbon dioxide, Irritating fumes, Hydrocarbons, Water vapors, Ammonia fumes, Toxic materials.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizing agents, Acids, Alkalis, Chlorinated compounds, Ammonia, Aldehydes, Amines, Isobutylene.

STABILITY: Stable.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: High temperature and humidity, ignition source, vapor build-up.

SECTION VI - HEALTH HAZARD DATA

PRIMARY ROUTE(S) OF EXPOSURE: Inhalation, skin contact.

ACUTE EFFECTS FROM SHORT TERM EXPOSURE:
 INHALATION: Vapors and mists cause severe irritation to nose, throat and lungs (burning, stinging, coughing). May cause headache, dizziness, nausea, weakness, shortness of breath and loss of coordination. Exposure to extremely high vapor concentrations may cause unconsciousness and asphyxiation. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.
 EYES: Contact with liquid or vapors causes severe irritation (redness, watering, itching, stinging, blurred vision).
 SKIN: Contact causes severe irritation (dryness, itching, cracking, rash and swelling).
 SKIN ABSORPTION: None known.
 SWALLOWING: Causes nausea, vomiting and diarrhea.

CHRONIC EFFECTS FROM LONG TERM/REPEATED EXPOSURE: Long-term or repeated overexposure, without proper ventilation or personal protection, may cause damage to the kidneys, liver, eyes, brain and nervous system. (Note: Toluene has been included on the Calif. Prop 65 list, for developmental toxicity, and requires the following statement: Warning: This product contains a chemical known to the State of Calif. to cause birth defects or other reproductive harm.).

OTHER: This product contains a form of Crystalline Silica. Long term exposure to Silica or Crystalline Silica DUSTS may result in silicosis, a disabling lung disease. Always wear appropriate respiratory protection when exposed to sanding or grinding dusts.

CARCINOGEN DATA: Crystalline Silicas are classified by IARC as potential human carcinogens. Inhalation of Crystalline Silica DUSTS may cause lung tumors. Trace quantities of Benzene may be present as a by-product from the refining process of petroleum based chemicals. Benzene is classified as a human carcinogen which produces myeloid leukemia and lymphoma by inhalation. Risk of cancer depends on level and duration of exposure. The following statement is required by California Proposition 65 (Safe Drinking Water and Toxic Reform Act of 1986) WARNING! THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Respiratory tract irritation; nose; skin and eye disorders; sensitization to chemical substances.

SECTION VII - EMERGENCY AND FIRST AID PROCEDURES

SWALLOWING: If person is conscious, give 1/2 glass milk or water. DO NOT induce vomiting. Call Poison Center, Emergency Room or Physician immediately.

INHALATION: Remove from exposure to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Keep person warm and quiet. Get medical attention immediately.

EYE: Immediately flush with plenty of water for 15 minutes, while lifting upper and lower eyelids. Get medical attention.

SKIN: Immediately remove by wiping, followed by waterless hand-cleanser and plenty of soap and water. Remove contaminated clothing and shoes. Wash or rinse thoroughly before reuse. Get medical attention if irritation persists.

OTHER: Have Material Safety Data Sheet available, if possible, when calling Poison Center, Emergency Room or Physician.

SECTION VIII - PERSONAL PROTECTION

PERSONAL PROTECTION: OUTDOOR OR OPEN AREAS: If necessary, because of wind, etc. use mechanical filter respirator or particle mask to avoid breathing spray mists. ENCLOSED OR RESTRICTED VENTILATION AREAS: Use NIOSH approved cartridge respirator to keep vapor/mist levels of hazardous ingredients (listed in Section II) below the occupational exposure limits (PEL and TLV). If exposure levels are unknown, or limits exceeded, a full facemask air-purifying cartridge respirator is recommended. Use filters to avoid breathing spray particles and sanding dusts. Follow respirator manufacturer's instructions for use.

VENTILATION: INDOOR OR ENCLOSED AREAS: Provide general mechanical ventilation or local exhaust to keep vapor concentrations below the PELs and TLVs in Section II and Lower Flammable Limits in Section IV.

HAND PROTECTION: When necessary, wear impermeable gloves to prevent skin contact. Consult safety equipment supplier for specific recommendation of construction material.

EYE PROTECTION: Wear safety glasses, with side shields, designed to protect eyes against liquid splash and mists. Note: Contact lenses may contribute to the severity of an eye injury and should not be worn when working with chemicals.

OTHER PROTECTIVE EQUIPMENT: When necessary, wear protective clothing, including hoodcap, to avoid skin contact with liquid or overspray.

WORK/HYGIENIC PRACTICES: Eye washes and safety showers are recommended in the workplace. Wash hands after using and before eating, drinking or using tobacco products. Thoroughly clean contaminated clothing and shoes before reuse. Periodically monitor exposure levels to hazardous ingredients listed in Section II and review permissible limits.

SECTION IX - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Eliminate ignition sources and ventilate area. Evacuate all unnecessary personnel. Wear full protective equipment. Dike drains to prevent entering storm or sanitary sewers, lakes, rivers, streams, or waterways. Contain spill and cover with inert absorbent material. Take up using non-sparking tools (aluminum, brass, or copper) and place mixture into containers for disposal. Note: Some spills or releases may require special reporting to local, state, or federal agencies.

WASTE DISPOSAL: Waste material and empty containers must be disposed of in accordance with all local, state and federal environmental control regulations. Use only approved waste management facilities.

SECTION X - SPECIAL PRECAUTIONS

HANDLING PRECAUTIONS: Keep liquid and vapors away from heat, sparks and flame. Turn off or remove all sources of ignition. Use proper labeling or ventilation to prevent vapor build-up. Avoid spraying or contact with eyes and skin. Do not take internally. Use caution in handling dusts. Avoid contact with respiratory and personal protective equipment. Do not heat containers. Incinerate containers. Contents are under pressure and may contain explosive vapors, even when empty. Do not remove or deface label.

SHIPPING AND STORAGE PRECAUTIONS: Contents under pressure. Do not store above 128 degrees F or permit prolonged exposure to sunlight. Protect containers from damage. Store in buildings or areas designed and protected for storage of aerosols. Keep out of reach of children.

OTHER PRECAUTIONS: N/A.

SECTION XI - DISCLAIMER

DISCLAIMER: THE INFORMATION CONTAINED HEREIN HAS BEEN COMPILED FROM SOURCES CONSIDERED TO BE RELIABLE. TO THE BEST OF OUR KNOWLEDGE AND BELIEF, ALL INFORMATION IS ACCURATE AND IS PROVIDED IN GOOD FAITH. HOWEVER, NO GUARANTEE OF ACCURACY IS MADE OR IMPLIED.

MATERIAL SAFETY DATA SHEET

EMERGENCY PHONE: 1-800-424-9300 (CHEMTREC)
 Date Prepared : 12/03/98
 Supersedes : 03/21/96
 Prepared by : DREW O'BRIEN
 TECHNICAL SERVICES SPECIALIST

HEALTH 3 FLAMMABILITY ... 0 REACTIVITY 0 PROTECTION X	HMIS RATING
	4 = SEVERE 3 = SERIOUS 2 = MODERATE 1 = SLIGHT 0 = MINIMAL X = SEE SECTION 6

PRODUCT IDENTITY **CLEAN ALL**
 PRODUCT CODE NUMBER **CG 1153, CG 1153A, CG 1155**
 PRODUCT USE **AUTOMOTIVE RECONDITIONING PRODUCT**
 DOT HAZARD CLASSIFICATION .. **CAUSTIC ALKALI LIQUIDS, NOS, (POTASSIUM HYDROXIDE, SODIUM METASILICATE), 8, UN1719, III**

SECTION 1 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	CAS NUMBER	Wgt. %	EXPOSURE LIMITS		OTHER	CARCINOGEN	NOTE
			PEL-OSHA	TLV-ACGIH			
2-BUTOXYETHANOL (skin)	111-76-2	3-7	25 ppm	25 ppm	N/AV	NO	**
NONYLPHENOXPOLYETHOXYETHANOL	127087-87-0	1-5	1 ppm	1 ppm	N/AV	NO	
DODECYLBENZENE SULFONIC ACID	27176-87-0	1-5	2 ppm	1 mg/m3	N/AV	NO	
SODIUM TRIPOLYPHOSPHATE (dust)	7758-29-4	1-5	15 mg/m3	15 mg/m3	N/AV	N/AV	
SODIUM XYLENE SULFONATE	1300-72-7	1-5	N/AV	N/AV	N/AV	NO	
PHOSPHORIC ACID, TRISODIUM SALT (dust)	10101-89-0	1-5	5 mg/m3	5 mg/m3	N/AV	NO	
POTASSIUM HYDROXIDE	1310-58-3	0.5-1.5	2 mg/m3	2 mg/m3	N/AV	NO	

**SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF SARA TITLE III, SEE SECTION 8 - REGULATORY INFORMATION.

SECTION 2 - PHYSICAL AND CHEMICAL CHARACTERISTICS

PHYSICAL STATE LIQUID
 ODOR AND APPEARANCE : PINK LIQUID WITH ETHERAL ODOR
 SPECIFIC GRAVITY (water=1): 1.05
 SOLUBILITY IN WATER SOLUBLE
 VAPOR PRESSURE (mmHg)...: <20
 VAPOR DENSITY (Air=1)...: >1
 ODOR THRESHOLD: N/AV
 EVAPORATION RATE (ETHER=1): SLOWER
 pH: >13
 BOILING POINT (F)...: 212
 FREEZING POINT (F)...: 32

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (F) AND METHOD...: N/AP
 FLAMMABLE LIMITS: LEL = N/AP UEL = N/AP
 EXTINGUISHING MEDIA: Product is not a fire hazard. Use extinguishing media appropriate for surrounding fires.
 SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode when fighting fires. Keep containers cool with water spray.
 UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers may rupture due to build up of pressure when exposed to extreme heat causing slippery conditions. Wear clothing and equipment to avoid body contact. May react with zinc, aluminum, tin and other active metals liberating flammable hydrogen gas.

SECTION 4 - REACTIVITY DATA

IS THE PRODUCT STABLE? YES CONDITIONS TO AVOID FOR STABILITY: N/AP
 INCOMPATIBILITY (Materials to Avoid): Avoid contact with acids and strong oxidizing agents and metal such as aluminum, zinc and tin.
 HAZARDOUS DECOMPOSITION PRODUCTS....: Oxides of carbon, nitrogen, sulfur and various hydrocarbons.
 WILL HAZARDOUS POLYMERIZATION OCCUR? NO CONDITIONS TO AVOID FOR POLYMERIZATION: N/AP

KEEP OUT OF REACH OF CHILDREN

N/AP - Not Applicable

N/AV - Not Available

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFIER: CLEAN ALL CG 1153, CG 1153A, CG 1155

SECTION 5 - HEALTH HAZARD DATA

ROUTE OF ENTRY: a) Eye contact b) Skin contact c) Inhalation, if misted

EFFECTS OF ACUTE EXPOSURE: a) Eyes - Corrosive to eye tissues. Brief contact can cause severe eye damage and prolonged contact can cause permanent eye injury which may be followed by blindness. b) Skin - Corrosive, may cause chemical burns. Superficial irreversible skin destruction can result from repeated or prolonged contact with dilute solutions. c) Inhalation - Can cause mild to severe irritation, depending on exposure. Excessive inhalation of mists can burn respiratory tract tissues. d) Ingestion - Can cause chemical burns to the mouth, throat, esophagus and stomach.

EFFECTS OF CHRONIC EXPOSURE: May result in areas of destruction of skin tissue or primary irritant dermatitis. Similarly, inhalation of mists may cause varying degrees of damage to the affected tissues and also increase susceptibility to respiratory illness. Prolonged or repeated overexposure may result in kidney and/or liver damage.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to the product.

EMERGENCY AND FIRST AID PROCEDURES:

- a) SKIN - Immediately flush with lots of running water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention.
- b) EYES - Immediately flush eyes with lots of running water for 15 minutes, lifting the upper and lower eyelids occasionally. Get medical attention immediately.
- c) INHALATION - If affected remove individual to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, administer artificial respiration. Keep person warm and quiet and get medical attention.
- d) INGESTION - Do not induce vomiting. Call physician immediately. If conscious give lots of water or milk. Do not give anything by mouth to an unconscious or convulsing person.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

GLOVES....: Impervious RESPIRATOR...: NIOSH approved, if misted EYE....: Chemical splash goggles
FOOTWEAR...: Impervious boots CLOTHING....: Impervious OTHER...: N/AP

VENTILATION: LOCAL EXHAUST: Below TLV(s) MECHANICAL (General): RECOMMENDED

WORK/HYGIENIC PRACTICES: Eye wash and safety shower must be easily accessible. Provide adequate ventilation. Wash thoroughly after handling and before eating, drinking or smoking. Remove contaminated clothing promptly and wash it before reuse.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Absorb all spills on suitable absorbant and collect for disposal.

WASTE DISPOSAL METHOD: Dispose of according to local, state and federal regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Protect from physical damage and keep containers tightly closed. Do not store below freezing conditions or above 120° F. Do not store near acids or acidic materials and oxidizers.

MAINTENANCE PRECAUTIONS: Promptly clean all leaks and spills to avoid slippery conditions.

OTHER PRECAUTIONS: Containers, even those that are emptied will retain product residue and vapors. Always obey hazard warning.

SECTION 8 - REGULATORY INFORMATION

This product contains the following chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372:

Glycol ethers (category) 3-7%

KEEP OUT OF REACH OF CHILDREN

N/AP - Not Applicable

N/AV - Not Available

EMERGENCY PHONE: (813) 546-8923

PREPARED BY: Steven R. Busch
DATE: 8-22-96

SECTION I - IDENTIFICATION

PRODUCT NUMBERS: SF 1548
 PRODUCT NAME: CLEAR Seam Sealer Clear
 WHIMIS CLASSIFICATION: Class B Div 2; Class D Div 2
 PRODUCT USE: SEALANT

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	T.L.V.	C.A.S. #	LD50,LC50 SPECIES & ROUTE
MINERAL SPIRITS	5-10	100ppm (575mg/m3)	64742-47-8	ORAL RAT >8000mg/kg DERMAL RAT >4000mg/kg RAT 1400ppm/4hrs
XYLENE	30-60	100ppm TWA ACGIH 100ppm TEA OSHA	1330-20-7	4300 mg/kg RAT ORAL 5000 ppm 4 hours RAT INHALATION
AIR FLOATED BALL CLAY	0.1-0.2	10 mg/m3	1318-74-7	N/A
BUTADIENE-STYRENE COPOLYMER 10-30			N/A	N/A
HYDROCARBON RESIN	10-30		64742-16-1	N/A
C12 CHLORINATED PARRAFINS	3-7	Not Established	63449-39-8	Not Established
CALCIUM CARBONATE	5-10	10mg/cu,m	1317-65-3	N/A

SECTION III - HAZARDS IDENTIFICATION

PRIMARY ROUTE(S) OF ENTRY: Skin contact, Skin absorption, Eye contact, Inhalation, Ingestion.
 EFFECTS OF ACUTE EXPOSURE: Can cause gastro-intestinal irritation, nausea, vomiting and diarrhea. Vapors can produce headache, nausea, dizziness, disorientation, numbness in fingers and toes, and irritation of nose and throat. Irritation upon direct contact with eyes. Vapors can produce irritation. May be absorbed by the skin. Skin contact may cause defatting, drying and cracking of the skin. May lead to dermatitis. Skin contact may cause mild irritation.
 EFFECTS OF CHRONIC EXPOSURE: May cause nausea, headache, dizziness, and drowsiness. May cause damage to central nervous system, respiratory system, lungs, eyes, skin, gastrointestinal tract.

SECTION IV - FIRST AID MEASURES

EYES: Immediately flush eyes with running water for a minimum of 20 minutes. If irritation persists get medical attention immediately.
SKIN: Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse. Immediately flush with water for 15 minutes.
INHALATION: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
INGESTION: Do not induce vomiting. Give large amounts of water if patient is conscious. Get medical attention immediately.

SECTION V - FIRE FIGHTING MEASURES

ASH POINT (G), METHOD: 7 deg G CC
 AUTO IGNITION TEMPERATURE (C): Not tested
 UPPER FLAMMABLE LIMIT (% vol): Not established
 LOWER FLAMMABLE LIMIT (% vol): Not established
 EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam
 HAZARDOUS COMBUSTION PRODUCTS: Oxides of carbon.

SENSITIVITY TO:

MECHANICAL IMPACT: No
 STATIC DISCHARGE: Yes

SECTION VI - ACCIDENTAL RELEASE MEASURES

SPILL/LEAK PROCEDURE: Avoid runoff into sewers and ditches which lead to waterways. Eliminate all sources of pollution. Absorb spill with inert material, (e.g. dry sand or earth). Then place in a chemical waste container.

SECTION VII - HANDLING AND STORAGE

HANDLING PROCEDURES: Equipment must be grounded. Handle and open container with care. Handle away from all sources of ignition. Avoid smoking. Keep container closed. Maintain a good personal hygiene. Use non-metallic tools. Use adequate ventilation. Avoid contact with skin and eyes. Avoid contamination of food.
 STORAGE REQUIREMENT: Provide adequate ventilation to protect from these hazards and to keep below maximum exposure values. Store at room temperature. Avoid static electricity-ground containers when transferring product. Keep away from heat and flame. Keep container closed when not in use. Should be in standard liquid storage tanks.

SECTION VIII - EXPOSURE CONTROL/PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT:
 EYE/TYPE: Use chemical splash goggles and face shield (ANSI Zg7.1 or approved equivalent.)
 RESPIRATORY PROTECTION: Ventilate to keep air below TLV. NIOSH approved air supply masks for areas of concentrated vapors.
 GLOVES/TYPE: Chemical resistant rubber gloves.
 CLOTHING/TYPE: Appropriate clothing to avoid skin contact.
 FOOTWEAR/TYPE: Chemical resistant rubber boots.
 OTHER/TYPE: Safety shower and eye-bath located close to chemical exposed area.
 VENTILATION REQUIREMENTS: Ventilation system must be designed vapor and explosion proof for handling solvent vapors. Local exhaust ventilation may be necessary to control any air contaminants to within their TLV's during the use of this product.

SECTION IX - PHYSICAL PROPERTIES

PHYSICAL STATE: Liquid
 APPEARANCE AND ODOR: Solvent odor
 SPECIFIC GRAVITY: 7.8
 ODOR THRESHOLD (ppm): Not established
 VAPOR PRESSURE(mm Hg): Not established
 VAPOR DENSITY (Air=1): 1.0
 EVAPORATION RATE (Ether=1): Not established
 BOILING POINT (C): Not determined
 pH: Not applicable
 SOLUBILITY IN WATER (% W/W): Negligible
 WATER-OCTANOL PARTITION: Not applicable
 COEFFICIENT
 VOLATILE ORGANIC COMPOUND (%): By Weight: 50 approx.
 By volume: 30-50 @ 20 c

SECTION X - STABILITY AND REACTIVITY

INCOMPATIBILITY

STABILITY

REACTIVITY CONDITIONS: Excessive heat, sparks and open flames
 HAZARDOUS PRODUCTS OF DECOMPOSITION: Carbon Dioxide

Carbon Monoxide

HAZARDOUS POLYMERIZATION

SECTION XI - TOXICOLOGICAL INFORMATION

EXPOSURE LIMITS: See hazardous ingredients section (II)
 IRRITANCY OF PRODUCT: Refer to Acute Exposure Section
 SENSITIZATION TO PRODUCT: In susceptible individuals
 CARCINOGENICITY: NTP studies have shown that C12 chlorinated paraffins increased the incidence of tumors in laboratory animals when force fed in high doses in combination with corn oil, over long periods of time.
 TERATOGENICITY: Not indicated
 MUTAGENICITY: Not indicated
 REPRODUCTIVE EFFECTS: Not indicated
 SYNERGISTIC PRODUCTS: None known

SECTION XII - ECOLOGICAL INFORMATION

ENVIRONMENTAL: Keep out of waterways. BIODEGRADABILITY: Not tested.

SECTION XIII - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Dispose of contaminated waste in accordance with municipal, provincial, state and federal regulations.

SECTION XIV - TRANSPORT INFORMATION

TDG CLASSIFICATION: Coating solution UN1139 Class 3.2 Packing Group 11

SECTION XV - OTHER INFORMATION

SECTIONS UPDATED SINCE: 3-23-95

REVISION: 8-22-96

COMPANY DISCLAIMER: The information provided in this Material Safety Data Sheet has been obtained from sources believed to be reliable. The supplier provides no warranties expressed or implied and assumes no responsibility for the accuracy or the completeness of the data contained herein.

DATED - AUGUST 22, 1996

COMPLIES WITH WAC 296-62-05413

COMMON NAME: DETSOL HD ITEM NUMBER: WM 3331-3335

SECTION I PREPARATION/REVISION DATE: 2/4/92

Manufacturer's Name and address: WESMAR COMPANY INC. 1451 N.W. 46TH SEATTLE, WA. 98107.

Emergency Phone: (206) 783-5344 If no answer call: (206) 523-4243 or (206) 789-5327

Chemical Name: N/A COMMON NAME: PETSOL HD

Chemical Family: ALKALINE CLEANER Formula: N/A

Chemical and Common Name & SODIUM HYDROXIDE (CAS#1310-73-21)

NONYLPHENOXYPOLYETHANOL (CAS#26027-38-3)

PHOSPHATE ESTER (CAS#51911-79-1)

Table with 4 columns: Health (Blue), Reactivity (Yellow), Flammability (Red), and Hazard Rating. Values range from 0 to 4.

HAZARD RATING

Degree of Hazard: 4=Extreme, 3=High, 2=Moderate, 1=Slight, 0=Insignificant

HAZARD RATING

COMPLIES WITH WAC 296-62-05413

COMMON NAME: DETSOL HD

SECTION III HEALTH HAZARD DATA

ACUTE HEALTH EFFECTS: Product is strongly alkaline: Contact with skin or eyes may result in chemical burns. Irreversible eye damage may occur. Inhalation of mists may irritate upper respiratory tract. Harmful if ingested.

CHRONIC HEALTH EFFECTS: None Known.

ROUTES OF ENTRY: Eyes, skin contact, ingestion, inhalation.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None Known.

EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Immediately begin flushing with cool water and continue for at least 15 minutes. Hold eyelids open while flushing. Seek immediate medical attention.

SKIN CONTACT: Immediately remove all contaminated clothing. Flush all affected areas with water for at least 15 minutes. Seek medical attention if irritation occurs. Launder clothing before reuse.

INGESTION: Give plenty of water and get victim to a physician at once. Do not induce vomiting. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air and seek medical attention.

SECTION IV CHEMICAL DATA

Boiling Point (F): 220 F. Specific Gravity (H2O=1): 1.12
Vapor Pressure (mm Hg.): N/D Percent volatile by vol. (%): N/D
Vapor Density (Air=1): N/D Evaporation Rate (___=1): N/D

SOLUBILITY: Completely soluble in water.
APPEARANCE: Clear green-blue liquid with pleasant lime odor.

WESMAR PRODUCTS, INC.
1440 N.W. 45TH STREET
SEATTLE, WA 98107
206/782

M A T E R I A L S A F E T Y D A T A S H E E T

COMPLIES WITH WAC 296-62-05413

COMMON NAME: DETSOL HD
SECTION V
PHYSICAL HAZARD DATA
FLASH POINT: None.

FLAMMABLE LIMITS: NOT APPLICABLE
EXTINGUISHING MEDIA: Use media appropriate to primary cause of fire.
SPECIAL FIRE FIGHTING PROCEDURES: Avoid contact with fire fighting personnel as burns may result from contact with skin. Wear protective clothing and self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None.
INCOMPATIBILITY (Materials to Avoid): None.
HAZARDOUS DECOMPOSITION PRODUCTS: None.
HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: N/A
STABILITY: Stable.

SECTION VI
SPILL OR LEAK PROCEDURES
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Appropriate protective clothing and equipment must be worn by all clean-up personnel. Contain spillage in suitable containers or holding area. Material that cannot be absorbed with an inert material such as diatomaceous earth and placed in a suitable container. Do not allow soil to enter waterways, groundwater or sewer systems.

WASTE DISPOSAL METHOD: Dispose of in approved chemical disposal area or in a manner which complies with all local, state and federal regulations. Do not flush to sewer without permission from local authorities.

M A T E R I A L S A F E T Y D A T A S H E E T

COMPLIES WITH WAC 296-62-05413

COMMON NAME: DETSOL HD
SECTION VII
EXPOSURE CONTROL INFORMATION
RESPIRATORY PROTECTION: None required unless TLV is exceeded.

VENTILATION: Good general room ventilation.
PROTECTIVE GLOVES: Rubber or polyethylene.
EYE PROTECTION: Goggles.

OTHER PROTECTIVE EQUIPMENT: Overalls, rubber boots, protect all exposed skin.

OTHER ENGINEERING CONTROLS: None.
WORK PRACTICES: Safety eye wash/shower stations must be available in work area.

HYGIENIC PRACTICES: All food should be kept in a separate location away from the storage/use location. Hands and face should be thoroughly washed after using and before eating or drinking.

SECTION VIII
SPECIAL PRECAUTIONS
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in a cool, dry location away from food and feed stuffs. Handle with care and caution.

MAINTENANCE PERSONNEL: No special precautions.
OTHER PRECAUTIONS: KEEP OUT OF REACH OF CHILDREN. Do not permit employees to handle without proper training and proper protective equipment.

(DETSOLHD D-1)

WESMAR PRODUCTS, INC.
 1440 N.W. 45th STREET
 SEATTLE, WA 98107
 (206) 782-8186

U-POL

PRODUCTS

MATERIAL SAFETY DATA SHEET

COMMERCIAL PRODUCT NAME: DOLPHIN

PREPARATION: POLYESTER REPAIR PASTE CONTAINING STYRENE

EMERGENCY TELEPHONE NO:- 1-800-424 9300 (CHEMTREC)
 1-703 527 3887 (CHEMTREC INTERNATIONAL)

SANDERS AND ASSOCIATES INC.,
 Three Werner Way,
 Suite 300
 Lebanon NJ 08833
 U.S.A.

FAX NO:- 1-800 787 5150

COMPOSITION/INFORMATION ON INGREDIENTS

<u>COMPONENT RISK</u>	<u>CAS NO.</u>	<u>LEVEL</u>	<u>SYMBOL</u>	
STYRENE	100-42-5	11 - 25%	Xn - Harmful.	R10 R20

R36/38

HAZARDS IDENTIFICATION

INHALATION: May cause drowsiness and irritation of respiratory tract.

SKIN: May cause irritation on prolonged contact, redness.

EYES: Irritation and soreness.

INGESTION: Sore throat, stomachache, nausea.

FIRST AID MEASURES**INHALATION:**

Move affected person to the fresh air without delay.
If drowsiness persists seek medical attention.

SKIN CONTACT:

Wash affected area with warm soapy water. Do not use solvents.

EYE CONTACT:

Irrigate with copious quantities of water and seek medical attention immediately.

INGESTION:

Do not induce vomiting. Drink plenty of water and seek medical attention.

FIRE FIGHTING MEASURES

Fight fires with CO₂, dry powder, or chemical foam. Do not use water jets. Burning material emits toxic fumes and smoke, so avoid inhalation of burning products.

ACCIDENTAL RELEASE MEASURES

The product does not readily flow. Any spillage should be wiped or scraped away. Keep product away from drains. Avoid sources of ignition. Dispose of in accordance with the requirements of the Environmental Protection Act.

HANDLING AND STORAGE**HANDLING:**

Keep away from heat. Keep away from sources of ignition.
Avoid contact with skin and eyes. Use only in well ventilated areas.

STORAGE:

Store below 25°C in a dry well ventilated space in original closed containers.

EXPOSURE CONTROLS/PERSONAL PROTECTION

A good standard of personal and industrial hygiene should be maintained at all times. Persons who suffer from skin complaints or other allergic effects should not work with the product.

OEL (UK)	Component	8 HR TWA	10 mins STEL
	Styrene	100 ppm	250 ppm

EYE PROTECTION:

Not necessary.

PROTECTIVE CLOTHING:

Recommended.

RESPIRATORY PROTECTION:

Dust particle mask approved to FFP1SD-EN149 (when sanding cured product).

SKIN PROTECTION:

Barrier cream recommended.

PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Putty like consistency.
ODOUR:	Slightly pungent, characteristic of Styrene.
DENSITY:	1.15 - 1.85.
FLASH POINT:	32°C (Styrene).
AUTOFLAMMABILITY TEMPERATURE :	490°C (Styrene).
EXPLOSIVE LIMITS:	Lower 1.1%. Upper 6.1% (Styrene).
VOLATILE CONTENT:	11 - 25%.
SOLUBILITY:	Insoluble in water.
VISCOSITY:	Approx. 500,000 - 1,000,000 centipoise.

STABILITY AND REACTIVITY

Can polymerise (solidify) if subjected to elevated temperatures over a period of time, exposed to UV/sunlight, or by the addition of free radical initiators e.g., organic peroxide. Heat increase may be sufficient to raise the temperature above the product flash point. Thermal decomposition can give rise to acrid fumes. Polymerisation in a closed container can give rise to pressure which may rupture the vessel.

TOXICOLOGICAL INFORMATION

For Styrene, the following values have been reported:-

An oral LD50 in rats of 5g/Kg.
LC50 in rats ranging between 2770 - 6000ppm.

Styrene odour is detectable at 25ppm. At 200-400ppm there is a transient irritant effect on nasal passages. At 400-1000ppm increasing systematic effects such as dizziness, nausea and headache at 800ppm and over becomes intolerable to mucous membranes. At 10000ppm and over may cause death in less than one hour.

There is no evidence that Styrene is carcinogenic in humans.

ECOLOGICAL INFORMATION

Marine pollutant and non biodegradeable.

Filler pastes are viscous compositions which lose solvents by evaporation or polymerisation, leaving a relatively inert residue which will not degrade significantly.

DISPOSAL CONSIDERATIONS

The uncured material and any contaminated container should be disposed of in accordance with the Environmental Protection Act.

TRANSPORT INFORMATION * PAINT RELATED MATERIAL OR POLYESTER RESIN KIT

SHIPPING NAME:

UNITED NATION NO: UN 1263 UN 3269

CLASS NO: 3.3. 3.3.

HARMONISED SYSTEMS NO: 321410 10 0. 321410 10 0.

PACKING GROUP: III. III.

Complies with The Carriage of Dangerous Goods by Road and Rail (Classification, Packaging and Labelling) Regulations.

For current International Maritime Dangerous Goods Declaration, please contact our Export Department
Telephone No: 44-(0) 208 492 5950.

REGULATORY INFORMATION

CONTAINS: Styrene.

SYMBOL: Xn Harmful.

RISK PHRASES: R10 Flammable.
R20 Harmful by inhalation.
R36/38 Irritating to eyes and skin.

SAFETY PHRASES: S2 Keep out of reach of children.
S3 Keep in a cool place.
S46 If swallowed seek medical advice immediately and show this container or label.
S51 Use only in well ventilated areas.

FURTHER INFORMATION

The main hazard likely to be encountered during finishing operations is the production of dust clouds. Dust from any source in the right concentrations must be regarded as a potential danger to health. It is, therefore, of paramount importance that dust clouds are kept to an absolute minimum.

Our filler pastes have been specially formulated to be rubbed down wet. When using this method the surface will air dry in less than 30 seconds. Many experts consider that this will result in a better finish and obviate the dust problem.

1. To avoid dust and get the best use from our products we suggest either of the following work methods:-
 - (a) Take off excess bodyfiller with a sander incorporating a dust extractor and finish the job using wet and dry paper.
 - (b) Take off excess bodyfiller with a body file, and then finish the job with wet and dry paper.

If the above mentioned methods are not used, airborne dust will be produced whilst rubbing down in the traditional way. Therefore, it is advisable that the rubbing down be carried out by personnel properly protected, i.e., wearing dust masks in an area separate from the main working area and, most important, properly ventilated - preferably by dust extractors.

2. Whilst none of our products contain any form of asbestos, any dusts emitted from sanding filler pastes can be classified as "Nuisance" dusts which, to the best of our knowledge have a long history of little adverse effects to human health when exposures are kept under reasonable control.
3. Please note, for repairs using glassfibre filled materials it should be unnecessary to sand them, if applied according to instructions. However, if sanding is deemed to be necessary, then we recommend the wearing of a suitable dust mask, particularly where mechanical means are used.
4. Mineral filler (which is a constituent of most body fillers), "in excessive quantities", is considered a moderate risk and, therefore, it is advisable to provide proper working methods/machinery to minimise the risk.

Reference should be made to the following official publications:-

EH40, EH42, EH44, C.O.S.H.H. Regulations, Environmental Protection Act, Toxicity Review Styrene.

ISSUE NUMBER: 0002
* Changes from previous issue

ISSUE DATE: 28/06/95

WJM 45611 - WJM4525 / S.A.R.

MATERIAL SAFETY DATA SHEET

SILICONE ADHESIVE REMOVER

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER:

WESMAR PRODUCTS, INC.
1440 N.W. 45th STREET
SEATTLE, WA 98107
(206) 782-8188

INFORMATION PHONE:

CHEMTREC 800-342-9300 (US) Day or night

EMERGENCY PHONE:

International Call Collect CHEMTREC 202-483-7616

Print Date: 9/5/2001

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: SILICONE ADHESIVE REMOVER

PRODUCT NUMBER: WM 4321 - WM 4325

DOT CLASS: Flammable Liquid

UN NUMBER: UN 1268

PREPARED BY: Patricia Rodabaugh

DATE PREPARED: 4/13/2001

LAST REVISION: 4/13/2001

SYNONYMS:

SECTION II - HAZARDOUS INGREDIENTS

Chemical Name	CAS #	Weight % OSHA PEL	ACGIH TLV
Solvent naphtha, mineral spirits	64762-887	50-58 100 ppm*	100 ppm*
Xylene	1320-20-7	1-2 100 ppm	100 ppm
Triethylbenzene, 1,2,4-	95-63-6	1-4 25 ppm	25 ppm
Toluene	108-88-3	42-48 200 ppm	50 ppm (skin)

SECTION III - PHYSICAL CHARACTERISTICS

BOILING POINT: 337

VAPOR PRESSURE: 1 mm @ 56 deg F

EVAPORATION: Slower than ether

POUNDS PER GALLON: 6.77

SOLUBILITY IN WATER: Solubility negligible in water

APPEARANCE AND ODOR: Colorless, clear liquid. Mild odor.

SECTION IV - FIRE/EXPLOSION

FLASH POINT: 75 F

LEL: 0.009 UEL: 0.07

FLASH POINT METHOD USED: Tag Closed Cup

EXTINGUISHING MEDIA:

Use water fog, "alcohol" foam, dry chemical, or CO2.

SPECIAL FIRE FIGHTING PROCEDURES:

WARNING: Flammable Liquid. Clear fire area of unprotected personnel. Do not enter confined fire space without full bunker gear, including a positive pressure NIOSH approved SCBA. Cool fire exposed containers with water.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

When heated above the flash point this material emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mist or spray may be flammable at temperatures below the flash point.

SECTION V - REACTIVITY DATA

STABILITY:

Stable

INCOMPATIBILITY:

Strong oxidizers.

HAZARDOUS DECOMPOSITION OR BY PRODUCTS:

Carbon monoxide and unidentified organic compounds may be formed during combustion.

HAZARDOUS POLYMERIZATION:

Will Not Occur

SECTION VI - HEALTH HAZARD DATA

ACUTE HEALTH EFFECT

EYE CONTACT: Liquid is moderately irritating to the eyes. High vapor concentrations may also be irritating.

INHALATION:

Vapors may be irritating to the nose, throat, and respiratory tract. High vapor concentrations may cause central nervous system (CNS) depression.

INGESTION:

Liquid is moderately toxic and may be harmful if swallowed; may produce CNS depression. Ingestion of product may result in vomiting, aspiration (breathing) of vomitus into the lungs must be avoided as even small quantities may result in aspir. pneumonia.

SKIN CONTACT:

Liquid is moderately irritating to the skin. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

SIGNS AND SYMPTOMS OF EXPOSURE:

Early to moderate CNS depression may be evidenced by giddiness, headache, lightheadedness, and nausea; in extreme cases, unconsciousness and death may occur. Aspiration pneumonia may be evidenced by coughing, labored breathing and cyanosis.

AGGRAVATED MEDICAL CONDITIONS:

May cause skin and liver disease, may attack respiratory tract. Laboratory studies have shown that petroleum distillates may cause kidney, liver, or lung damage. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

SUPPLEMENTAL HEALTH INFORMATION:

Male rats exposed for 90 days by inhalation to vapors of similar solvents showed evidence of kidney damage. The relevance of this effect to humans is unknown. In one of the studies a low grade anemia was also observed.

EMERGENCY FIRST AID PROCEDURES

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. If irritation persists, get medical attention.

INHALATION: Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Get medical attention.

INGESTION: DO NOT INDUCE VOMITING. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

SKIN CONTACT: Remove contaminated clothing/shoes. Flush skin with water. Follow by washing with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED:

WARNING: Flammable. Ventilate area of leak or spill. Remove all sources of ignition. Clean-up personnel require protective clothing and respiratory protection from vapors. Only specially trained or qualified personnel should handle the emergency.

WASTE DISPOSAL METHOD:

The preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Keep away from heat, sparks, and flame. Surfaces that are hot may ignite even liquid product in the absence of sparks or flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors are gone.

OTHER PRECAUTIONS:

KEEP OUT OF REACH OF CHILDREN! Empty containers retain product residue and can be dangerous. Do not pressure, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION:

If exposure may or does exceed occupational exposure limits (Sec. 2) use a NIOSH approved respirator to prevent overexposure. In accord with 29 CFR 1910.134 use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapors.

VENTILATION:

Provide adequate ventilation sufficient to keep the airborne concentration of this product below its exposure limits. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

PROTECTIVE GLOVES:

Test data indicate the best protection is provided by nitrone, nitrile, and natural rubber gloves.

EYE PROTECTION:

Use chemical safety goggles and/or full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work areas.

SILICONE ADHESIVE REMOVER

SILICONE ADHESIVE REMOVER

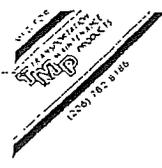
OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

Where splashing is possible, full chemically resistant protective clothing (e.g., acid suit) and boots are required.

WORK/HYGIENE PRACTICES:

Use good personal hygiene when handling this product. Wash hands after use, before eating, drinking, smoking, or using the toilet.

The information contained herein is based on the data available to us and is believed to be accurate. However, equipment or methods regarding the accuracy of these data or the results to be obtained from the use thereof, makes no warranty, assumes no responsibility for injuries from the use of this product described herein.



MATERIAL SAFETY DATA SHEET

COMMERCIAL PRODUCT NAME: Graytex Chipguard (white, black, clear)
PRODUCT CODE: UP 0721- 0723
PREPARATION: PAINT PRODUCT CONTAINING XYLENE MIXTURE OF ISOMERS

WESMAR PRODUCTS, INC.
 1440 N.W. 45th STREET
 SEATTLE, WA 98107
 (206) 782-8186

EMERGENCY TELEPHONE NO.: 1-800 340 7824

COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	LEVEL	SYMBOL	RISK
XYLENE	1330-20-7	Approx. 40%	Xn - Harmful	R10 R30/21 F03

HAZARD IDENTIFICATION

INHALATION: May cause drowsiness and irritation of respiratory tract.
SKIN: May cause irritation on prolonged contact, which can lead to dermatitis.
EYES: Irritation and soreness.
INGESTION: Sore throat, stomachache, nausea.

FIRST AID MEASURES

INHALATION: Move affected person to the fresh air without delay. If drowsiness persists seek medical attention.
SKIN CONTACT: Wash affected area with warm soapy water. Do not use solvents.
EYE CONTACT: Irrigate with copious quantities of water and seek medical attention immediately.
INGESTION: Do not induce vomiting, drink plenty of water and seek medical attention.

FIRE FIGHTING MEASURES

Fight fires with CO₂, dry powder, or chemical foam. Do not use water jets. Burning material emits toxic fumes and smoke, so avoid inhalation of burning products.

ACCIDENTAL RELEASE MEASURES

The product will readily flow. Contain and collect any spillage with sand or earth. Keep product away from drains. Avoid sources of ignition. Dispose of in accordance with the requirements of the Environmental Protection Act.

HANDLING AND STORAGE

HANDLING: Keep away from heat. Keep away from sources of ignition. Avoid contact with skin and eyes. Use only in well ventilated areas, and for extensive spraying, in a suitable booth.
STORAGE: Store in accordance with The Highly Flammable Liquids and Liquefied Petroleum Gases Regulations

EXPOSURE CONTROL/PERSONAL PROTECTION

A good standard of personal and industrial hygiene should be maintained at all times. Persons who suffer from skin complaints or other allergic effects should not work with the product.

OEL (UK)	Component	8 HUCTVA	10 mins STEL
	Xylene	100 ppm	150 ppm

EYE PROTECTION: Not necessary

PROTECTIVE CLOTHING: Recommended.

RESPIRATORY PROTECTION: Suitable respiratory protection necessary, when spraying in areas of poor ventilation.

SKIN PROTECTION: Barrier cream recommended.

PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White, grey, or black liquid
ODOUR: Characteristic of Xylene.
DENSITY: Approx 1.2.
FLASH POINT: Approx 24°C.
AUTOFLAMMABILITY TEMPERATURE: 490°C (Xylene).
EXPLOSIVE LIMITS: Lower 1.0% Upper 6.0% (Xylene).
VOLATILE CONTENT: Approx. 10%.
SOLUBILITY: Insoluble in water.
VISCOSITY: Approx 150 centipoise.

STABILITY AND REACTIVITY

Stable under normal conditions. Heat increase may be sufficient to raise the temperature above the product flash point. Thermal decomposition can give rise to acid fumes.

TOXICOLOGICAL INFORMATION

For Xylene, the following values have been reported:

An oral LD50 in rats of 4.1g/Kg.
LC50 in rats of 3000 ppm/4 hours.

ECOLOGICAL INFORMATION

Marine pollutant and non biodegradable.

Paints are low viscosity compositions which lose solvents by evaporation, leaving a relatively inert residue which will not degrade significantly.

DISPOSAL CONSIDERATIONS

The material and any contaminated container should be disposed of in accordance with the Environmental Protection Act.

TRANSPORT INFORMATION

SHIPPING NAME: PAINT.
UNITED NATION NO: UN 1263
CLASS NO: 3.3
HARMONISED SYSTEMS NO: 320899 00 00
PACKING GROUP: III.

Complies with The Carriage of Dangerous Goods by Road and Rail (Classification, Packaging, and Labelling) Regulations.

For current International Maritime Dangerous Goods Declaration, please contact our Export Department Telephone No. 414(0)181-115-0172.

REGULATORY INFORMATION

CONTAINS: Xylene.

SYMBOL: Xn. Harmful.

RISK PHRASES:

R10 Flammable.
R20/21 Harmful by inhalation and in contact with skin.
R38 Irritating to the skin.

SAFETY PHRASES:

S2 Keep out of reach of children.
S23 Do not breathe vapour/spray.
S25 Avoid contact with the eyes.
S51 Use only in well ventilated areas.

FURTHER INFORMATION

Reference should be made to the following official publications:-

EH40, COSHH Regulations, Environmental Protection Act.

WESMAR PRODUCTS, INC
1440 N.W. 45th STREET
SEATTLE, WA 98107
(206) 782-8189

PREPARATION: POLYESTER REPAIR PASTE CONTAINING STYRENE

STOCK NUMBER: UP 0717

STOCK NAME: Fibral Sandable Putty 1.3L

EMERGENCY TELEPHONE NO: 1-800 340 7824

COMPOSITION/INFORMATION ON INGREDIENTS

<u>COMPONENT</u>	<u>CAS NO.</u>	<u>LEVEL</u>	<u>SYMBOL</u>	<u>RISK</u>
STYRENE	100-42-5	11 - 25%	Xn - Harmful.	R10 R20 R36/38

HAZARDS IDENTIFICATION

INHALATION: May cause drowsiness and irritation of respiratory tract.
SKIN: May cause irritation on prolonged contact, redness.
EYES: Irritation and soreness.
INGESTION: Sore throat, stomachache, nausea.

FIRST AID MEASURES

INHALATION: Move affected person to the fresh air without delay.
If drowsiness persists seek medical attention.
SKIN CONTACT: Wash affected area with warm soapy water. Do not use solvents.
EYE CONTACT: Irrigate with copious quantities of water and seek medical attention immediately.
INGESTION: Do not induce vomiting, drink plenty of water and seek medical attention.

CONTAINS:

Styrene.

SYMBOL:

Xn Harmful.

RISK PHRASES:

R10 Flammable.
R20 Harmful by inhalation.
R36/38 Irritating to eyes and skin.

SAFETY PHRASES:

S2 Keep out of reach of children.
S3 Keep in a cool place.
S46 If swallowed seek medical advice immediately and show this container or label.
S51 Use only in well ventilated areas.

FURTHER INFORMATION

The main hazard likely to be encountered during finishing operations is the production of dust clouds. Dust from any source in the right concentrations must be regarded as a potential danger to health. It is, therefore, of paramount importance that dust clouds are kept to an absolute minimum.

Our filler pastes have been specially formulated to be rubbed down wet. When using this method the surface will air dry in less than 30 seconds. Many experts consider that this will result in a better finish and obviate the dust problem.

1. To avoid dust and get the best use from our products we suggest either of the following work methods:-

- (a) Take off excess bodyfiller with a sander incorporating a dust extractor and finish the job using wet and dry paper.
- (b) Take off excess bodyfiller with a body file, and then finish the job with wet and dry paper.

If the above mentioned methods are not used, airborne dust will be produced whilst rubbing down in the traditional way. Therefore, it is advisable that the rubbing down be carried out by personnel properly protected, i.e., wearing dust masks in an area separate from the main working area and, most important, properly ventilated - preferably by dust extractors.

2. Whilst none of our products contain any form of asbestos, any dusts emitted from sanding filler pastes can be classified as "Nuisance" dusts which, to the best of our knowledge have a long history of little adverse effects to human health when exposures are kept under reasonable control.

3. Please note, for repairs using glassfibre filled materials it should be unnecessary to sand them, if applied according to instructions. However, if sanding is deemed to be necessary, then we recommend the wearing of a suitable dust mask, particularly where mechanical means are used.

4. Mineral filler (which is a constituent of most body fillers). "in excessive quantities", is considered a moderate risk and, therefore, it is advisable to provide proper working methods/machinery to minimise the risk.

Reference should be made to the following official publications:-

EH40, EH42, EH44, C.O.S.H.H. Regulations, Environmental Protection Act, Toxicity Review Styrene.

ISSUE DATE: 30/08/94

MATERIAL SAFETY DATA SHEET

CG 1625
PRODUCT IDENTIFIER: CG 1625A GLASS CLNR (30:1 CONC)

SECTION 5 - HEALTH HAZARD DATA

ROUTE OF ENTRY: a) Skin b) Inhalation c) Eye contact

EFFECTS OF ACUTE EXPOSURE: a) Eyes - Can cause severe irritation, redness, tearing, and blurred vision. b) Skin - Prolonged or repeated contact can cause moderate reddening, swelling and possible skin damage. 2-Butoxyethanol is readily absorbed through the skin. c) Inhalation - Can cause mild to moderate irritation of the respiratory passages. 2-Butoxyethanol is readily absorbed by epithelial tissues of the lungs. d) Ingestion - Harmful or fatal if swallowed.

EFFECTS OF CHRONIC EXPOSURE: Overexposure to glycol ether has apparently been found to cause liver, lung and kidney damage, anemia and other blood abnormalities in laboratory animals.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to the product.

EMERGENCY AND FIRST AID PROCEDURES:

- SKIN - Wash skin with plenty of soap and water. If irritation develops, consult a physician.
- EYES - Immediately flush eyes with plenty of clear, running water for at least 15 minutes while carefully lifting the upper and lower lids. Get medical attention.
- INHALATION - If affected remove individual to fresh air. If breathing is difficult give oxygen. If breathing has stopped, administer artificial respiration. Keep person warm and quiet and get medical attention.
- INGESTION - Immediately drink two glasses of water and induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

GLOVES....: Impervious recommended
FOOTWEAR...: N/AP

RESPIRATOR...: NIOSH approved, if needed
CLOTHING....: N/AP

EYE....: Safety glasses
OTHER...: N/AP

VENTILATION: LOCAL EXHAUST: Below TLV(s) MECHANICAL (General): Explosion proof

WORK/HYGIENIC PRACTICES: Eye wash and safety shower should be easily accessible. Provide adequate ventilation. Wash thoroughly after handling and before eating, drinking or smoking. Remove contaminated clothing promptly and wash it before reuse.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Eliminate all ignition sources. Absorb on suitable absorbant and collect for disposal.

WASTE DISPOSAL METHOD: Contaminated absorbant may be disposed of according to local, state and federal regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep away from heat, sparks and open flames. Protect from physical damage and keep tightly closed. Do not store under freezing conditions or above 120° F.

MAINTENANCE PRECAUTIONS: Never use welding or cutting torch on or near containers. Ground all metal containers while pouring.

OTHER PRECAUTIONS: Empty containers retain product residue and vapors. Always obey hazard warnings.

SECTION 8 - REGULATORY INFORMATION

This product contains the following chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372:

Glycol ethers (category) 10-30%

KEEP OUT OF REACH OF CHILDREN

N/AP - Not Applicable

N/AV - Not Available

ITEM NUMBER: CA 1314

TRADE NAME/SYNONYMS: Aerosol Glass Cleaner
CHEMICAL NAME/SYNONYMS: Complex Mixture
CHEMICAL FAMILY: Automotive Reconditioning Product
FORMULA: Proprietary
PRODUCT CODE: E009
SHIPPING INFORMATION: ORM D

MANUF/DIST: WORLD WIDE CHEMICALS, INC.
1910 South State St
Indianapolis, IN 46203
EMERGENCY PHONE: 317-788-9925
PREPARATION/REVISION DATE: 07-90

PREPARER/CONTACT: GAYLE PAMMEYER/QUALITY AND MSDS COORDINATOR

Table with 4 columns: Health/Flammability/Reactivity/Protection, HMIS Rating, and other hazard indicators.

SECTION 1 - HAZARDOUS INGREDIENTS

THIS PRODUCT CONTAINS HAZARDOUS INGREDIENTS: YES

Table with 4 columns: Chemical/Common Name, CAS-Number, PEL-OSHA, TLV-ACGELH. Lists 2-Butoxyethanol, Butane, Propane, and 2-Propanol.

THIS PRODUCT CONTAINS CARCINOGENS (NTP, IARC, OR OSHA): NO

SECTION 2 - HEALTH HAZARD DATA

HEALTH EFFECTS (Acute and Chronic)-

- Acute:
a) Eyes - Can cause severe irritation, redness, tearing, and blurred vision.
b) Skin - Prolonged or repeated contact can cause moderate reddening, swelling, and possible skin damage.
c) Inhalation - Breathing of dust or mist can cause mild to severe irritation of nasal or respiratory passages.
d) Ingestion - Can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic:
Overexposure to glycol ether (in its pure state) has apparently been found to cause anemia, liver abnormalities, kidney damage, lung damage, and blood abnormalities in laboratory animals.

PRIMARY ROUTES OF ENTRY- a) Skin b) Inhalation

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Pre-existing skin, eye and respiratory disorders may be aggravated by exposure to product.

EMERGENCY AND FIRST AID PROCEDURES

- a) SKIN - Wash with soap and water. Remove contaminated clothing and shoes. Wash before reuse.
b) EYES - In case of contact, immediately flush eyes with plenty of water. Consult a physician.
c) INHALATION - If affected, remove individual to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep person warm, quiet, and get medical attention.
d) INGESTION - Do not induce vomiting. Call physician immediately. If conscious give lots of water or milk. Do not give anything by mouth to an unconscious or convulsing person.

SECTION 3 - CHEMICAL DATA

BOILING POINT (F): 200
VAPOR PRESSURE (mmHg): 20
VAPOR DENSITY (AIR=1): <1
PH: N/E
SPECIFIC GRAVITY (WATER=1): 0.98
PERCENT VOLATILE BY VOLUME: >80.0
EVAPORATION RATE (BUTYL ACETATE=1): <1
SOLUBILITY IN WATER: Soluble

APPEARANCE AND ODOR INFORMATION-
White liquid with pleasant odor.
ODOR THRESHOLD-
N/A

SECTION 4 - PHYSICAL HAZARD DATA

FLASH POINT (Method Used): 101 F(TCC)
FLAMMABLE LIMITS: LEL= 2 UEL= 12

EXTINGUISHING MEDIA -
Foam, dry chemical, carbon dioxide, water.

SPECIAL FIRE FIGHTING PROCEDURES-
Keep containers cool with water spray. Use shielding to protect personnel against bursting, rupturing or venting containers.

UNUSUAL FIRE AND EXPLOSION HAZARDS-
Do not expose aerosols to temperatures above 130 F. Containers may burst.

INCOMPATIBILITY (Materials to avoid)-
None

HAZARDOUS DECOMPOSITION PRODUCTS-
Oxides of carbon may be formed upon combustion.

WILL HAZARDOUS POLYMERIZATION OCCUR-
No.
CONDITIONS TO AVOID FOR POLYMERIZATION
N/A

IS THE PRODUCT STABLE-
Yes
CONDITIONS TO AVOID FOR STABILITY
N/A

WESMAR PRODUCTS, INC.
1440 N. W. 45TH STREET
SEATTLE WA 98107

SECTION 6 - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED-
Absorb spills on suitable absorbant and collect in DOT approved containers for disposal. Keep product out of sewers, storm drains, surface waters and soil.

WASTE DISPOSAL METHODS-

Dispose of contaminated product and materials used in spill clean up according to local, state and federal regulations for glycol ethers.

SECTION 6 - EXPOSURE CONTROL INFORMATION

VENTILATION-

LOCAL EXHAUST: Below TLV(s)

MECHANICAL (General): Explosion Proof

RESPIRATORY PROTECTION-

If TLV of the product or any component is exceeded, a NIOSH/MSHA jointly approved air supplied respirator is advised in absence of proper environmental control.

PROTECTIVE GLOVES-

Wear resistant gloves such as nitrile rubber, PVC, etc.

EYE PROTECTION-

Chemical splash goggles are strongly advised.

OTHER PROTECTIVE EQUIPMENT-

To prevent repeated and prolonged skin contact, wear impervious clothing and boots.

WORK PRACTICES-

Eye wash fountain and safety shower should be easily accessible. Discard properly such items as rags and trash soaked with the product. Provide adequate ventilation.

HYGIENIC PRACTICES-

Wash thoroughly after handling and before eating, drinking or smoking. Remove contaminated clothing promptly and wash thoroughly before reuse.

SECTION 7 - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE-

- Do not store under freezing conditions or above 120 degrees F.
- Protect from physical damage and keep tightly closed.
- Do not store near acids or acidic materials and oxidizers.

MAINTENANCE PRECAUTIONS-

When working with flammable material electrically ground all equipment and use only non-sparking tools.

OTHER PRECAUTIONS-

Containers, drums, etc. that have been emptied, will retain product residue and vapors. All MSDS hazard warnings.

SECTION 8 - REGULATORY INFORMATION

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III

This product contains the following chemicals subject to the reporting requirements of SARA Title III, Section 313:

2-Butoxyethanol CAS No. 111-76-2 <5%

KEEP OUT OF REACH OF CHILDREN



MATERIAL SAFETY DATA SHEET

COMMERCIAL PRODUCT NAME: Dolphin Pourable Putty (15 oz & 30 oz)

PRODUCT CODE: UP 0713 & UP 0714

PREPARATION: POLYESTER REPAIR PASTE CONTAINING STYRENE

WESMAR PRODUCTS, INC.
 1440 N.W. 45th STREET
 SEATTLE, WA 98107
 (206) 782-8186

EMERGENCY TELEPHONE NO.: 1-800-340-7824

COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	LEVEL	SYMBOL	RISK
STYRENE	100-42-5	11 - 25%	Xn - Harmful	R10 R20 R50/53

HAZARD IDENTIFICATION

INHALATION: May cause drowsiness and irritation of respiratory tract.

SKIN: May cause irritation on prolonged contact, redness.

EYES: Irritation and soreness.

INGESTION: Sore throat, stomachache, nausea.

FIRST AID MEASURES

INHALATION: Move affected person to the fresh air without delay. If drowsiness persists seek medical attention.

SKIN CONTACT: Wash affected area with warm soapy water. Do not use solvents.

EYE CONTACT: Irrigate with copious quantities of water and seek medical attention immediately.

INGESTION: Do not induce vomiting, drink plenty of water and seek medical attention.

FIRE FIGHTING MEASURES

Fight fires with CO₂, dry powder, or chemical foam. Do not use water jets. Burning material emits toxic fumes and smoke, so avoid inhalation of burning products.

ACCIDENTAL RELEASE MEASURES

The product does not readily flow. Any spillage should be wiped or scraped away. Keep product away from drains. Avoid sources of ignition. Dispose of in accordance with the requirements of the Environmental Protection Act.

HANDLING AND STORAGE

HANDLING: Keep away from heat. Keep away from sources of ignition. Avoid contact with skin and eyes. Use only in well-ventilated areas.

STORAGE: Store below 25°C in a dry, well-ventilated space in original closed containers.

EXPOSURE CONTROLS/PERSONAL PROTECTION

A good standard of personal and industrial hygiene should be maintained at all times. Persons who suffer from skin complaints or other allergic effects should not work with the product.

OEL (UK)	Component Styrene	8 HR TWV	100 ppm	10 min)	STEL	250 ppm
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EYE PROTECTION: Not necessary

PROTECTIVE CLOTHING: Recommended

RESPIRATORY PROTECTION: Dust particle mask approved to FF-P1SD-EN149 (when handling cured product)

SKIN PROTECTION: Barrier cream recommended

PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Putty like consistency

ODOUR: Slightly pungent, characteristic of Styrene

DENSITY: 1.13 - 1.85

FLASH POINT: 32°C (Styrene)

AUTOFLAMMABILITY TEMPERATURE: 490°C (Styrene)

EXPLOSIVE LIMITS: Lower 1.1% Upper 6.1% (Styrene)

VOLATILE CONTENT: 11 - 25%

SOLUBILITY: Insoluble in water

VISCOSITY: Approx. 5000,000 - 1,000,000 centipoises

STABILITY AND REACTIVITY

Can polystyrene (solidify) if subjected to elevated temperatures over a period of time, exposed to UV/sunlight, or by the addition of free radical initiators e.g., organic peroxide. Heat increase may be sufficient to raise the temperature above the product flash point. Thermal decomposition can give rise to acid fumes. Polymerisation in a closed container can give rise to pressure which may rupture the vessel.

TOXICOLOGICAL INFORMATION

For Styrene, the following values have been reported:-

An oral LD50 in rats of 5g/kg
LC50 in rats ranging between 2770 - 6000ppm

Styrene odour is detectable at 25ppm. At 200-400ppm there is a transient irritant effect on nasal passages. At 400-1000ppm increasing systematic effects such as dizziness, nausea and headache at 800ppm and over becomes intolerable to mucous membranes. At 10000ppm and over may cause death in less than one hour.

There is no evidence that Styrene is carcinogenic in humans.

ECOLOGICAL INFORMATION

Marine pollutant and non biodegradable.

Filler pastes are viscous compositions which lose solvents by evaporation of polymerisation, leaving a relatively inert residue which will not degrade significantly.

DISPOSAL CONSIDERATIONS

The uncured material and any contaminated container should be disposed of in accordance with the Environmental Protection Act.

TRANSPORT INFORMATION

SHIPPING NAME: POLYESTER RESIN KIT.

UNITED NATION NO: UN 3269.

CLASS NO: 3.1.

HARMONISED SYSTEMS NO: 321410 00 20

PACKING GROUP: III.

Complies with The Carriage of Dangerous Goods by Road and Rail (Classification, Packaging and Labelling) Regulations.

For current International Maritime Dangerous Goods Declaration, please contact our Export Department Telephone No. 44-40181-445-9372.

REGULATORY INFORMATION

CONTAINS:

Styrene

Xn Harmful

R10 Flammable

R20 Harmful by inhalation.

R36/38 Irritating to eyes and skin

S2 Keep out of reach of children

S3 Keep in a cool place.

S46 If swallowed seek medical advice immediately and show this container or label

S51 Use only in well ventilated areas

SYMBOL:

RISK PHRASES:

SAFETY PHRASES:

FURTHER INFORMATION

The main hazard likely to be encountered during finishing operations is the production of dust clouds. Dust from any source in the right concentrations must be regarded as a potential danger to health. It is, therefore, of paramount importance that dust clouds are kept to an absolute minimum.

Our filler pastes have been specially formulated to be rubbed down wet. When using this method the surface will air dry in less than 30 seconds. Many experts consider that this will result in a better finish and obviate the dust problem.

To avoid dust and get the best use from our products we suggest either of the following work methods -

(a) Take off excess bodyfiller with a sander incorporating a dust extractor and finish the job using wet and dry paper.

(b) Take off excess bodyfiller with a body file, and then finish the job with wet and dry paper. If the above mentioned methods are not used, airborne dust will be produced whilst rubbing down in the traditional way. Therefore, it is advisable that the rubbing down be carried out by personnel properly protected, i.e., wearing dust masks in an area separate from the main working area and, most important, properly ventilated - preferably by dust extractors.

Whilst none of our products contain any form of asbestos, any dusts emitted from sanding filler pastes can be classified as "Nuisance" dusts which, to the best of our knowledge have a long history of little adverse effects to human health when exposures are kept under reasonable control.

Please note, for repairs using glassfibre filled materials it should be unnecessary to sand them, if applied according to instructions. However, if sanding is deemed to be necessary, then we recommend the wearing of a suitable dust mask, particularly where mechanical means are used.

Mucral filler (which is a constituent of most body fillers) "in excessive quantities", is considered a moderate risk and, therefore, it is advisable to provide proper working methods/machinery to minimise the risk. Reference should be made to the following official publications:-

E140, E142, E144, C O S 1111, Regulations, Environmental Protection Act, Toxicity Review Styrene.

ISSUE NUMBER: 0001

ISSUE DATE: 28/03/96

**Material Safety Data Sheet
SUPREME RED**

WESMAR CO. INC.

5720 204TH ST. SW
LYNNWOOD, WA 98036
(206) 783-5344

DATE PREPARED: MAR 1, 2006

DATE REVISED: MAR 1, 2011

24 HOUR EMERGENCY PHONE NUMBER

PERS: 1-800-633-8253

SECTION I – IDENTIFICATION

PRODUCT NAME: SUPREME RED
CHEMICAL FAMILY: MILDLY ALKALINE MATERIAL
FORMULA: N/A
CAS NUMBER: N/A

SECTION II – HAZARDOUS IDENTIFICATION

EMERGENCY OVERVIEW:

EYES:..... May cause severe eye irritation with possible permanent eye damage and impairment of vision.

SKIN (DERMAL):..... Prolonged and/or repeated exposure to concentrated product may result in irritation to the skin.

SWALLOWING (INGESTION): May cause severe gastrointestinal irritation and/or ulceration of the mouth and throat. Single dose oral LD50 has not been determined.

INHALATION:..... Vapors and mist may cause respiratory tract irritation.

MEDICAL CONDITION AGGRAVATED

BY EXPOSURE:..... Existing skin and/or respiratory disorders may be aggravated by exposure.

CHRONIC OVEREXPOSURE:.. None known

OSHA REGULATORY STATUS: Since this product is a mixture, there is no defined PEL's (Personal Exposure Limits) established by OSHA. ACGIH TLV's (Threshold Limit Values) for hazardous components are listed in the Hazardous Ingredients Section of this MSDS.

SECTION III – COMPOSITION INFORMATION ON INGREDIENTS

THRESHOLD LIMIT VALUE:.. The TLV in section in section III is the ACGIH/TLV-TWA (threshold limit value/time weighted average concentration for an eight hour work day). The STEL is the short term exposure limit and the (Ceil) is the ceiling limit.

HAZARDOUS INGREDIENT	PERCENT	CAS NO.	ACGIH/TWA	STEL/TLV
Sodium dodecylbenzene sulfonate	5-10	27176-87-0	NOT EST.	NOT EST.

(Also contains biodegradable surfactant(s), fragrance and dye.)

SECTION IV – FIRST AID DATA

EYES:..... In case of contact, immediately flush eyes with lots of running water for at least 15 minutes. Call for medical assistance.

Material Safety Data Sheet
SUPREME RED

SKIN (DERMAL):..... Wash skin with soap and water. Rinse with plenty of water. Remove and launder contaminated clothing before reuse.

SWALLOWING (INGESTION): NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. (If available, give several glasses of milk) If vomiting occurs spontaneously, keep airway clear and give more water. GET MEDICAL ATTENTION IMMEDIATELY.

INHALATION:..... Remove to fresh air. Give artificial respiration if not breathing. Obtain medical attention.

SECTION V – FIRE FIGHTING MEASURES

FLASHPOINT:..... Non flammable, non combustible

LOWER EXPLOSIVE LIMIT:... N/A

UPPER EXPLOSIVE LIMIT:..... N/A

EXTINGUISHING MEDIA:..... Use extinguishing media appropriate to primary cause of fire.

SPECIAL FIRE FIGHTING PROCEDURES:..... Avoid contact with fire fighting personnel as burns may result from contact with skin. when fighting a fire near or involving this product, wear a self-contained breathing apparatus. (SCBA)

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known

SECTION VI – ACCIDENTAL RELEASE MEASURES

SPILL/ LEAK PROCEDURES:.. Appropriate protective clothing must be worn by trained cleanup personnel. Dilute with large quantities of water and dispose in waste water treatment facilities. Check with local authorities first.

SECTION VII – HANDLING AND STORAGE

HANDLING INFORMATION:... Do not take internally. May be harmful if swallowed. Keep out of reach of children.

STORAGE REQUIREMENTS:.. Keep containers tightly closed when not in use. Empty container completely and dispose of in accordance with applicable regulations. **SPILLS:** Contain spill. Absorb with inert material and dispose in accordance with applicable regulations. Store away from food products.

SECTION VIII – EXPOSURE CONTROLS / PERSONAL PROTECTION

EYE PROTECTION:..... Chemical safety goggles. Contact lenses should not be worn when working with any chemicals.

RESPIRATORY PROTECTION: Respiratory protection should be worn if levels exceed defined PEL's for this product or any hazardous component listed in the Hazardous Ingredient Section of this MSDS.

OTHER PROTECTIVE EQUIPMENT: Rubber gloves, coveralls and protective footwear.

Material Safety Data Sheet
SUPREME RED

VENTILATION:..... Local exhaust sufficient to maintain TLV below permissible exposure limits.

SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:..... Clear red viscous liquid with pleasant odor.
BOILING POINT:..... Approx. 212° F.
VAPOR PRESSURE:..... NOT EST.
VAPOR DENSITY (AIR=1):..... NOT EST.
SPECIFIC GRAVITY:..... 1.02
pH:..... 9.0 - 9.9 AS IS
SOLUBILITY IN WATER:..... Completely soluble in water.

SECTION X – STABILITY AND REACTIVITY DATA

STABILITY: Stable
HAZARDOUS
POLYMERIZATION:..... Will not occur
INCOMPATIBILITY: Strong oxidizing agent, strong acids.
HAZARDOUS
DECOMPOSITION: Carbon monoxide and carbon dioxide upon thermal decomposition.

SECTION XI – TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: Acute Oral Effects: Not determined. Acute toxicity via the oral route is expected to be low. Acute Dermal Effects: Not determined. Acute toxicity via the dermal route is expected to be low.

SECTION XII – ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No data available on the adverse effects of this material on the environment. Neither COD nor BOD data are available.

SECTION XIII – DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:..... Consult all LOCAL, STATE, and FEDERAL regulations with regard to proper and suitable disposal methods.

SECTION XIV – TRANSPORTATION INFORMATION

PROPER SHIPPING NAME: N/A
HAZARD CLASS AND LABEL: NON HAZARDOUS
UN NUMBER: N/A

Material Safety Data Sheet
SUPREME RED

PACKAGING GROUP:N/A

SECTION XV – REGULATORY INFORMATION

LISTED CARCINOGEN: None known
TSCA STATUS: All components in this product are listed on the TSCA inventory.
SARA SECTION 313: This product does not contain any EPCRA section 313 chemicals subject to the reporting requirements of section 313 of the Emergency Planning Community Right-To-Know Act of 1986 (40CFR 372):
NFPA HEALTH: 2
NFPA FLAMMABILITY: 0
NFPA REACTIVITY: 0

SECTION XVI – OTHER INFORMATION

REFERENCES: The information contained herein has been compiled from sources believed to be reliable and accurate to the best of our knowledge at this date. It is provided without warranty, expressed or implied, as to the results of use of this information or to the product to which it relates. Wesmar Co. assumes no responsibility for injury to any person or property resulting from any use of the material. Each user assumes the risk in their use of this product and should review the data and recommendations in the specific context of their intended use.

FOOT NOTES: NOT EST. = Not Established, N/A = Not Applicable, (Ceil) = TLV ceiling limit.

UP 0791

UPOL PRODUCTS

WESMAR PRODUCTS, INC.
1440 N.W. 45th STREET
SEATTLE, WA 98107
(206) 782-8188

PRODUCT SAFETY DATA SHEET

COMMERCIAL PRODUCT NAME:

UPOL "HIGH 5" AEROSOL

PREPARATION:

PRODUCT CONTAINING MIXTURE OF SOLVENTS

EMERGENCY TELEPHONE NO.:

1-800-424-9300(CHEMIREC)
1-703-527-3887(CHEMIREC)

INTERNATIONAL)

SANDERS AND ASSOCIATES INC.,
Three Werner Way,
Suite 300
Lebanon NJ 08833
U.S.A.

FAX NO.:

1-800-787-5150

COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	LEVEL	SYMBOL	RISK
XYLENE	1330-20-7	5 - 10%	Xn - Harmful.	R10 R20/21 R38
ACETONE	67-64-1	25 - 50%	F - Highly flammable	R11
BUTANE	106-97-8	10 - 25%	F+ - Extremely flammable	R12
PROPANE	74-98-6	10 - 25%	F+ - Extremely flammable	R12
AROMATIC HYDROCARBON	64742-95-6	1 - 5%	Xn - Harmful	R10

HAZARDS IDENTIFICATION

INHALATION:

May cause drowsiness and irritation of respiratory tract.

SKIN:

May cause irritation on prolonged contact, which can lead to dermatitis.

EYES:

Irritation and soreness.

INGESTION:

Sore throat, stomachache, nausea, but unlikely to be ingested.

FIRST AID MEASURES

INHALATION:

Move affected person to the fresh air without delay. If drowsiness persists seek medical attention.

SKIN CONTACT:

Wash affected area with warm soapy water. Do not use solvents.

EYE CONTACT:

Irrigate with copious quantities of water and seek medical attention immediately.

INGESTION:

Do not induce vomiting, drink plenty of water and seek medical attention.

FIRE FIGHTING MEASURES

Fight fires with CO₂, dry powder, or chemical foam. Do not use water jets. Burning material emits toxic fumes and smoke, so avoid inhalation of burning products.

ACCIDENTAL RELEASE MEASURES

The product will readily flow. Contain and collect any spillage with sand or earth. Keep product away from drains. Avoid sources of ignition. Dispose of in accordance with the requirements of the Environmental Protection Act.

HANDLING AND STORAGE

HANDLING:

Keep away from heat. Keep away from sources of ignition. Avoid contact with skin and eyes. Use only in well ventilated areas, and for extensive spraying, in a suitable booth.

STORAGE:

Store below 25°C in a dry well ventilated space in original containers. Keep away from sources of heat.

EXPOSURE CONTROL/PERSONAL PROTECTION

A good standard of personal and industrial hygiene should be maintained at all times. Persons who suffer from skin complaints or other allergic effects should not work with the product.

OEL (UK)	Component	8 HR TV/A	15 mins STEL
	Xylene	100 ppm	150 ppm
	Butane	600 ppm	750 ppm
	Acetone	750 ppm	1500 ppm

EYE PROTECTION:

Not necessary.

PROTECTIVE CLOTHING:

Recommended.

RESPIRATORY PROTECTION:

Suitable respiratory protection necessary, when spraying in areas of poor ventilation.

SKIN PROTECTION:

Barrier cream recommended.

PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:

Beige liquid.

ODOUR:

Characteristic of Acetone.

DENSITY:

N/A.

FLASH POINT:

-40°C.

AUTOFIAMMABILITY TEMPERATURE:

>250°C.

EXPLOSIVE LIMITS:

Lower 0.8%. Upper 13.0%.

REGULATORY INFORMATION

VOLATILE CONTENT: Approx. 40%
SOLUBILITY: Insoluble in water.
VISCOSITY: N/A.
CONTAINS: Mixture of solvents.
SYMBOL: F+ Extremely flammable.
RISK PHRASES: N/A.
SAFETY PHRASES: S2 Keep out of reach of children.
S23 Do not breathe vapour/spray.
S25 Avoid contact with the eyes.
S51 Use only in well ventilated areas.
Pressurised container, protect from sunlight and do not expose to temperatures exceeding 50°C.
Do not pierce or burn even after use.
Do not spray on a naked flame or any incandescent material.

FURTHER INFORMATION

Reference should be made to the following official publications:-
EH40, COSHH Regulations, Environmental Protection Act.

ISSUE NUMBER: 0001

ISSUE DATE: 08/03/2000

STABILITY AND REACTIVITY

Stable under normal conditions. A void naked flames. Heat increase may be sufficient to raise the temperature above the product flash point. Thermal decomposition can give rise to acid fumes.

TOXICOLOGICAL INFORMATION

For Xylene, the following values have been reported:-

An oral LD50 in rats of 4.3g/Kg.
LC50 in rats of 5000 ppm/4 hours.

For Acetone, the following values have been reported:-

An oral LD50 in rats of 5.8g/Kg.
LC50 in rats of 50mg/L.

ECOLOGICAL INFORMATION

Marine pollutant and non biodegradable.

Paints are low viscosity compositions which lose solvents by evaporation, leaving a relatively inert residue which will not degrade significantly.

DISPOSAL CONSIDERATIONS

The material and any contaminated container should be disposed of in accordance with the Environmental Protection Act.

TRANSPORT INFORMATION

SHIPPING NAME: AEROSOLS.
UNITED NATION NO: UN 1950.
CLASS NO: 2.1
HARMONISED SYSTEMS NO: 320890 91 5.
PACKING GROUP: Not allocated.

Complies with The Carriage of Dangerous Goods by Road and Rail (Classification, Packaging and Labelling) Regulations.

For current International Maritime Dangerous Goods Declaration, please contact our Export Department
Telephone No: 44-(0)208 492 5950.

MATERIAL SAFETY DATA SHEET

EMERGENCY PHONE: 1-800-424-9300 (CHEMTREC)
 Date Prepared : 12/03/98
 Supersedes : 03/21/96
 Prepared by : DREW O'BRIEN
 TECHNICAL SERVICES SPECIALIST

	HMIS RATING
HEALTH 1	4 = SEVERE
FLAMMABILITY ... 1	3 = SERIOUS
REACTIVITY 0	2 = MODERATE
PROTECTION X	1 = SLIGHT
	0 = MINIMAL
	X = SEE SECTION 6

PRODUCT IDENTITY V.L.C.D.
 PRODUCT CODE NUMBER TM 1301-TM 1305
 PRODUCT USE AUTOMOTIVE RECONDITIONING PRODUCT
 DOT HAZARD CLASSIFICATION : NOT REGULATED

SECTION 1 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	CAS NUMBER	Wgt. %	PEL-OSHA	EXPOSURE LIMITS TLV-ACGIH	OTHER	CARCINOGEN	NOTE
GLYCERINE (mist)	56-81-5	1-5	10 mg/m ³	10 mg/m ³	N/AV	NO	
ALKYLPHENOXYPOLYETHOXYETHANOL	MIXTURE	1-5	N/AV	N/AV	N/AV	NO	

SECTION 2 - PHYSICAL AND CHEMICAL CHARACTERISTICS

PHYSICAL STATE LIQUID
 ODOR AND APPEARANCE : MILKY BLUE LIQUID, CHERRY ODOR
 SPECIFIC GRAVITY (water=1): >1
 SOLUBILITY IN WATER DISPERSIBLE

VAPOR PRESSURE (mmHg)... <20
 VAPOR DENSITY (Air=1)... >1
 ODOR THRESHOLD N/AV
 EVAPORATION RATE (ETHER=1): SLOWER

pH 10
 BOILING POINT (F).... >212
 FREEZING POINT (F)... 32

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (F) AND METHOD...: N/AP
 FLAMMABLE LIMITS: LEL = N/AP UEL = N/AP
 EXTINGUISHING MEDIA: Use alcohol foam, water fog, carbon dioxide or dry chemical.
 SPECIAL FIRE FIGHTING PROCEDURES: None
 UNUSUAL FIRE AND EXPLOSION HAZARDS: Product is not a fire hazard, but its residue may burn after water evaporates.

SECTION 4 - REACTIVITY DATA

IS THE PRODUCT STABLE? YES
 CONDITIONS TO AVOID FOR STABILITY: Strong oxidizing agents.
 INCOMPATIBILITY (Materials to Avoid): Avoid contact with strong oxidizing agents such as chlorine, permanganate, etc.
 HAZARDOUS DECOMPOSITION PRODUCTS....: Oxides of carbon, silicon, nitrogen, traces of hydrocarbons and acrolein.
 WILL HAZARDOUS POLYMERIZATION OCCUR? NO
 CONDITIONS TO AVOID FOR POLYMERIZATION: N/AP

KEEP OUT OF REACH OF CHILDREN

N/AP - Not Applicable

N/AV - Not Available

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFIER: V.L.C.D. TM 1301-TM 1305

SECTION 5 - HEALTH HAZARD DATA

ROUTE OF ENTRY: a) Skin b) Inhalation c) Eye contact

EFFECTS OF ACUTE EXPOSURE: a) Eyes - May cause mild irritation. b) Skin - Prolonged or repeated contact can cause irritation, defatting and dermatitis. c) Inhalation - Can cause slight irritation of the respiratory passages. d) Ingestion - Can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

EFFECTS OF CHRONIC EXPOSURE: Overexposure to high concentrations of mist may increase susceptibility to respiratory illness.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing eye skin and respiratory disorders may be aggravated by exposure to the product.

EMERGENCY AND FIRST AID PROCEDURES:

- a) SKIN - Wash with plenty of soap and water. If irritation develops, consult a physician.
- b) EYES - Immediately flush with plenty of clear, running water for at least 15 minutes. Get medical attention.
- c) INHALATION - If affected, remove individual to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, administer artificial respiration. Keep person warm and quiet, and get medical attention.
- d) INGESTION - Call a poison control center or physician immediately. Do not induce vomiting. Immediately drink two glasses of milk or water. Never give anything by mouth to an unconscious or convulsing person.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

GLOVES.....: Recommend impervious
FOOTWEAR...: N/AP

RESPIRATOR...: NIOSH-Approved, if needed
CLOTHING....: N/AP

EYE.....: Safety glasses
OTHER...: Splash goggles, if needed

VENTILATION: LOCAL EXHAUST: Below TLV MECHANICAL (General): Explosion proof

WORK/HYGIENIC PRACTICES: Eye wash and safety shower should be easily accessible. Provide adequate ventilation. Wash thoroughly after handling and before eating, drinking or smoking. Remove contaminated clothing promptly and launder before reuse.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Absorb small spills on suitable absorbent, and collect for disposal. Dike large spills and pump liquid to salvage tank. Absorb remaining liquid on suitable absorbent and collect for proper disposal.

WASTE DISPOSAL METHOD: Dispose of contaminated absorbent in accordance with local, state and federal regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep away from heat, sparks and open flames. Protect from physical damage and keep tightly closed. Do not store under freezing conditions or above 120 degrees F.

MAINTENANCE PRECAUTIONS: None

OTHER PRECAUTIONS: Empty containers retain product residue and vapors. Always obey hazard warnings.

SECTION 8 - REGULATORY INFORMATION

This product contains the following chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372:

NONE

KEEP OUT OF REACH OF CHILDREN

N/AP - Not Applicable

N/AV - Not Available

BUILDINGS 592 (TRIDENT SEAFOODS)

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

Date 06/19/13 Time: 9:50

Address: 401 Alexander Ave. Building 592 Tacoma, WA 98421

Building Owner: Port of Tacoma

Occupant Name: Trident Seafoods

Contact Name: Mark Schneider Telephone (home):253-502-5318 Telephone (work): Cell:

How long has owner/tenant/occupant/resident occupied building? 13 years

Occupation: Ship repair and maintenance

Number of Occupants Adults: 75-300 Ages: Children: Ages:

BUILDING CONSTRUCTION CHARACTERISTICS:

Building Use: Residential Commercial/Industrial X School/Institutional

Building Type: One story Two story X Apartment (# of units) Condominium (# of units) Other

General Description of Building Construction Materials: Brick, Siding, Wood, Stone, Stucco, Metal, Other Metal

Year Constructed: 1911

GARAGE: Do you have an attached garage? Yes No

Has the building been weatherized with any of the following? Insulation, Storm Windows, Energy-Efficient Windows, Other (specify) No

What type of basement does the building have?

Table with 5 columns: None, Finished, Unfinished, Depth below reference point (meters), and checkboxes for Partial, Full, Crawl space.

Number of floors at or above grade: 2

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

Depth of basement below grade: _____ ft. Basement Size: _____ ft²
Foundation construction: Poured concrete Cinder block Stone
Any visual evidence of leakage through basement walls or floor
Floor Construction: Poured concrete Wood Earth Brick Other: _____
Floor condition (cracks, drains): Cracks on floor/good

Condition at floor/wall joint (if visible): Good

Any exterior openings from the basement: NA

- Vents
- Fans
- Windows
- Wall openings
- Utility pipe penetrations
- Other: _____

Type of ground cover outside of building: grass / concrete / asphalt / other (specify): _____

Sub-slab vapor/moisture barrier in place? Yes / No / Don't know

Type of barrier: _____

Do you have a sump?: Yes No

Where: _____

If yes, sealed open NA

If yes, is there water in the sump?: Yes No

Is building serviced with municipal water? Yes No

Do you have a water well?: Yes No Don't know

Well location: _____

Do you drink the water obtained from the well? _____

What do you use the well for?: _____

Do you have a cistern?: Yes No

If yes, describe its location: _____

Do you have a septic system?: Yes No If Yes is it still active Yes No

If yes, describe its location: _____

If yes, describe how septic system is cleaned: _____

Have there ever been a fire in the building?: Yes No

If yes, describe its location and extent: _____

Is there a laundry room located inside the house?: Yes No

If yes, describe its location: NA

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

Is there a Radon System in the building: Yes No NA

HEATING AND VENTILATION SYSTEM(S) PRESENT:

What type of heating system(s) is/are used in the building?

Hot Air Circulation Heat Pump Steam Radiation Wood Stove
Hot Air Radiation Unvented Kerosene heater Electric Baseboard Other (specific)

Where are they located? Pump on 2nd floor/no warehouse heating

Is there outside air vent for heating system? Yes

What type(s) of fuel(s) are used in this building?

Natural Gas Electric Coal Other (specific) Propane
Fuel Oil Wood Solar

What type of mechanical ventilation systems are present and/or currently operating in the building? Chrome welding fumes

Central Air Conditioning Mechanical Fans Bathroom Ventilation
Fan Kitchen Range Hood Open Windows
Individual Air Conditioning Units Air-to-Air Heat Exchanger Other (specify)

Where are they located? Office building

Do you have a fireplace? Yes No
Does the fireplace have an outside combustion air vent? Yes No

SOURCES OF CHEMICAL CONTAMIANTS

- 1. When was the last time dry-cleaned clothes were brought into the building?
 0 to 5 days ago 6 to 10 days ago More than 10 days ago Don't dry-clean
- 2. How recently were the carpets installed?
 In the last six months More than six months ago No Carpet
- 3. When was the last time the carpet was cleaned?

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

In the last six months More than six months ago Never

4. Was there any recent remodeling or painting done in the building?

Yes No Details: 4 years ago/purchasing dept.

5. Are there any pressed wood products in the building (e.g., hardwood plywood wall paneling, particleboard, fiberboard)? NA

6. Are there any new upholstery, drapes, or textiles in the building? NA

7. Do you have any spot removers in the building?

Yes No Details: _____

8. Are there any hobbies include model building, arts and crafts, model railroading, or others that require paints, thinners, or glue undertaken in the building?

Yes No Details: _____

9. Do you perform automotive or other vehicle maintenance or repair within the building (e.g., attached garage)?

Yes No Details: Forklift maintenance

10. Which of these items are present in the building? (Check all that apply)

<i>Potential VOC Source</i>	<i>Location of Source</i>	<i>Removed 48 hours prior to sampling? (Yes/No/NA)</i>
<input type="checkbox"/> Paints or paint thinners	596/No 595, 407	Yes
<input type="checkbox"/> Gas-powered equipment		
<input type="checkbox"/> Gasoline storage cans		Yes
<input type="checkbox"/> Cleaning solvents		
<input type="checkbox"/> Air fresheners		
<input type="checkbox"/> Oven cleaners		
<input type="checkbox"/> Carpet/upholstery cleaners		
<input type="checkbox"/> Hairspray		
<input type="checkbox"/> Nail polish/polish remover		
<input type="checkbox"/> Bathroom cleaner		Yes
<input type="checkbox"/> Appliance cleaner		
<input type="checkbox"/> Furniture/floor polish		
<input type="checkbox"/> Moth balls		
<input type="checkbox"/> Fuel tank <input type="checkbox"/> Empty		
<input type="checkbox"/> Wood stove		
<input type="checkbox"/> Fireplace		
<input type="checkbox"/> Perfume/colognes		
<input type="checkbox"/> Hobby supplies (e.g., solvents, paints,		

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

lacquers, glues, photographic darkroom chemicals)
 Scented trees, wreaths, potpourri, etc.
 Other
 Other
 Other
 Other

11. Do you have pesticides in the building?

Yes No Unsure

12. Do you have any spray insecticides in the building?

Yes No Unsure

13. Have you painted any area of the interior of the building in the last 12 months?

Yes No

If yes, please indicate what paint you used

Enamel Vinyl Latex Other

14. Have you painted the exterior of the building in the last 12 months? Yes No

If yes, please indicate what paint you used

Enamel Vinyl Latex Other

15. Where are paint, thinner, pesticides, insecticides stored?

	<i>Paint</i>	<i>Thinner</i>	<i>Pesticides</i>	<i>Insecticides</i>
Garage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Basement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storage shed (Flame Lockers)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (Flame Lockers)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> I don't store these items in the building				

16. Have you purchased one of the following items in the last 12 months?

Rubberized door mat Computer Wiring
 Plastic shower curtain Printer Linoleum
 Wood stains or paint VCR

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

17. Do you have a computer printer in the building?

Yes No

18. Do you have a VCR etc in the building?

Yes No

19. Do you use cleaners to maintain your VCR?

Yes No

If yes, what type? _____

20. Are there any pets in the building?

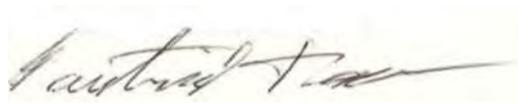
Yes No

If yes, what type? ___Dogs_____

If yes, number ___2 or 3_____

21. Does anyone in the smoke in the building? Yes No

22. Questions asked by Occupant that require follow-up.



Patrick Domres

Signature and Printed Name of Conducting the Survey

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

Date 3/7/14 Time: 11:30 am

Address: 401 Alexander Ave E, Building 592, Tacoma WA 98421

Building Owner: Port of Tacoma

Occupant Name: Trident Seafoods

Contact Name: Steve Besaw Telephone (work): 253-502-5318

Cell:

How long has owner/tenant/occupant occupied building? 14 years

Occupation: Ship Repair and Maintenance

Number of Occupants Adults: 75-300 Ages: 25-55 Children: Ages:

BUILDING CONSTRUCTION CHARACTERISTICS:

Building Use: Commercial/Industrial

Building Type: One story Two storey X Other

General Description of Building Construction Materials: Metal, Other

Year Constructed: 1911

GARAGE: Do you have an attached garage? Yes No

Has the building been weatherized with any of the following? Insulation, Storm Windows, Energy-Efficient Windows, Other (specify) No

What type of basement does the building have?

Table with 5 columns: Basement Type, Checked, Finished, Unfinished, Depth below reference point (meters). Rows include None, Partial, Full, and Crawl space.

Number of floors at or above grade:

Depth of basement below grade: ft. Basement Size: ft²

Foundation construction: Poured concrete X Cinder block Stone

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

Any visual evidence of leakage through basement walls or floor

Floor Construction: Poured concrete Wood Earth Brick Other: _____

Floor condition (cracks, drains): _____

Condition at floor/wall joint (if visible): _____

Any exterior openings from the basement:

- Vents
- Fans
- Windows
- Wall openings
- Utility pipe penetrations
- Other: _____

Type of ground cover outside of building: grass / **concrete** / asphalt / other (specify): _____

Sub-slab vapor/moisture barrier in place? Yes / No / **Don't know**

Type of barrier: _____

Do you have a sump?: Yes No

Where: _____

If yes, sealed open NA

If yes, is there water in the sump?: Yes No

Is building serviced with municipal water? Yes No

Do you have a water well?: Yes No Don't know

Well location: _____

Do you drink the water obtained from the well? _____

What do you use the well for?: _____

Do you have a cistern?: Yes No

If yes, describe its location: _____

Do you have a septic system?: Yes No If Yes is it still active Yes No

If yes, describe its location: _____

If yes, describe how septic system is cleaned: _____

Have there ever been a fire in the building?: Yes No

If yes, describe its location and extent: _____

Is there a laundry room located inside the house?: Yes No

If yes, describe its location: _____

Is there a Radon System in the building: Yes No

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

HEATING AND VENTILATION SYSTEM(S) PRESENT:

What type of heating system(s) is/are used in the building?

Hot Air Circulation Heat Pump Steam Radiation Wood Stove
Hot Air Radiation Unvented Kerosene heater **Electric Baseboard** Other (specific)

Where are they located? _____ office _____

Is there outside air vent for heating system? _____ No _____

What type(s) of fuel(s) are used in this building?

Natural Gas **Electric** Coal Other (specific)
Fuel Oil Wood Solar

What type of mechanical ventilation systems are present and/or currently operating in the building?

Central Air Conditioning **Mechanical Fans** Bathroom Ventilation
Fan Kitchen Range Hood Open Windows
Individual Air Conditioning Units Air-to-Air Heat Exchanger Other (specify)

Where are they located? _____

SOURCES OF CHEMICAL CONTAMINANTS

1. When was the last time dry-cleaned clothes were brought into the building?
 0 to 5 days ago 6 to 10 days ago More than 10 days ago Don't dry-clean

2. How recently were the carpets installed?
 In the last six months More than six months ago No Carpet

3. When was the last time the carpet was cleaned?
 In the last six months More than six months ago Never

4. Was there any recent remodeling or painting done in the building?
 Yes No Details: _____

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

5. Are there any pressed wood products in the building (e.g., hardwood plywood wall paneling, particleboard, fiberboard)? No

6. Are there any new upholstery, drapes, or textiles in the building? No

7. Do you have any spot removers in the building?

Yes No Details: None

8. Do you perform automotive or other vehicle maintenance or repair within the building (e.g., attached garage)?

Yes No Details: None

9. Which of these items are present in the building? (Check all that apply)

<i>Potential VOC Source</i>	<i>Location of Source</i>	<i>Removed 48 hours prior to sampling? (Yes/No/NA)</i>
-----------------------------	---------------------------	--

- Paints or paint thinners**
- Gas-powered equipment
- Gasoline storage cans**
- Cleaning solvents**
- Air fresheners
- Oven cleaners
- Carpet/upholstery cleaners
- Hairspray
- Nail polish/polish remover
- Bathroom cleaner**
- Appliance cleaner
- Furniture/floor polish
- Moth balls
- Fuel tank Empty**
- Wood stove
- Fireplace
- Perfume/colognes
- Hobby supplies (e.g., solvents, paints, lacquers, glues, photographic darkroom chemicals)
- Scented trees, wreaths, potpourri, etc.
- Other
- Other
- Other
- Other

10. Do you have MSDS for the above referenced chemicals?

Yes No Unsure

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

11. Do you have pesticides in the building?

- Yes No Unsure

12. Do you have any spray insecticides in the building?

- Yes No Unsure

13. Have you painted any area of the interior of the building in the last 12 months?

- Yes No

If yes, please indicate what paint you used

- Enamel Vinyl Latex Other

14. Have you painted the exterior of the building in the last 12 months? Yes No

If yes, please indicate what paint you used

- Enamel Vinyl Latex Other

15. Where are paint, thinner, pesticides, insecticides stored?

	<i>Paint</i>	<i>Thinner</i>	<i>Pesticides</i>	<i>Insecticides</i>
Garage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Basement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storage shed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- I don't store these items in the building

16. Have you purchased one of the following items in the last 12 months?

- Rubberized door mat Computer Wiring
 Plastic shower curtain Printer Linoleum
 Wood stains or paint

17. Do you have a computer printer in the building?

- Yes No

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

18. Are there any pets in the building?

Yes No

If yes, what type? _____

If yes, number _____

19. Questions asked by Occupant that require follow-up.



Patrick Domres

Signature and Printed Name of Conducting the Survey

Yellow: 592

Product Name	1, 1, 1-Trichloroethane	1, 1-Dichloroethene	1, 2, 4-Trimethylbenzene	1, 4-Dichlorobenzene	Benzene	Carbon Tetrachloride	chloroform (Trichloromethane)	cis-1, 2-Dichloroethane	Ethylbenzene	m&p-Xylene	Methylene chloride	Naphthalene	o-Xylene	Styrene	Tetrachloroethene	Toluene	Trichloroethene
3M Fastbond Contact Adhesive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rustoleum-High Performance Enamel	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rust-Oleum Finish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dupli-color Primer Sealer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Krylon Farm and Implement Paint	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dynaflux CNF Cleaner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3M Scotchkote Electrical Coating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dri-Lube Solid Surface Dry film lubricant	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Klean-Strip Lacquer Thinner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Johnson wax spitfire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dem Kote Primer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
International Interplate Nippe Ceramo (Gray)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gunk Engine Degreaser	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dem Kote Enamel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3M Injector Cleaner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hyster high performance maintenance Paint	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Krylon rust tough primer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Revision Number: 001.2

Issue date: 12/15/2011

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Marine Grade Anti-Seize
Product type: Lubricant
Company address: Henkel Corporation
 One Henkel Way
 Rocky Hill, Connecticut 06067

IDH number: 275026
Item number: 34026
Region: United States

Contact information:
 Telephone: 860.571.5100
 Emergency telephone: 860.571.5100
 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state:	paste	HEALTH:	1
Color:	black	FLAMMABILITY:	1
Odor:	mild	PHYSICAL HAZARD:	0
CAUTION:		Personal Protection:	See MSDS Section 8

CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: Shortness of breath. Coughing. Moderate respiratory tract irritation.
Skin contact: Moderate skin irritation.
Eye contact: Moderate eye irritation. Redness. Excess tearing.
Ingestion: Principal hazard of ingestion is aspiration into the lungs and subsequent pneumonitis. Not expected to be harmful by ingestion.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Petroleum Based grease	Unknown	30 - 60
Calcium oxide	1305-78-8	10 - 30
Graphite	7782-42-5	10 - 30
Mineral oil light naphthenic hydrotreat. <3% DMSO	64742-53-6	5 - 10
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	5 - 10
Calcium distearate	1592-23-0	5 - 10
Boron nitride	10043-11-5	1 - 5

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If symptoms develop and persist, get medical attention.

Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. If symptoms develop and persist, get medical attention. Wash clothing before reuse.

Eye contact: Get medical attention. Immediately flush eyes with plenty of water for at least 15 minutes.

Ingestion: Get medical attention. Keep individual calm. Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.

5. FIRE FIGHTING MEASURES

Flash point: Not applicable

Autoignition temperature: Not available.

Flammable/Explosive limits - lower: Not available.

Flammable/Explosive limits - upper: Not available.

Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Special firefighting procedures: Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode.

Unusual fire or explosion hazards: None

Hazardous combustion products: Oxides of nitrogen. Oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.

Clean-up methods: Scrape up as much material as possible. Clean residue with soap and water. Store in a partly filled, closed container until disposal.

7. HANDLING AND STORAGE

Handling: Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling.

Storage: Keep container closed. Keep in a cool, well ventilated area.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Petroleum Based grease	5 mg/m3 TWA mist	5 mg/m3 TWA mist	None	None
Calcium oxide	2 mg/m3 TWA	5 mg/m3 TWA	None	None
Graphite	2 mg/m3 TWA Respirable fraction.	5 mg/m3 TWA Respirable fraction. 15 mg/m3 TWA Total dust. 15 MPPCF TWA	None	None
Mineral oil light naphthenic hydrotreat. <3% DMSO	5 mg/m3 TWA Inhalable fraction.	500 ppm (2,000 mg/m3) TWA 5 mg/m3 TWA Mist.	None	None
Distillates (petroleum), hydrotreated heavy naphthenic	5 mg/m3 TWA mist 10 mg/m3 STEL mist 5 mg/m3 TWA Inhalable fraction.	5 mg/m3 TWA mist 500 ppm (2,000 mg/m3) TWA 5 mg/m3 TWA Mist.	None	None
Calcium distearate	10 mg/m3 TWA 3 mg/m3 TWA Respirable fraction.	None	None	None
Boron nitride	None	None	None	None

Engineering controls:

Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

Respiratory protection:

Observe OSHA regulations for respiratory use (29 CFR 1910.134). Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection:

Safety goggles or safety glasses with side shields.

Skin protection:

Use impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	paste
Color:	black
Odor:	mild
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	Not available.
Boiling point/range:	Not available.
Melting point/ range:	Not available.
Specific gravity:	1.2648
Vapor density:	Not available.
Flash point:	Not applicable
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Evaporation rate:	Not available.
Solubility in water:	Insoluble
Partition coefficient (n-octanol/water):	Not available.
VOC content:	3 %; 38.4 g/l EPA Method 24

10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	None reasonably foreseeable.
Incompatible materials:	Strong acids and strong bases. Strong oxidizing agents. Strong reducing agents.
Conditions to avoid:	None known

11. TOXICOLOGICAL INFORMATION

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Petroleum Based grease	No	No	No
Calcium oxide	No	No	No
Graphite	No	No	No
Mineral oil light naphthenic hydrotreat. <3% DMSO	No	No	No
Distillates (petroleum), hydrotreated heavy naphthenic	No	No	No
Calcium distearate	No	No	No
Boron nitride	No	No	No

Hazardous components	Health Effects/Target Organs
Petroleum Based grease	No Data
Calcium oxide	Irritant, Corrosive, Eyes
Graphite	Lung
Mineral oil light naphthenic hydrotreat. <3% DMSO	Irritant
Distillates (petroleum), hydrotreated heavy naphthenic	Irritant
Calcium distearate	No Target Organs
Boron nitride	Irritant, Corrosive

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/MDG)

Proper shipping name:	Not regulated
Hazard class or division:	None
Identification number:	None
Packing group:	None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification:	None above reporting de minimus
CERCLA/SARA Section 302 EHS:	None above reporting de minimus
CERCLA/SARA Section 311/312:	Immediate Health
CERCLA/SARA 313:	None above reporting de minimus
California Proposition 65:	No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDSL Status:	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
WHMIS hazard class:	E, D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Lou Fabrizio, Regulatory Affairs Specialist

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.



MATERIAL SAFETY DATA SHEET

BELZONA® 5811 (IMMERSION GRADE) BASE

1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	BELZONA® 5811 (IMMERSION GRADE) BASE		
INTERNAL ID	0305/1421/-/01		
PRODUCT USE	Base component of a two component system. Mix with Solidifier component before use. High performance barrier coating for protection of metallic and non-metallic surfaces against attack from aqueous solutions. Application by brush. Application by heated airless spray. Please refer to the relevant Belzona® Instructions For Use for further information. For use only by professional operators.		
SUPPLIER	Belzona Inc. 2000 N.W. 88 Court Miami FL 33172 ☎ 1-305-594-4994 Fax: 1-305-599-1140 belzona@belzona.com	MANUFACTURER	Belzona Polymerics Limited Claro Road, Harrogate North Yorkshire HG1 4AY, England ☎ +44 (0) 1423 567641 Fax: +44 (0) 1423 505967 belzona@belzona.co.uk
CONTACT PERSON	Prepared by the Regulatory Affairs Department; Phone: +44 (0) 1423 567 641		
EMERGENCY TELEPHONE	CHEMTREC: 800-424-9300 Toll free in United States CHEMTREC: 1-703-527-3887 For calls from outside the United States		

2 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Beige or Black Paste. Epoxy odor. WARNING. May cause allergic skin reaction. May cause irritation to eyes or skin. Possible reproductive hazard; contains a component that may cause impaired fertility. Possible developmental hazard; contains a component that may cause harm to the unborn child. Combustible liquid - Class IIIB. Prevent the product from entering into soil, drains, sewers, ditches or waterways.

POTENTIAL HEALTH EFFECTS

INHALATION

Vapors that may collect in the container headspace during transit or prolonged storage may be harmful if inhaled. Inhalation of airborne droplets or aerosols may severely damage contacted tissue and produce scarring.

INGESTION

Ingestion is not normally an exposure risk arising from professional applications. Inadvertent ingestion of small amounts of this product through poor hygiene or cross contamination may cause irritation of mucous membranes.

SKIN CONTACT

Prolonged or repeated contact with the skin may cause irritation, blistering or dermatitis. Release during high pressure use may result in injection of material into the skin causing local necrosis.

EYE CONTACT

Splashes in the eyes may cause irritation and reversible local damage.

ROUTE OF ENTRY

Skin and/or eye contact. Ingestion. Inhalation. Injection.

TARGET ORGANS

Eyes. Skin. Respiratory system, lungs.

MEDICAL SYMPTOMS

Prolonged or repeated contact with the skin or mucous membrane may result in irritant symptoms such as redness, blistering or dermatitis. Onset of symptoms may be delayed. Eye contact may cause tearing and discomfort.

MEDICAL CONSIDERATIONS

Skin contact constitutes a pronounced hazard. Persons with a history of skin sensitization problems should only be employed in processes in which this product is used under appropriate medical supervision.

CARCINOGENICITY

Not available for the mixture, however none of the components in concentrations of 0.1% or greater are listed as carcinogens according to OSHA, NTP, ACGIH or IARC.

SENSITIZATION

There is no data on the product itself. This product contains one or more components that have caused skin sensitization in humans. See Section 11.

BELZONA® 5811 (IMMERSION GRADE) BASE**TOXIC TO REPRODUCTION**

There is no data on the product itself. This product contains one or more components that have shown reprotoxic effects in laboratory tests. See Section 11.

MUTAGENICITY

Not available for the mixture, however available information on the individual components does not indicate a mutagenic hazard.

DEVELOPMENTAL TOXICITY

There is no data on the product itself. This product contains one or more components that have shown fetotoxic and/or teratogenic effects in laboratory tests. See Section 11.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Weight
REACTION PRODUCT: BISPHENOL A-(EPICHLORHYDRIN)	500-033-5	25068-38-6	30-60%
DIISOHEPTYL PHTHALATE	276-158-1	71888-89-6	5-10%
SILICA, QUARTZ	238-878-4	14808-60-7	30-60%

COMPOSITION COMMENTS

The remaining constituents of this product are either considered to be non-hazardous or below the relevant concentration limits.

4 FIRST-AID MEASURES**GENERAL INFORMATION**

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

INHALATION

Remove to fresh air. Keep the patient warm and at rest. If breathing has stopped, administer artificial respiration. Give nothing by mouth. If unconscious, place in the recovery position and seek medical advice.

INGESTION

If accidentally swallowed obtain immediate medical attention. Keep at rest. Rinse mouth with plenty of water and drink plenty of water. Do NOT induce vomiting.

SKIN CONTACT

Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use a proprietary skin cleaner. Do NOT use solvents or thinners. If irritation or inflammation persists, seek medical attention. If material is injected under the skin, seek immediate medical attention. Even when there are few or no symptoms do not hesitate to refer the casualty to hospital.

EYE CONTACT

Contact lenses should be removed. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart, and seek medical advice.

5 FIRE-FIGHTING MEASURES**EXTINGUISHING MEDIA**

Use: sand, alcohol resistant foam, carbon dioxide, chemical powder, water fog for larger fires.

Do NOT use water jet.

SPECIAL FIRE FIGHTING PROCEDURES

Fire will produce dense black smoke containing hazardous products of combustion (see Section 10). Exposure to decomposition products may be a hazard to health. Appropriate positive-pressure self-contained breathing apparatus (SCBA) and full fire fighting turn-out gear (Bunker gear) should be worn. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains, sewers, ditches or waterways.

UNUSUAL FIRE & EXPLOSION HAZARDS**SENSITIVITY TO MECHANICAL IMPACT**

The product is not sensitive to mechanical impact or physical shock.

SENSITIVITY TO STATIC DISCHARGE

May accumulate static charge during use.

AUTO IGNITION TEMPERATURE NIA
(°C)

FLAMMABILITY LIMIT - LOWER(%) NIA

FLAMMABILITY LIMIT - UPPER(%) NIA

FLASH POINT (°C) > 150 (302°F) CC (Closed cup).

FLAMMABILITY CLASS

3.2 Combustible Liquid IIIB

6 ACCIDENTAL RELEASE MEASURES

BELZONA® 5811 (IMMERSION GRADE) BASE

PERSONAL PRECAUTIONS

Avoid contact with eyes, skin and clothing. Refer to protective measures listed in Section 8.

ENVIRONMENTAL PRECAUTIONS

Prevent the product from entering into soil, drains, sewers, ditches or waterways in large quantities.

SPILL CLEAN UP METHODS

Scrape the majority of the product into a suitable labeled container. Cover the spill area with sand or other suitable inert material and sweep up into the container. Clean surfaces down with a water and detergent mixture. Refer to disposal methods listed in Section 13.

7 HANDLING AND STORAGE

HANDLING

GENERAL

Keep the container tightly closed until ready for use. Vapors may collect in the container headspace during transit or prolonged storage. Avoid breathing vapor when opening the container. Do not breathe spray during application. Prevent air-borne concentrations higher than the occupational exposure limits (see Section 8). Avoid contact with eyes, skin and clothing. Smoking, eating and drinking should be prohibited in areas of storage and use. For personal protection see Section 8. Always keep in containers made of the same material as the supply container. Good housekeeping methods and regular safe removal of waste materials should be observed. Ensure emergency equipment (for fires, spills, leaks, etc.) is readily available.

FIRE/EXPLOSION

This product is combustible. Exclude sources of heat, sparks and open flame.

SPECIAL

When applying the product by heated airless spray, ensure that temperatures are controlled to the minimum that achieves acceptable atomization. Exclude non-essential personnel. Minimise the number of employees exposed and the duration of their exposure. Do not breathe vapors/mists. Dry sanding or brush blasting of the cured coating may give rise to hazardous dust. Wet methods should be used wherever possible. If exposure cannot be avoided see Section 8 for further exposure control measures.

STORAGE

Observe the label precautions. Store between 5°C (41°F) and 30°C (86°F) unless otherwise stated in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.

ENVIRONMENTAL STORAGE PRECAUTIONS

Spillage, incorrect storage of chemicals or waste materials or unsuitable disposal activities can result in pollutants seeping through the soil, causing serious harm to groundwater- which is a vital source of drinking water. All wastes especially liquid wastes, should be securely stored on site in designated areas that are isolated from waterways and groundwater and diked to contain any spillages.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENT	STD	TWA (8-hrs)	STEL (15 min)	TWA (8-hrs)	STEL (15 min)
DIISOHEPTYL PHTHALATE	SUP	5 mg/m3			

INGREDIENT COMMENTS

Consult local authorities for acceptable exposure limits. Those occupational exposure limits that are marked 'SUP' are assigned by the supplier of the substance.

ENGINEERING MEASURES

STANDARD APPLICATIONS

Open containers in a well ventilated area.

SPRAY APPLICATIONS

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and/or vapors below the relevant occupational exposure limits, suitable respirators should be worn (see 'Respiratory Equipment' below).

RESPIRATORY EQUIPMENT

GENERAL GUIDANCE ON RESPIRATORY PROTECTION

It is essential that the concentration of the contaminant(s) in the application environment does not exceed the applicable occupational exposure limit(s) multiplied by the Assigned Protection Factor (APF) quoted for the respiratory protective equipment selected.

STANDARD APPLICATIONS

Respirators are not normally required, but may be required where adequate ventilation cannot be achieved.

SPRAY APPLICATIONS

Where necessary, it is recommended that an OSHA/NIOSH approved supplied-air respirator (SAR) equipped with a full facepiece is worn if exposure to the applicator or other people nearby cannot be controlled to below the occupational exposure limit and engineering methods cannot reasonably be improved.

EMERGENCY SITUATIONS

Where entry into unknown or Immediately Dangerous To Life or Health (IDLH) atmospheres is required, an OSHA/NIOSH approved pressure-demand self-contained breathing apparatus (SCBA) with a full facepiece or a pressure-demand supplied-air respirator (SAR) with a full facepiece in combination with an auxiliary pressure-demand SCBA respirator should be worn.

BELZONA® 5811 (IMMERSION GRADE) BASE**HAND PROTECTION****GENERAL GUIDANCE ON HAND PROTECTION**

The breakthrough time of the gloves selected should exceed the expected use period. Where this is not possible gloves should be changed in good time, and in any case before the breakthrough time is exceeded. Where doubt exists, advice should be sought from manufacturers or vendors of protective gloves in order to determine appropriate types for the particular circumstances. Barrier creams may help to protect exposed areas of skin but are not substitutes for full physical protection. They should not be applied once exposure has occurred.

SPECIFIC RECOMMENDATIONS

Use protective gloves made of: Neoprene. Nitrile.

STANDARD APPLICATIONS / SPRAY APPLICATIONS / EMERGENCY SITUATIONS

Medium-heavy weight gauntlet type gloves that provide wrist protection are suitable.

EYE PROTECTION**STANDARD APPLICATIONS**

It is recommended that eye protection, for example safety glasses with side shields or goggles are worn at all times during the handling and use of this material.

EMERGENCY SITUATIONS

Refer to 'Respiratory Equipment' above.

OTHER PROTECTION**STANDARD APPLICATIONS/SPRAY APPLICATIONS**

Synthetic polyethylene coveralls such as the Tyvek PRO-TECH® or equivalent coveralls manufactured to provide protection against liquid chemicals should be worn. Grossly contaminated clothing should be removed and the skin washed with soap and water or a proprietary skin cleaner.

EMERGENCY SITUATIONS

Wear chemical resistant splash suit and boots made from neoprene or PVC, as appropriate.

HYGIENE MEASURES

Wash at the end of each work shift and before eating, smoking and using the toilet. Ensure eye wash facilities (fountain, bottle, vials, etc.) are readily available. Do not put contaminated articles or equipment e.g. spatulas, applicators, brushes, cloths etc., into pockets. Where necessary, contaminated work clothing and shoes should be removed to prevent cross contamination of surfaces and the risk of inadvertent skin contact and ingestion.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Paste.		
COLOR	Beige. Black		
ODOR	Epoxy.		
PHYSICAL DATA COMMENTS	This section contains typical values for Health, Safety and Environmental guidance only and is not intended to represent a technical specification for the product. L = Low. LP = See Section 12.		
SOLUBILITY	Immiscible with water		
BOILING POINT (°C)	NIA	MELTING POINT (°C)	NIA
RELATIVE DENSITY	1.61 - 1.66 @ 20°C (68°F)	VAPOUR DENSITY (air=1)	>1
VAPOUR PRESSURE	L	EVAPORATION RATE	N.ap
pH-VALUE, CONC. SOLUTION	N.ap	VISCOSITY	NIA
DECOMPOSITION TEMPERATURE (°C)	NIA	ODOR THRESHOLD, LOWER	NIA
FLASH POINT (°C)	> 150 (302°F) CC (Closed cup).	PARTITION COEFFICIENT (N-Octanol/Water)	LP
VOLATILE ORGANIC CONTENT	0 g/litre		

10 STABILITY AND REACTIVITY

STABILITY

Stable under recommended storage and handling conditions (see Section 7). In a fire, hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide may be produced.

CONDITIONS TO AVOID

Keep away from oxidizing agents and strongly alkaline and strongly acidic materials to prevent the possibility of exothermic reaction.

11 TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION

There is no data on the product itself.

Name	REACTION PRODUCT: BISPHENOL A-(EPICHLORHYDRIN)
Toxic Dose 1 - LD 50	>11,400 mg/kg (oral rat)
Toxic Dose 2 - LD 50	>23,500 mg/kg (dermal rat)
Toxic Conc. - LC 50	N.ap
Toxicological information	

BELZONA® 5811 (IMMERSION GRADE) BASE

Repeated skin contact may lead to sensitization with possibly cross-sensitization to other epoxies. In rare cases, low molecular weight liquid epoxy resins can cause an allergic respiratory reaction like asthma, based on limited human information. The evidence available is not however, considered to fall within the classification criteria as laid out within the OSHA Hazard Communication Standard nor the Controlled Products Regulations.

Name	DIISOHEPTYL PHTHALATE
Toxic Dose 1 - LD 50	>10,000 mg/kg (oral rat)
Toxic Dose 2 - LD 50	>3,160 mg/kg (dermal rbt)
Toxic Conc. - LC 50	NIA.

Toxicological information

Developmental/Reproductive toxicity studies: Has been shown to cause developmental effects at high doses in laboratory animals when administered orally by gavage in a developmental study and developmental and fertility effects when administered at high doses by feed in a two-generation reproduction study. Technologists have determined that the potential risk from occupational exposure is very low, based on the limited relevance of the rodent findings to humans and the large safety margins between exposure and effect levels.

12 ECOLOGICAL INFORMATION

ECOTOXICITY

PRODUCT COMPONENT AS SUPPLIED

There is no data on the product itself. The following information is provided on the basis of the individual component data available. The product should not be allowed to enter soil, drains, sewers, ditches and waterways or be deposited where it can affect ground or surface waters. See also Sections 5, 6, 7, 9 and 13.

CURED PRODUCT

When mixed, applied and cured in accordance with the Belzona® Instructions For Use (IFU) the resultant polymeric coating is not considered to be dangerous for the environment.

BIOACCUMULATION

Based on the individual component data, the product is expected to bioaccumulate. Log octanol/water partition coefficient (Log Pow) is expected to be greater than 3.0.

DEGRADABILITY

Based on the individual component data, the product is not expected to be readily biodegradable according to OECD/EC guidelines.

ACUTE FISH TOXICITY

Based on the individual component data, the product is expected to have experimental LC50/EC50/IC50 values between 1 and 10 mg/l in most sensitive species.

13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

GENERAL

Do NOT dump into any sewers, on the ground, or into any body of water. The product as shipped in its intended condition does not exhibit any of the 'Characteristics' of hazardous waste as defined in 40 CFR 261.20-24. Disposal must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations are the responsibility solely of the waste generator.

COMPONENT DISPOSAL

TRANSIT PACKAGING: shrink or stretch wrap, boxes and fittings that have not been contaminated with product should be re-used or recycled. UNREACTED PRODUCT: empty uncleaned containers and contaminated packaging should be disposed of as non-hazardous solid waste. REACTED PRODUCT: that has been mixed and cured in accordance with the relevant 'Instructions For Use' will form an inert filled polymeric compound that may be able to be disposed of as non-hazardous solid waste. Refer to your local licensed, permitted waste agent or facility.

14 TRANSPORT INFORMATION

TRANSPORT NOTES

Non-regulated for transport under current Domestic, or International Air and Sea Regulations.
Transport within user's premises: always transport in closed containers that are upright and secure.
Ensure that persons transporting the product know what to do in the event of accident or spillage.

15 REGULATORY INFORMATION

SARA (311/312) HAZARD CATEGORIES

Acute Chronic

BELZONA® 5811 (IMMERSION GRADE) BASE**REGULATORY STATUS (US)**

This product is considered "Hazardous" as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

SECTION 313: This product does not contain toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372.

U.S California Safe Drinking Water & Toxic Enforcement Act (Proposition 65): To the best of our knowledge, this product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Toxic Substance Control Act (TSCA): All constituents of this product are included on the Inventory or are not required to be listed.

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM -WHMIS**LABEL(S) FOR SUPPLY**

Materials Causing
Other Toxic
Effects.

CONTROLLED PRODUCT CLASSIFICATION

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (CPR SECTION 33).

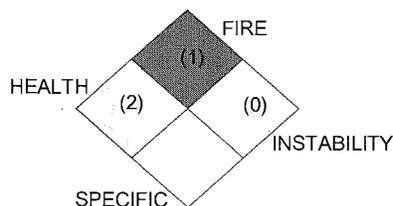
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canadian WHMIS Classification

D2A D2B

REGULATORY STATUS (CANADA)

Domestic Substances List (DSL) & Non-Domestic Substances List (NDSL): All constituents of this product are present on the DSL or are not required to be listed.

16 OTHER INFORMATION**NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)****GENERAL INFORMATION**

Throughout this Material Safety Data Sheet; NIA = No Information Available; N.ap = Not applicable.

REVISION COMMENTS

REVISION. This material safety data sheet has been revised in the following Section(s): 2, 8, 11,

Please observe the REVISION DATE. Should you be reading a material safety data sheet that is more than 24 months old or have concerns over its validity, please contact your local Belzona Distributor or Belzona direct (belzona@belzona.com) and the most current information will be sent to you.

REVISION DATE 10/23-2006

VERSION No. 1.1

SAFETY DATA SHEET STATUS

English (North American). Approved.

DISCLAIMER

To the best of our knowledge, the information contained herein is accurate. However, some of the information presented and conclusions drawn are derived from sources other than direct test data on the product itself and while Belzona Inc. believes such sources to be reliable, the information is provided without any warranty regarding its correctness.

Since Belzona Inc. has no control over the conditions under which the product will be used, liability will not be assumed to exceed replacement or refund of the purchase price of this product. Except as stated herein, there are no express or implied warranties including implied warranties of merchantability or fitness for a particular purpose. Belzona Inc. assumes no liability for injury or incidental or consequential damage arising out of the storage, handling, use or, disposal of this product.



MATERIAL SAFETY DATA SHEET

BELZONA® 5811 (IMMERSION GRADE) SOLIDIFIER

1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	BELZONA® 5811 (IMMERSION GRADE) SOLIDIFIER		
INTERNAL ID	0405/1422/01		
PRODUCT USE	Solidifier component of a two component system. Mix with Base component before use. High performance barrier coating for protection of metallic and non-metallic surfaces against attack from aqueous solutions. Application by brush. Application by heated airless spray. Please refer to the relevant Belzona® Instructions For Use for further information. For use only by professional operators.		
SUPPLIER	Belzona Inc. 2000 N.W. 88 Court Miami FL 33172 ☎ 1-305-594-4994 Fax: 1-305-599-1140 belzona@belzona.com	MANUFACTURER	Belzona Polymeric Limited Claro Road, Harrogate North Yorkshire HG1 4AY, England ☎ +44 (0) 1423 567641 Fax: +44 (0) 1423 505967 belzona@belzona.co.uk
CONTACT PERSON	Prepared by the Regulatory Affairs Department; Phone: +44 (0) 1423 567 641		
EMERGENCY TELEPHONE	CHEMTREC: 800-424-9300 Toll free in United States CHEMTREC: 1-703-527-3887 For calls from outside the United States		

2 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Dark brown. Liquid Amine odor. DANGER. Causes skin and eye burns. May be harmful if swallowed or absorbed through the skin. May cause allergic skin or respiratory reaction. A component of the product may affect the central nervous system. Combustible liquid - Class IIIB. Prevent the product from entering into soil, drains, sewers, ditches or waterways.

POTENTIAL HEALTH EFFECTS

INHALATION

Exposure to vapors may result in irritation of the mucous membrane and the respiratory system; in severe cases burns may occur. Inhalation of airborne droplets or aerosols may severely damage contacted tissue and produce scarring.

INGESTION

Ingestion is not normally an exposure risk arising from professional applications. Inadvertent ingestion of small amounts of this product through poor hygiene or cross contamination may cause irritation or burns of the mouth, throat and stomach. May be harmful if swallowed.

SKIN CONTACT

Contact with skin or any living tissue may cause burns, in severe cases complete tissue destruction may occur. This product contains components that may be absorbed through the skin (see Section 8). May be harmful if absorbed through the skin. Release during high pressure use may result in injection of material into the skin causing local necrosis.

EYE CONTACT

Contact with eyes may cause severe irritation with corneal injury, which may result in permanent impairment of vision. Product vapor in low concentrations can cause tearing, conjunctivitis and corneal edema when absorbed into the tissue of the eye from the atmosphere. Low vapor concentrations of many amines can cause a visual disturbance known as 'blue haze' or 'halo vision'. Vision becomes foggy or blurred, objects may appear bluish, and halos may be seen around lights. Symptoms may be delayed. Eye discomfort or pain may not be experienced by affected persons. The effect normally clears up within a day and causes no permanent injury. The visual disturbance could contribute to accidents.

ROUTE OF ENTRY

Inhalation. Skin absorption. Ingestion. Skin and/or eye contact. Injection.

TARGET ORGANS

Eyes. Skin. Respiratory system, lungs. Central nervous system.

MEDICAL SYMPTOMS

Inhalation of vapor, skin absorption and ingestion may result in symptoms of central nervous system depression, such as headache, drowsiness, nausea and vomiting. Inhalation may result in asthmatic symptoms, wheezing and a tightness of the chest. Extreme irritation of eyes and mucous membranes, including burning and tearing. Contact with skin or any living tissue may cause burns, in severe cases complete tissue destruction may occur. Repeated contact with the skin may cause dermatitis or allergic skin reaction. Onset of symptoms may be delayed.

MEDICAL CONSIDERATIONS

Skin contact constitutes a pronounced hazard. Persons with a history of skin sensitization problems should only be employed in processes in which this product is used under appropriate medical supervision. Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not risk exposure to respiratory sensitizers.

BELZONA® 5811 (IMMERSION GRADE) SOLIDIFIER**CARCINOGENICITY**

Not available for the mixture, however none of the components in concentrations of 0.1% or greater are listed as carcinogens according to OSHA, NTP, ACGIH or IARC.

SENSITIZATION

There is no data on the product itself. This product contains one or more components that have caused allergic either skin or respiratory reactions in susceptible individuals. See Section 11.

TOXIC TO REPRODUCTION

Not available for the mixture, however available information on the individual components does not indicate a reprotoxic hazard.

MUTAGENICITY

Not available for the mixture, however available information on the individual components does not indicate a mutagenic hazard.

DEVELOPMENTAL TOXICITY

Not available for the mixture, however available information on the individual components does not indicate a developmental hazard.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Weight
BENZYL ALCOHOL	202-859-9	100-51-6	10-30%
CYCLOALIPHATIC AMINE PREPARATION	Proprietary	Proprietary	10-30%
DIETHYLENETRIAMINE	203-865-4	111-40-0	1-5%
TRIETHYLENETETRAMINE	203-950-6	112-24-3	1-5%
4,4'-METHYLENEBIS(CYCLOHEXANAMINE)	217-168-8	1761-71-3	1-5%

COMPOSITION COMMENTS

The remaining constituents of this product are either considered to be non-hazardous or below the relevant concentration limits.

4 FIRST-AID MEASURES**GENERAL INFORMATION**

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

INHALATION

Remove to fresh air. Keep the patient warm and at rest. If breathing has stopped, administer artificial respiration. Give nothing by mouth. If unconscious, place in the recovery position and seek medical advice.

INGESTION

If accidentally swallowed do NOT induce vomiting. Keep at rest. Rinse mouth with water and drink 1 cup of water every 10 minutes for 30 minutes. Seek immediate medical attention.

SKIN CONTACT

Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use a proprietary skin cleaner. Do NOT use solvents or thinners. If irritation or inflammation persists, seek medical attention. If material is injected under the skin, seek immediate medical attention. Even when there are few or no symptoms do not hesitate to refer the casualty to hospital.

EYE CONTACT

Contact lenses should be removed. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart, and seek medical advice.

5 FIRE-FIGHTING MEASURES**EXTINGUISHING MEDIA**

Use: sand, alcohol resistant foam, carbon dioxide, chemical powder, water fog for larger fires.
Do NOT use water jet.

SPECIAL FIRE FIGHTING PROCEDURES

Fire will produce dense black smoke containing hazardous products of combustion (see Section 10). Exposure to decomposition products may be a hazard to health. Appropriate positive-pressure self-contained breathing apparatus (SCBA) and full fire fighting turn-out gear (Bunker gear) should be worn. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains, sewers, ditches or waterways.

UNUSUAL FIRE & EXPLOSION HAZARDS**SENSITIVITY TO MECHANICAL IMPACT**

The product is not sensitive to mechanical impact or physical shock.

SENSITIVITY TO STATIC DISCHARGE

The product has a high flashpoint and contains alcohols that are good at conducting electricity. Probably not sensitive to static discharge.

AUTO IGNITION TEMPERATURE NIA
(°C)

FLAMMABILITY LIMIT - NIA
LOWER(%)

BELZONA® 5811 (IMMERSION GRADE) SOLIDIFIER

FLAMMABILITY LIMIT - UPPER(%) NIA

FLASH POINT (°C) > 103 (217°F) CC (Closed cup).

FLAMMABILITY CLASS

3.2 Combustible Liquid IIIB

6 ACCIDENTAL RELEASE MEASURES**PERSONAL PRECAUTIONS**

Exclude sources of ignition and ventilate the area. Exclude non-essential personnel. Keep up-wind of spill to avoid breathing vapors. Do not get in eyes, on skin, or on clothing. Refer to protective measures listed in Section 8.

ENVIRONMENTAL PRECAUTIONS

Prevent the product from entering into soil, drains, sewers, ditches or waterways in large quantities.

SPILL CLEAN UP METHODS

Contain and collect spillages with non-combustible absorbent materials e.g. sand, earth, vermiculite, diatomaceous earth and place into a suitable labeled container. Clean surfaces down with a water and detergent mixture. Refer to disposal methods listed in Section 13.

7 HANDLING AND STORAGE**HANDLING****GENERAL**

Keep the container tightly closed when not in use. Vapors may collect in the container headspace during transit or prolonged storage. Avoid breathing vapor when opening the container. Where possible open containers and mix components in a well ventilated place away from the application area. Do not breathe spray during application. Prevent air-borne concentrations higher than the occupational exposure limits (see Section 8). Do not get in eyes, on skin, or on clothing. Smoking, eating and drinking should be prohibited in areas of storage and use. For personal protection see Section 8. Always keep in containers made of the same material as the supply container. Ensure emergency equipment (for fires, spills, leaks, etc.) is readily available. Good housekeeping methods and regular safe removal of waste materials should be observed.

FIRE/EXPLOSION

This product is combustible. Exclude sources of heat, sparks and open flame.

SPECIAL

When applying the product by heated airless spray, ensure that temperatures are controlled to the minimum that achieves acceptable atomization. Ammonia may be given off when heated. Do not breathe vapors/mists. Exclude non-essential personnel. Minimise the number of employees exposed and the duration of their exposure.

STORAGE

Observe the label precautions. Store between 5°C (41°F) and 30°C (86°F) unless otherwise stated in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Store separately from oxidizing agents and strongly acidic materials.

ENVIRONMENTAL STORAGE PRECAUTIONS

Spillage, incorrect storage of chemicals or waste materials or unsuitable disposal activities can result in pollutants seeping through the soil, causing serious harm to groundwater- which is a vital source of drinking water. All wastes especially liquid wastes, should be securely stored on site in designated areas that are isolated from waterways and groundwater and diked to contain any spillages.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENT	STD	TWA (8-hrs)	STEL (15 min)	TWA (8-hrs)	STEL (15 min)
BENZYL ALCOHOL	AIHA	10 ppm			
DIETHYLENTRIAMINE	OSHA (F)	1 ppm			
DIETHYLENTRIAMINE	ACGIH	1 ppm(Sk)		4.3 mg/m3(Sk)	
TRIETHYLENETETRAMINE	AIHA	1 ppm(Sk)			

INGREDIENT COMMENTS

'ACGIH' = Threshold Limit Value (TLV) set by ACGIH. 'OSHA (F)' = 'Final Rule' Permissible Exposure Limit (PEL) set by OSHA. 'AIHA' = American Industrial Hygiene Association. 'Sk' indicates a risk of exposure through skin absorption. Consult local authorities for acceptable exposure limits. During standard, non-spray applications, the risk of exposure by inhalation to hazardous concentrations of diethylenetriamine under normal working conditions in a well ventilated area is minimal.

ENGINEERING MEASURES**STANDARD APPLICATIONS**

Use in well ventilated areas or provide adequate mechanical ventilation.

SPRAY APPLICATIONS

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and/or vapors below the relevant occupational exposure limits, suitable respirators should be worn (see 'Respiratory Equipment' below).

BELZONA® 5811 (IMMERSION GRADE) SOLIDIFIER

RESPIRATORY EQUIPMENT

GENERAL GUIDANCE ON RESPIRATORY PROTECTION

It is essential that the concentration of the contaminant(s) in the application environment does not exceed the applicable occupational exposure limit(s) multiplied by the Assigned Protection Factor (APF) quoted for the respiratory protective equipment selected.

STANDARD APPLICATIONS

Respirators are not normally required, but may be required where adequate ventilation cannot be achieved.

SPRAY APPLICATIONS

Where necessary, it is recommended that an OSHA/NIOSH approved supplied-air respirator (SAR) equipped with a full facepiece is worn if exposure to the applicator or other people nearby cannot be controlled to below the occupational exposure limit and engineering methods cannot reasonably be improved.

EMERGENCY SITUATIONS

Where entry into unknown or Immediately Dangerous To Life or Health (IDLH) atmospheres is required, an OSHA/NIOSH approved pressure-demand self-contained breathing apparatus (SCBA) with a full facepiece or a pressure-demand supplied-air respirator (SAR) with a full facepiece in combination with an auxiliary pressure-demand SCBA respirator should be worn.

HAND PROTECTION

GENERAL GUIDANCE ON HAND PROTECTION

The breakthrough time of the gloves selected should exceed the expected use period. Where this is not possible gloves should be changed in good time, and in any case before the breakthrough time is exceeded. Where doubt exists, advice should be sought from manufacturers or vendors of protective gloves in order to determine appropriate types for the particular circumstances. Barrier creams may help to protect exposed areas of skin but are not substitutes for full physical protection. They should not be applied once exposure has occurred.

SPECIFIC RECOMMENDATIONS

Use protective gloves made of: Neoprene. Nitrile.

STANDARD APPLICATIONS / SPRAY APPLICATIONS / EMERGENCY SITUATIONS

Medium-heavy weight gauntlet type gloves that provide wrist protection are suitable.

EYE PROTECTION

STANDARD APPLICATIONS

It is recommended that eye protection, for example safety glasses with side shields or goggles are worn at all times during the handling and use of this material.

EMERGENCY SITUATIONS

Refer to 'Respiratory Equipment' above.

OTHER PROTECTION

STANDARD APPLICATIONS

Synthetic polyethylene coveralls such as the Tyvek PRO-TECH® or equivalent coveralls manufactured to provide protection against liquid chemicals should be worn. Grossly contaminated clothing should be removed and the skin washed with soap and water or a proprietary skin cleaner.

EMERGENCY SITUATIONS

Wear chemical resistant splash suit and boots made from neoprene or PVC, as appropriate.

HYGIENE MEASURES

Wash at the end of each work shift and before eating, smoking and using the toilet. Ensure eye wash facilities (fountain, bottle, vials, etc.) are readily available. Do not put contaminated articles or equipment e.g. spatulas, applicators, brushes, cloths etc., into pockets. Where necessary, contaminated work clothing and shoes should be removed to prevent cross contamination of surfaces and the risk of inadvertent skin contact and ingestion.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Liquid		
COLOR	Dark brown.		
ODOR	Amine.		
PHYSICAL DATA COMMENTS	This section contains typical values for Health, Safety and Environmental guidance only and is not intended to represent a technical specification for the product. A = Alkaline. LP = See Section 12.		
SOLUBILITY	Partially miscible with water.		
BOILING POINT (°C)	> 200 (392°F) @ 760 mm Hg	MELTING POINT (°C)	NIA
RELATIVE DENSITY	1.18 - 1.22 @ 20°C (68°F)	VAPOUR DENSITY (air=1)	> 1
VAPOUR PRESSURE	< 1.38 kPa @ 21°C (70°F)	EVAPORATION RATE	NIA
pH-VALUE, CONC. SOLUTION	A	VISCOSITY	NIA
DECOMPOSITION TEMPERATURE (°C)	NIA	ODOR THRESHOLD, LOWER	NIA
FLASH POINT (°C)	> 103 (217°F) CC (Closed cup).	PARTITION COEFFICIENT (N-Octanol/Water)	LP
VOLATILE ORGANIC CONTENT	285 g/litre		

10 STABILITY AND REACTIVITY

STABILITY

Stable under recommended storage and handling conditions (see Section 7). In a fire, hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide, oxides of nitrogen and ammonia may be produced.

BELZONA® 5811 (IMMERSION GRADE) SOLIDIFIER

CONDITIONS TO AVOID

Keep away from oxidizing agents and strongly acidic materials to prevent the possibility of exothermic reaction.

11 TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION

There is no data on the product itself.

Name	BENZYL ALCOHOL
Toxic Dose 1 - LD 50	1230-1660 mg/kg (oral rat)
Toxic Dose 2 - LD 50	2000 mg/kg (dermal rbt)
Toxic Conc. - LC 50	>500* mg/m3 (inh rat)

Toxicological information

Remarks: *Exposure duration not reported.

Exhibits a strong anesthetic effect when applied directly to the skin. May be absorbed through the skin. Developmental studies: Female rodent mice administered 750mg/kg/day over days 6-13 of gestation showed slight teratogenic effects in the offspring; slight reduced birth weight and weight gain, in the presence of significant maternal toxicity. Mutagenicity studies: In general human and animal bacterial tests have been negative (with and without activation). However, mutations were observed in Chinese hamster ovary cells (with activation).

Name	DIETHYLENETRIAMINE
Toxic Dose 1 - LD 50	1080 mg/kg (oral rat)
Toxic Dose 2 - LD 50	1090 mg/kg (dermal rbt)
Toxic Conc. - LC 50	NIA.

Toxicological information

Has caused skin sensitization in humans. Occupational respiratory sensitization has been documented. May be absorbed through the skin.

Name	TRIETHYLENETETRAMINE
Toxic Dose 1 - LD 50	2500 mg/kg (oral rat)
Toxic Dose 2 - LD 50	805 mg/kg (dermal rbt)
Toxic Conc. - LC 50	(See remarks.)

Toxicological information

Remarks: No deaths/4h saturated vapor.

Mutagenicity studies: positive in-vitro point mutations. However did not cause cancer in laboratory animals. Developmental studies: laboratory animals that were fed exaggerated doses of TETA showed embryotoxic and teratogenic effects in the presence of maternal toxicity that were believed to be associated with an observed copper deficiency. Has caused skin sensitization in humans.

Triethylenetetramine is closely related to ethylenediamine, which is a known respiratory sensitizer. There are a small number of case reports of occupational asthma that relate to triethylenetetramine exposure, but in most cases there was concurrent exposure to other respiratory sensitizers, in particular ethylenediamine. May be absorbed through the skin.

Name	4,4'-METHYLENEBIS(CYCLOHEXANAMINE)
Toxic Dose 1 - LD 50	625-1000 mg/kg (oral rat)
Toxic Dose 2 - LD 50	2110 mg/kg (dermal rbt)
Toxic Conc. - LC 50	NIA.

Toxicological information

Has caused skin sensitization in animals.

12 ECOLOGICAL INFORMATION

ECOTOXICITY

PRODUCT COMPONENT AS SUPPLIED

There is no data on the product itself. The following information is provided on the basis of the individual component data available. The product should not be allowed to enter soil, drains, sewers, ditches and waterways or be deposited where it can affect ground or surface waters. See also Sections 5, 6, 7, 9 and 13.

CURED PRODUCT

When mixed, applied and cured in accordance with the Belzona® Instructions For Use (IFU) the resultant polymeric coating is not considered to be dangerous for the environment.

BIOACCUMULATION

Based on the individual component data, the product is expected to bioaccumulate. Log octanol/water partition coefficient (Log Pow) is expected to be greater than 3.0.

DEGRADABILITY

Based on the individual component data, the product is not expected to be readily biodegradable according to OECD/EC guidelines.

ACUTE FISH TOXICITY

Based on the individual component data, the products LC50/EC50/IC50 are expected to be between 10 and 100 mg/l in most sensitive species.

13 DISPOSAL CONSIDERATIONS

BELZONA® 5811 (IMMERSION GRADE) SOLIDIFIER**DISPOSAL METHODS****GENERAL**

Do NOT dump into any sewers, on the ground, or into any body of water. The product as shipped in its intended condition exhibits the following 'Characteristics' of hazardous waste as defined in 40 CFR 261.20-24: 'Corrosivity'- RCRA Code: D002. Disposal must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations are the responsibility solely of the waste generator.

COMPONENT DISPOSAL

TRANSIT PACKAGING: shrink or stretch wrap, boxes and fittings that have not been contaminated with product should be re-used or recycled. **UNREACTED PRODUCT:** empty uncleaned containers and contaminated packaging should be disposed of as hazardous chemical waste. **REACTED PRODUCT:** that has been mixed and cured in accordance with the relevant 'Instructions For Use' will form an inert filled polymeric compound that may be able to be disposed of as non-hazardous solid waste. Refer to your local licensed, permitted waste agent or facility.

14 TRANSPORT INFORMATION**TRANSPORT NOTES**

Transport classification: labeling and packaging requirements may vary with pack and load size. Please refer to the current transport regulations.

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of accident or spillage.

DOT PROPER SHIPPING NAME

Amines, liquid, corrosive, n.o.s. (containing Diethylenetriamine and Triethylenetetramine mixture)

TDG SHIPPING NAME

Amines, liquid, corrosive, n.o.s. (Diethylenetriamine)

DOT HAZARD CLASS	8	DOT PACKING GROUP	III
UN NO. SEA	2735	IMDG CLASS	8
IMDG PACK GR.	III	MARINE POLLUTANT	No.
UN NO. AIR	2735	AIR CLASS	8
AIR PACK GR.	III	TDG CLASS	8
TDG PACKING GROUP	III		

15 REGULATORY INFORMATION**SARA (311/312) HAZARD CATEGORIES**

Acute

REGULATORY STATUS (US)

This product is considered "Hazardous" as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

SECTION 313: This product does not contain toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372.

U.S California Safe Drinking Water & Toxic Enforcement Act (Proposition 65): To the best of our knowledge, this product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Toxic Substance Control Act (TSCA): All constituents of this product are included on the Inventory or are not required to be listed.

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM -WHMIS**LABEL(S) FOR SUPPLY**

Materials Causing
Other Toxic
Effects.

Corrosive
Material.

CONTROLLED PRODUCT CLASSIFICATION

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (CPR SECTION 33).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

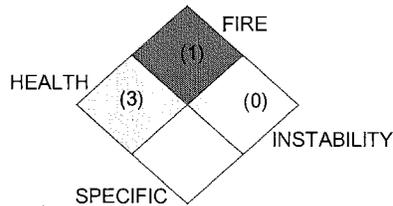
Canadian WHMIS Classification

D2A D2B E

BELZONA® 5811 (IMMERSION GRADE) SOLIDIFIER**REGULATORY STATUS (CANADA)**

Domestic Substances List (DSL) & Non-Domestic Substances List (NDSL): All constituents of this product are present on the DSL or are not required to be listed.

WHMIS Trade Secret Registry Number(s)
5017 Grant Date 5/5/2004 (Other supplier)

16 OTHER INFORMATION**NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)****GENERAL INFORMATION**

Throughout this Material Safety Data Sheet; NIA = No Information Available; N.ap = Not applicable.

REVISION COMMENTS

REVISION. This material safety data sheet has been revised in the following Section(s): All Sections. Replaces all previous versions.

Please observe the REVISION DATE. Should you be reading a material safety data sheet that is more than 24 months old or have concerns over its validity, please contact your local Belzona Distributor or Belzona direct (belzona@belzona.com) and the most current information will be sent to you.

REVISION DATE 08/04-2006

VERSION No. 1.0

SAFETY DATA SHEET STATUS

English (North American). Approved.

DISCLAIMER

To the best of our knowledge, the information contained herein is accurate. However, some of the information presented and conclusions drawn are derived from sources other than direct test data on the product itself and while Belzona Inc. believes such sources to be reliable, the information is provided without any warranty regarding its correctness.

Since Belzona Inc. has no control over the conditions under which the product will be used, liability will not be assumed to exceed replacement or refund of the purchase price of this product. Except as stated herein, there are no express or implied warranties including implied warranties of merchantability or fitness for a particular purpose. Belzona Inc. assumes no liability for injury or incidental or consequential damage arising out of the storage, handling, use or, disposal of this product.



Section 1: Product & Company Identification

Product Name: Heavy Duty Degreaser (aerosol)

Product Number (s): 03095, 03095T, 73095

Product Use: General Purpose Cleaner

Manufacturer / Supplier Contact Information:

In United States:

CRC Industries, Inc.

885 Louis Drive

Warminster, PA 18974

www.crcindustries.com

1-215-674-4300 (General)

(800) 521-3168 (Technical)

(800) 272-4620 (Customer Service)

In Canada:

CRC Canada Co.

2-1246 Lorimar Drive

Mississauga, Ontario L5S 1R2

www.crc-canada.ca

1-905-670-2291

In Mexico:

CRC Industries Mexico

Av. Benito Juárez 4055 G

Colonia Orquídea

San Luís Potosí, SLP CP 78394

www.crc-mexico.com

52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

WARNING: Vapor Harmful. Contents Under Pressure.

As defined by OSHA's Hazard Communication Standard, this product is hazardous.

Appearance & Odor: Colorless liquid, irritation odor at high concentrations.

Potential Health Effects:

ACUTE EFFECTS:

EYE: Liquid contact will produce mild eye irritation. Vapors may also cause irritation. Corneal injury is unlikely.

SKIN: Prolonged or repeated exposure can cause skin irritation, drying, flaking, defatting and possibly dermatitis or skin burns. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

INHALATION: Exposure to vapors may cause respiratory tract irritation. High concentrations may cause central nervous system depression. Symptoms include dizziness and loss of coordination and could lead to unconsciousness or death. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability.

INGESTION: Single dose toxicity is low. Swallowing an excessive amount can cause gastrointestinal disturbances and central nervous system depression. If aspirated into lungs, during swallowing or vomiting, liquid may be rapidly absorbed through the lungs and result in injury to other body systems.

CHRONIC EFFECTS: Chronic immersion of skin in this liquid may lead to absorption through skin. This may cause numbness in the immersed area. Excessive inhalation of vapors may increase sensitivity to epinephrine and increase myocardial irritability.

TARGET ORGANS: central nervous system; liver, kidney effects seen in laboratory animals

Medical Conditions Aggravated by Exposure: pre-existing skin conditions, respiratory conditions

Product Name: Heavy Duty Degreaser (aerosol)

Product Number (s): 03095, 03095T, 73095

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Tetrachloroethylene (PERC)	127-18-4	50 - 60
Trichloroethylene (TCE)	79-01-6	40 - 50
1,2-Butylene Oxide	106-88-7	< 0.5
Carbon dioxide	124-38-9	< 5

Section 4: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

Ingestion: Do NOT induce vomiting. Contact physician or poison control center.

Note to Physicians: Because rapid absorption may occur through lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary. No specific antidote.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is nonflammable in accordance with aerosol flammability definitions. (See 16 CFR 1500.3(c)(6)) However, it can be made to burn under certain conditions.

Flash Point:	None (TCC)	Upper Explosive Limit:	44.8%
Autoignition Temperature:	ND	Lower Explosive Limit:	8.0%

Fire and Explosion Data:

Suitable Extinguishing Media: Use media suitable for surrounding fire.

Products of Combustion: Hydrogen chloride, trace amounts of phosgene, chlorine, and carbon monoxide.

Explosion Hazards: Aerosol containers, when exposed to heat from fire, may build pressure and explode.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Product Name: Heavy Duty Degreaser (aerosol)

Product Number (s): 03095, 03095T, 73095

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8. Do NOT breathe vapors.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Methods for Containment & Clean-up: Dike area to contain spill. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Prevent skin and eye contact. Wash hands after use and before contacting food. Avoid breathing vapors. Vapors are heavier than air and will collect in low areas or confined spaces. Make sure ventilation removes vapors from low areas. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. For product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120°F / 49°C to prevent cans from rupturing.

Aerosol Storage Level: I

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
Tetrachloroethylene	100	NE	25	100	NE		ppm
Trichloroethylene	100	200 (v)	10	25	5	mfr	ppm
1,2-Butylene oxide	N.E.	N.E.	N.E.	N.E.	2	AIHA	ppm
Carbon dioxide	5000	30000 v	5000	30,000	NE		ppm

N.E. – Not Established

(c) – ceiling

(s) – skin

(v) – vacated

mfr – manufacturer's recommendation

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridges. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid

Product Name: Heavy Duty Degreaser (aerosol)

Product Number (s): 03095, 03095T, 73095

contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as PVA or Viton. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State: liquid

Color: colorless

Odor: solvent odor

Odor Threshold: ND

Specific Gravity: 1.544

Initial Boiling Point: 189°F / 87°C

Freezing Point: ND

Vapor Pressure: > 12 mmHg @ 68°F / 20°C

Vapor Density: > 4 (air = 1)

Evaporation Rate: very fast

Solubility: slight

Coefficient of water/oil distribution: ND

pH: NA

Volatile Organic Compounds: wt %: 43.9 g/L: 677.8 lbs./gal: 5.65

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: Avoid direct sunlight or ultraviolet sources. Avoid open flames, welding arcs, and other high temperature sources which induce thermal decomposition.

Incompatible Materials: Avoid contact with metals such as: aluminum powders, magnesium powders, potassium, sodium, and zinc powder. Avoid unintended contact with amines. Avoid contact with strong bases and strong oxidizers.

Hazardous Decomposition Products: Hydrogen chloride, trace amounts of chlorine and phosgene

Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

<u>Component</u>	<u>Oral LD50 (rat)</u>	<u>Dermal LD50 (rabbit)</u>	<u>Inhalation LC50 (rat)</u>
Tetrachloroethylene	2629 mg/kg	> 10 g/kg	5200 mg/kg/4H
Trichloroethylene	4920 mg/kg	10,000 mg/kg	12,500 ppm/4H
1,2-Butylene oxide	500 mg/kg	2100 µL/kg	6300 mg/m ³ /4H
Carbon dioxide	No data	No data	470,000 ppm/30M

Product Name: Heavy Duty Degreaser (aerosol)

Product Number (s): 03095, 03095T, 73095

ground shipping until January 1, 2014.

If shipping as limited quantity by ground, note that shipping papers are not required.

Section 15: Regulatory Information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients: tetrachloroethylene (100 lbs)
trichloroethylene (100 lbs)
1,2-butylene oxide (100 lbs)

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:

Fire Hazard	No
Reactive Hazard	No
Release of Pressure	Yes
Acute Health Hazard	Yes
Chronic Health Hazard	Yes

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
trichloroethylene (< 44%), tetrachloroethylene (< 54%), 1,2-butylene oxide (0.2%)

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): trichloroethylene, tetrachloroethylene, 1,2-butylene oxide

U.S. State Regulations:

Consumer Products VOC Regulations: This product is not compliant to be sold for use in California, Connecticut, Delaware, The District of Columbia, Illinois, Indiana, Maine, Maryland, Massachusetts, Michigan, New Jersey, New York, and Rhode Island. In other states with Consumer Products VOC Regulations, this product is compliant as a general purpose degreaser.

State Right to Know:

New Jersey: 79-01-6, 127-18-4, 124-38-9, 106-88-7
Pennsylvania: 79-01-6, 127-18-4, 124-38-9, 106-88-7
Massachusetts: 79-01-6, 127-18-4, 124-38-9, 106-88-7
Rhode Island : 79-01-6, 127-18-4, 124-38-9, 106-88-7

Canadian Regulations:

Controlled Products Regulations:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Hazard Class: A, D1B, D2A, D2B

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

Product Name: Heavy Duty Degreaser (aerosol)
Product Number (s): 03095, 03095T, 73095

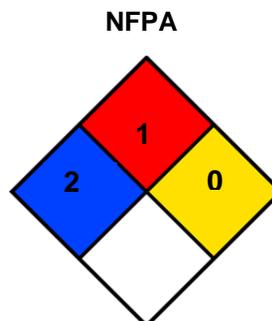
European Union Regulations:

RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

Additional Regulatory Information: None

Section 16: Other Information

HMIS® (II)	
Health:	2
Flammability:	1
Reactivity:	0
PPE:	B



Ratings range from 0 (no hazard) to 4 (severe hazard)

Prepared By: Michelle Rudnick
CRC #: 782
Revision Date: 08/01/2012

Changes since last revision: Section 14: Transport Information

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Service
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substance List
g/L: grams per Liter
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organization
lbs./gal: pounds per gallon
LC: Lethal Concentration
LD: Lethal Dose

NA: Not Applicable
ND: Not Determined
NIOSH: National Institute of Occupational Safety & Health
NFPA: National Fire Protection Association
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PMCC: Pensky-Martens Closed Cup
PPE: Personal Protection Equipment
ppm: Parts per Million
RoHS: Restriction of Hazardous Substances
STEL: Short Term Exposure Limit
TCC: Tag Closed Cup
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Information System



Material Safety Data Sheet

Section 1: Product & Company Identification

Product Name: Knock'er Loose® (Aerosol)

Product Number (s): 03020

Manufactured By:

CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
www.crcindustries.com

General Information	(215) 674-4300
Technical Assistance	(800) 521-3168
Customer Service	(800) 272-4620
24-Hr Emergency (CHEMTREC)	(800) 424-9300

Section 2: Hazards Identification

Emergency Overview

Appearance & Odor: Reddish liquid, pleasant pine odor

DANGER

Harmful or fatal if swallowed. May cause eye and skin irritation. Contents under pressure.

As defined by OSHA's Hazard Communication Standard, this product is hazardous.

Potential Health Effects:

- EYE:** Liquid may cause mild irritation including stinging, tearing and redness.
- SKIN:** Liquid may cause mild to moderate skin irritation including redness, itching, and burning. Repeated contact may cause drying and cracking of skin.
- INHALATION:** Breathing small amounts of vapor during normal handling is not likely to cause harmful effects. Breathing large amounts may cause irritation to the nose and throat as well as headache, drowsiness, dizziness, confusion, or other nervous system effects.
- INGESTION:** Swallowing small amounts during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. Main hazard is aspiration of this material into the lungs during swallowing or vomiting. This can result in lung inflammation and other lung injury.
- CHRONIC EFFECTS:** Unknown
- TARGET ORGANS:** Inadequate data available for evaluation.

Medical Conditions Aggravated by Exposure: skin or respiratory conditions

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Hydrotreated middle distillates	64742-46-7	25 - 35
Aliphatic hydrocarbon	8052-41-3	20 - 30
Dipropylene glycol n-propyl ether	29911-27-1	8 - 15
Dipropylene glycol methyl ether acetate	88917-22-0	8 - 15
Pine resin distillate	8006-64-2	8 - 15
Diisobutyl ketone	108-83-8	4 - 8
Carbon dioxide	124-38-9	1 - 3

Section 4: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

Ingestion: Do not induce vomiting due to aspiration hazard. Seek medical attention.

Note to Physicians: This material is an aspiration hazard.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is not flammable in accordance with aerosol flammability definitions (16 CFR 1500.3(c)(6)).

Flash Point (liquid):	126 F (COC)	Upper Explosive Limit:	6.0 (estimate)
Autoignition Temperature	ND	Lower Explosive Limit:	1.0 (estimate)

Suitable Extinguishing Media: Use extinguishing media appropriate for a Class B fire.

Products of Combustion: Oxides of carbon

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Methods for Containment & Clean-up: Eliminate all sources of ignition. Dike area to contain spill. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Do not use near flames, sparks or other sources of ignition. Do not use on energized equipment. If container makes contact with energized equipment it will conduct electricity. Do not heat product. Use with adequate ventilation in order to prevent vapor build-up and a flammable atmosphere. Avoid contact with skin and eyes. Avoid breathing vapors or mist.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120 F to prevent cans from rupturing.

Aerosol Storage Level: III

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
Hydrotreated middle distillates	5*	NE	5*	10*	NE		mg/m ³
Aliphatic hydrocarbon	100 (v)	NE	100	NE	NE		ppm
Dipropylene glycol n-propyl ether	NE	NE	NE	NE	NE		
Dipropylene glycol methyl ether acetate	NE	NE	NE	NE	NE		
Pine resin distillate	100	NE	20	NE	NE		ppm
Diisobutyl ketone	50	NE	25	NE	NE		ppm
Carbon dioxide	5000	30000v	5000	30000	NE		ppm
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

Engineering Controls: Area should have ventilation to provide fresh air. Use local exhaust to prevent accumulation of vapors. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations

Respiratory Protection: None required for normal work where adequate ventilation is provided. Use a NIOSH-approved cartridge respirator with organic vapor cartridge if vapors exceed exposure limits. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as nitrile or other synthetic rubbers. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State: Liquid
 Color: reddish
 Odor: pleasant pine
 Specific Gravity: 0.84
 Initial Boiling Point: 315 F
 Freezing Point: ND
 Vapor Pressure: ND
 Vapor Density: > 1 (air = 1)
 Evaporation Rate: < 1 (ether = 1)
 Solubility: negligible
 pH: NA
 Volatile Organic Compounds: wt %: 43.3 g/L: 363.7 lbs./gal: 3.0

Section 10: Stability and Reactivity

Stability: Stable
 Conditions to Avoid: heat, sources of ignition
 Incompatible Materials: strong oxidizers, strong acids
 Hazardous Decomposition Products: oxides of carbon
 Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

ACUTE EFFECTS

<u>Component</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
Hydrotreated middle distillate	LD50	> 5 g/kg	Oral	Rat
Hydrotreated middle distillate	LD50	> 2 g/kg	Dermal	Rabbit
Hydrotreated middle distillate	LC50	> 5mg/L/4H	Inhalation	Rat
Aliphatic hydrocarbons	LD50	5 g/kg	Oral	Rat
Aliphatic hydrocarbons	LD50	3 g/kg	Dermal	Rabbit

CHRONIC EFFECTS

Carcinogenicity:

	<u>Component</u>	<u>Result</u>
OSHA:	None listed	
IARC:	None listed	
NTP:	None listed	

Mutagenicity: No data available.

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity: Hydrotreated middle distillate -- 96 Hr LC50 Pimephales promelas: 35 mg/L (flow-through)
 Dipropylene glycol methyl ether acetate -- 96 Hr LC50 Pimephales promelas: 151 mg/L

Persistence / Degradability: No data available

Bioaccumulation / Accumulation: No data available

Mobility in Environment: No data available

Section 13: Disposal Considerations

Disposal: The dispensed liquid product is a RCRA hazardous waste for the characteristic of ignitability with a waste code of D001. (See 40 CFR Part 261.20 – 261.33)
Aerosol containers should be emptied and depressurized before disposal. Empty containers may be recycled or discarded. Any liquids should be collected and properly disposed.

All disposal activities must comply with federal, state and local regulations. Local regulations may be more stringent than state or national requirements.

Section 14: Transport Information

Proper shipping description:

US DOT (ground): Consumer Commodity, ORM-D

Special Provisions: None

Section 15: Regulatory Information

U.S. Federal

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients: None

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:	Fire Hazard	Yes
	Reactive Hazard	No
	Release of Pressure	Yes
	Acute Health Hazard	Yes
	Chronic Health Hazard	No

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting

requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
None

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): None

State Regulations

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: NONE

State Right to Know:

New Jersey: 8052-41-3, 8002-09-3, 8006-64-2, 108-83-8, 124-38-9
Pennsylvania: 8052-41-3, 108-83-8, 124-38-9
Massachusetts: 8052-41-3, 8006-64-2, 108-83-8, 124-38-9
Rhode Island : 8052-41-3, 8006-64-2, 108-83-8, 124-38-9

Additional Regulatory Information: This product complies with Consumer Products VOC regulations as a Penetrant.

Section 16: Other Information

NFPA: Health: 1 Flammability: 2 Reactivity: 0
HMIS: Health: 1 Flammability: 2 Reactivity: 0 PPE: B

Prepared By: Michelle Rudnick
CRC #: 548
Revision Date: 01/06/2009

Changes since last revision: Section 15: Additional Regulatory Information revised

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label.

CAS:	Chemical Abstract Service	NA:	Not Applicable
ppm:	Parts per Million	ND:	Not Determined
TCC:	Tag Closed Cup	NE:	Not Established
PMCC:	Pensky-Martens Closed Cup	g/L:	grams per Liter
PPE:	Personal Protection Equipment	lbs./gal:	pounds per gallon
TWA:	Time Weighted Average	STEL:	Short Term Exposure Limit
OSHA:	Occupational Safety and Health Administration	COC:	Cleveland Open Cup
ACGIH	American Conference of Governmental Industrial Hygienists		
NIOSH	National Institute of Occupational Safety & Health		



MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: Di-Electric Grease (aerosol)
Product Number (s): 03082, 73082
Product Use: lubricating and insulating electrical components

Manufacturer / Supplier Contact Information:

In United States:

CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
www.crcindustries.com
1-215-674-4300 (General)
(800) 521-3168 (Technical)
(800) 272-4620 (Customer Service)

In Canada:

CRC Canada Co.
2-1246 Lorimar Drive
Mississauga, Ontario L5S 1R2
www.crc-canada.ca
1-905-670-2291

In Mexico:

CRC Industries Mexico
Av. Benito Juárez 4055 G
Colonia Orquídea
San Luís Potosí, SLP CP 78394
www.crc-mexico.com
52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

DANGER: Extremely Flammable. Harmful or Fatal if Swallowed. Contents Under Pressure.
As defined by OSHA's Hazard Communication Standard, this product is hazardous.
Appearance & Odor: Translucent to opaque gel paste, solvent odor

Potential Health Effects:

ACUTE EFFECTS:

EYE: May cause mild irritation including stinging and redness, but does not injure eye.

SKIN: Contact may cause redness, itching, burning and skin damage. Prolonged or repeated contact can worsen irritation by causing drying and cracking of the skin, leading to dermatitis (inflammation).

INHALATION: High vapor concentrations are irritating to the respiratory tract and may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects, including death. May cause peripheral nervous system disorder and/or damage.

INGESTION: Low order of toxicity by ingestion. Main hazard is aspiration into the lungs during swallowing or vomiting. Small amounts aspirated into the respiratory system may cause bronchopneumonia or pulmonary edema, possibly progressing to death.

CHRONIC EFFECTS: Overexposure to n-hexane may cause progressive and potentially irreversible damage to the peripheral nervous system, particularly in the arms and legs.

TARGET ORGANS: central nervous system, peripheral nervous system, respiratory system

Medical Conditions Aggravated by Exposure: skin and respiratory conditions

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Hexane isomers	64742-49-0	25 - 35
Heptane isomers	142-82-5	25 - 35
n-Hexane	110-54-3	2.2
Silicone fluid	63148-62-9 / 68611-44-9 / 70131-67-8	5 - 15
Liquefied petroleum gas	68476-86-8	25 - 35

Section 4: First Aid Measures

- Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.
- Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.
- Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.
- Ingestion: Do NOT induce vomiting. Contact a physician immediately.
- Note to Physicians:* Treat symptomatically. Gastric lavage using a cuffed endotracheal tube may be performed at your discretion.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is extremely flammable in accordance with aerosol flammability definitions. (See 16 CFR 1500.3(c)(6)).

Flash Point: < 20°F (TCC)
Autoignition Temperature: 489°F

Upper Explosive Limit: ND
Lower Explosive Limit: ND

Fire and Explosion Data:

Suitable Extinguishing Media: Class B fire extinguishers, dry chemical, foam or CO₂

Products of Combustion: Fumes, smoke, oxides of carbon, and hydrocarbons

Explosion Hazards: Aerosol containers, when exposed to heat from fire, may build pressure and explode. Vapors may accumulate in a confined space and create a flammable atmosphere.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition. Do not spray water directly on fire; product will float and could be reignited on surface of water.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into

sewers or storm drains.

Methods for Containment & Clean-up: Dike area to contain spill. Remove all sources of ignition. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Use proper grounding and bonding procedures for transferring materials. Do not use product near any source of ignition. Avoid contact with eyes and skin. Avoid breathing vapors. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. For product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120 F to prevent cans from rupturing.

Aerosol Storage Level: III

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
Hexane isomers	500(v)	1000(v)	500	1000	NE		ppm
Heptane isomers	500	NE	400	500	NE		ppm
n-Hexane	500	NE	50(s)	NE	NE		ppm
Silicone fluid	NE	NE	NE	NE	NE		
Liquefied petroleum gas	1000	NE	1000	NE	NE		ppm
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as nitrile, PVA or Viton. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State: gel / paste
 Color: translucent to opaque
 Odor: solvent
 Odor Threshold: ND
 Specific Gravity: 0.646
 Initial Boiling Point: 140°F
 Freezing Point: ND
 Vapor Pressure: ND
 Vapor Density: > 1 (air = 1)
 Evaporation Rate: fast
 Solubility: negligible in water
 Coefficient of water/oil distribution: ND
 pH: NA
 Volatile Organic Compounds: wt %: 90.15 g/L: 582 lbs./gal: 4.85

Section 10: Stability and Reactivity

Stability: Stable
 Conditions to Avoid: Sources of ignition, temperature extremes
 Incompatible Materials: Strong oxidizers, strong acids
 Hazardous Decomposition Products: Oxides of carbon
 Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

<u>Component</u>	<u>Oral LD50 (rat)</u>	<u>Dermal LD50 (rabbit)</u>	<u>Inhalation LC50 (rat)</u>
Hexane isomers	No data	No data	No data
Heptane isomers	No data	No data	103 mg/m ³ /4H
n-Hexane	28,710 mg/kg	3000 mg/kg	48,000 ppm/4H
Silicone fluid	No data	No data	No data
Liquefied petroleum gas	No data	No data	No data

Chronic Toxicity:

<u>Component</u>	<u>OSHA Carcinogen</u>	<u>IARC Carcinogen</u>	<u>NTP Carcinogen</u>	<u>Irritant</u>	<u>Sensitizer</u>
Hexane isomers	No	No	No	E (mild) / S (mild)	Unknown
Heptane isomers	No	No	No	E (mild) / S (moderate) / R (mild)	Unknown
n-Hexane	No	No	No	E (moderate) / S (moderate) / R (moderate)	Unknown
Silicone fluid	No	No	No	No	Unknown
Liquefied petroleum gas	No	No	No	No	No

E – Eye	S – Skin	R - Respiratory
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Reproductive Toxicity: No information available
Teratogenicity: No information available
Mutagenicity: No information available
Synergistic Effects: No information available

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity: n-hexane - 48 Hr EC50 water flea: 3.87 mg/L
 96 Hr LC50 Lepomis macrochirus: 4.12 mg/L
 n-heptane - 24 Hr EC50 Daphnia magna: >10 mg/L
 Persistence / Degradability: No information available
 Bioaccumulation / Accumulation: No information available
 Mobility in Environment: No information available

Section 13: Disposal Considerations

Waste Classification: The dispensed liquid product is a RCRA hazardous waste for the characteristic of ignitability with a waste code of D001. Pressurized containers are a D003 reactive waste. (See 40 CFR Part 261.20 – 261.33)
 Empty aerosol containers may be recycled. Any liquid product should be managed as a hazardous waste.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

Section 14: Transport Information

US DOT (ground): Consumer Commodity, ORM-D
 ICAO/IATA (air): Consumer Commodity, ID8000, 9
 IMO/IMDG (water): Aerosols, UN1950, 2.1, Limited Quantity
 Special Provisions: None

Section 15: Regulatory Information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients: n-hexane (5000 lbs)

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:	Fire Hazard	Yes
	Reactive Hazard	No
	Release of Pressure	Yes
	Acute Health Hazard	Yes
	Chronic Health Hazard	Yes

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
n-hexane (2.2%)

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): n-hexane

U.S. State Regulations:

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: None

Consumer Products VOC Regulations: This product is not regulated

State Right to Know:

New Jersey: 75-83-2, 109-66-0, 78-78-4, 94-37-7, 110-54-3, 79-29-8, 68476-86-8, 142-82-5, 110-82-7
Pennsylvania: 107-83-5, 75-83-2, 110-54-3, 79-29-8, 68476-86-8, 142-82-5, 110-82-7
Massachusetts: 107-83-5, 75-83-2, 110-54-3, 79-29-8, 68476-86-8, 142-82-5, 110-82-7
Rhode Island: 110-54-3, 68476-86-8, 142-82-5, 110-82-7

Canadian Regulations:

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

WHMIS Hazard Class: A, B5, D2B

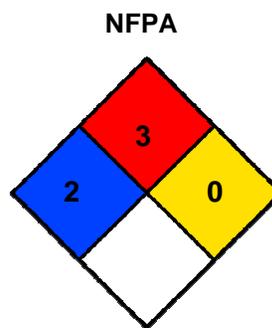
European Union Regulations:

RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

Additional Regulatory Information: None

Section 16: Other Information

HMIS® (II)	
Health:	2
Flammability:	3
Reactivity:	0
PPE:	B



Ratings range from 0 (no hazard) to 4 (severe hazard)

Prepared By: Michelle Rudnick
 CRC #: 438B
 Revision Date: 02/02/2009

Changes since last revision: MSDS reformatted to meet the requirements of the Canadian Controlled Products Regulations.

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

- | | |
|--|---|
| ACGIH: American Conference of Governmental Industrial Hygienists | NA: Not Applicable |
| CAS: Chemical Abstract Service | ND: Not Determined |
| CFR: Code of Federal Regulations | NIOSH: National Institute of Occupational Safety & Health |
| DOT: Department of Transportation | NFPA: National Fire Protection Association |
| DSL: Domestic Substance List | NTP: National Toxicology Program |
| g/L: grams per Liter | OSHA: Occupational Safety and Health Administration |
| HMIS: Hazardous Materials Identification System | PMCC: Pensky-Martens Closed Cup |
| IARC: International Agency for Research on Cancer | PPE: Personal Protection Equipment |
| IATA: International Air Transport Association | ppm: Parts per Million |
| ICAO: International Civil Aviation Organization | RoHS: Restriction of Hazardous Substances |
| IMDG: International Maritime Dangerous Goods | STEL: Short Term Exposure Limit |
| IMO: International Maritime Organization | TCC: Tag Closed Cup |
| lbs./gal: pounds per gallon | TWA: Time Weighted Average |
| LC: Lethal Concentration | WHMIS: Workplace Hazardous Materials Information System |
| LD: Lethal Dose | |

MSDS - Material Safety Data Sheet

Product Name: ENGINE BRITE HEAVY DUTY ENGINE DEGREASER
(UPC: 078698502014) (AAP SKU: 7040104)

MSDS No.: EB1

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY

Contact: Robert Geer

Address: 600 RADIATOR ROAD

Information Telephone Number: 704-684--181 1

City, ST Zip: INDIAN TRAIL, NC 28079

Emergency Contact: RMPDC (877-740-5015)

Country:

Emergency Telephone Number: 303-623-5716

Emergency Restrictions:

Product Name: ENGINE BRITE HEAVY DUTY ENGINE DEGREASER (UPC: 078698502014) (AAP SKU: 7040104)

MSDS No.: EB1

Issue Date: 07/14/2010

Supersedes Date: 03/16/2010

II. Hazards Identification:**EMERGENCY OVERVIEW**

Flammable. Harmful or Fatal if Swallowed. Eye and Skin Irritant. Contents Under Pressure.

Level 3 Aerosol

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects**Route(s) of Entry:**

Absorption, Eye, Inhalation, and Ingestion.

Health Hazards (Acute and Chronic):

See signs and symptoms below

Signs and Symptoms:

Eye Contact: Irritant. Prolonged contact may cause conjunctivitis.

Skin Contact: Irritant. Defatting of tissue, dermatitis may occur.

Inhalation: Irritant to mucous membranes. Repeated exposure may cause narcosis..

Ingestion: HARMFUL OR FATAL IF SWALLOWED.

Medical Conditions Generally Aggravated by Exposure:

None Known

Other Health Warnings:

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

Potential Environmental Effects

Not Available

III. Composition/Information on Ingredients:

Chemical Name	CAS No.	% Range	Trade Secret
Petroleum naphtha	64742-94-5	1.0 - 5.0	
1,2,4-Trimethylbenzene	95-63-6	0.1 - 1.0	
2-Butoxyethanol	111-76-2	0.1 - 1.0	
Carbon dioxide	124-38-9	1.0 - 5.0	
Naphthalene	91-20-3	1.0 - 5.0	
Petroleum distillate, Aliphatic	68476-34-6	60.0 - 100.0	
Polyoxyethylene Hexaoleate	57171-56-9	1.0 - 5.0	
Xylene (mixed isomers)	1330-20-7	0.1 - 1.0	

MSDS - Material Safety Data Sheet

***Product Name: ENGINE BRITE HEAVY DUTY ENGINE DEGREASER
(UPC: 078698502014) (AAP SKU: 7040104)***

MSDS No.: EBI

IV. First Aid Measures:

Emergency and First Aid Procedures:

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.

Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing before reuse.

Inhalation: Remove to fresh air. If breathing becomes difficult give oxygen and get prompt medical attention. If breathing stops, give artificial respiration and get prompt medical attention.

Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately. Aspiration of vomitus into the lungs can cause pneumonitis, which can be fatal.

Note to Physicians:

N/E

V. Fire Fighting Measures:

Suitable Extinguishing Media:

Water Fog, Foam, Carbon Dioxide, Dry Chemical

Unsuitable Extinguishing Media:

Do not use forced water stream as this could cause the fire to spread.

Products of Combustion:

High temperatures and ignition sources produce products of combustion: carbon monoxide, sulfur-like smoke.

Protection of Firefighters:

Wear self-contained positive pressure breathing apparatus and protective clothes. Use shield to protect from rupturing and venting containers. At elevated temperatures containers may vent, rupture or burst, even violently

VI. Accidental Release Measures:

Personal Precautions:

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental Precautions:

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred. Run off to sewer may create fire or explosion hazard.

Methods for Containment:

Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc).

Methods for Cleanup:

Using a non-metallic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material.

Other Information:

All equipment used with handling the concentrate must be grounded. If run-off occurs, notify proper authorities as required that a spill has occurred.

VII. Handling and Storage:

Handling Precautions:

Handling: Use with adequate ventilation and proper protective equipment.

Do not use near fire, sparks, or flame. Do not puncture or incinerate container. Avoid contact with eyes. Avoid prolonged or repeated breathing of vapors. If exposure may or does exceed occupational exposure limits, use a NIOSH approved respirator to prevent over-exposure.

Storage Precautions:

Store in cool, well ventilated area below 120°F away from heat sources. Do not store with oxidizers.

VIII. Exposure Controls/Personal Protection:

MSDS - Material Safety Data Sheet

**Product Name: ENGINE BRITE HEAVY DUTY ENGINE DEGREASER
(UPC: 078698502014) (AAP SKU: 7040104)**

MSDS No.: EBI

Chemical Name	OSHA PEL	ACGIH TLV	Other Limits
Petroleum distillate, Aliphatic	N/E	100 ppm	N/E
Petroleum naphtha	N/E	N/E	100 ppm
2-Butoxyethanol	25 ppm	25 ppm	Not Available
Carbon dioxide	N/AV	5000 ppm	Not Available
Naphthalene	10 ppm	10 ppm	Not Available
Xylene (mixed isomers)	100 ppm	100 ppm	Not Available
1,2,4-Trimethylbenzene	N/E	25 ppm	Not Available
Polyoxyethylene Hexaoleate	Not Available	Not Available	Not Available

Engineering Controls:

See Section above for applicable exposure limits. Use with adequate ventilation. If TLV is exceeded, wear NIOSH approved respirator.

Personal Protective Equipment:

For prolonged exposure wear protective safety glasses, gloves, and apron.

IX. Physical and Chemical Properties:

Boiling Point: 305°F

Boiling Range: Not Available

Solubility In Water: Emulifies

Flash Point: 136°F

Odor Threshold: Not Available

Vapor Density (AIR = 1): 1.2

pH Range: Not Available

Decomposition Temp: Not Available

Lower Explosive Limit: N/E

Specific Gravity (H2O = 1): 0.86

Other Information: VOC Content: <15.0%

Melting Point: N/A

Freezing Point: Not Available

Evaporation Rate (Butyl Acetate = 1): N/D

Flash Point Method: TCC

Appearance and Odor: Amber liquid with petroleum odor

Vapor Pressure (mm Hg.): N/D

Partition Coefficient: Not Available

Auto-Ignition Temp: Not Available

Upper Explosive Limit: N/E

X. Stability and Reactivity:

Stability:

Stable

Conditions to Avoid:

See Incompatible Materials below.

Incompatible Materials:

Strong oxidizing agents.

Hazardous Decomposition Products:

High temperatures and ignition sources produce products of combustion: carbon monoxide, sulfur-like smoke.

Possibility of Hazardous Reactions:

Will not occur.

MSDS - Material Safety Data Sheet**Product Name: ENGINE BRITE HEAVY DUTY ENGINE DEGREASER
(UPC: 078698502014) (AAP SKU: 7040104)**

MSDS No.: EBI

XI. Toxicological Information:

N/D

XII. Ecological Information:

N/D

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in aerosol recycling centers when empty. Before offering for recycling, empty the can by using the product according to the label. DO NOT PUNCTURE! If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations.

XIV. Transport Information:**Shipping Name:** Not Available**DOT Hazard Class:** Not Available**UN/NA#:** Not Available**DOT Subsidiary Hazard Class:** Not Available**Packing Group:** Not Available**Transportation Information:**

DOT Hazard Class: ORM-D

Shipping Name: Consumer Commodity

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for international and air shipping purposes.

ICAO/IATA (US)

Shipping Name: Aerosols

Class: 2.1

UN number: UN1950

International:

ICAO/IATA

UN number: UN1950

Shipping Name: Aerosols

Class: 2.1

IMDG

UN number: UN1950

Shipping Name: Aerosols

Class: 2.1

EmS: F-D, S-U

XV. Regulatory Information:

MSDS - Material Safety Data Sheet

**Product Name: ENGINE BRITE HEAVY DUTY ENGINE DEGREASER
(UPC: 078698502014) (AAP SKU: 7040104)**

MSDS No.: EBI

SARA 313 Reportable Chemicals:
 Aromatic Petroleum Distillate 64742-94-5
 Xylene 1330-20-70
 2-Butoxyethanol 111-76-2
 Naphthalene 91-20-3
 1,2, 4-Trimethylbenzene 95-63-6

USA TSCA: All components of this material are listed on the US TSCA Inventory.

Warning: This product contains a chemical(s) known to the State of California to cause cancer or birth defects or other reproductive harm.

State RTK Chemicals:
 Xylene 1330-20-70
 2-Butoxyethanol 111-76-2
 Naphthalene 91-20-3

XVI. Other Information:

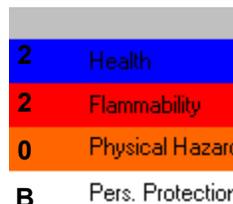
Chemical State: Liquid Gas Solid
Chemical Type: Pure Mixture
Hazard Category:
 Acute Chronic Fire
 Pressure Reactive



Additional Manufacturer Warnings:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

N/E: Not Established
 N/D: Not Determined
 N/A: Not Applicable
 N/AV: Not Available



Additional Product Information:

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



GLADE® AIR FRESHENER - CLEAN LINEN™

Version 2.0

Print Date 06/17/2011

Revision Date 05/31/2011

MSDS Number 350000004693
SITE_FORM Number
30000000000000004005.001

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Trade name : GLADE® AIR FRESHENER - CLEAN LINEN™

Use of the Substance/Mixture : Air Freshener

Company : S.C. Johnson and Son, Limited
1 Webster Street
Brantford ON N3T 5R1

Emergency telephone number : 24 Hour Transport & Medical Emergency Phone (866) 231-5406
24 Hour International Emergency Phone (952) 852-4647
24 Hour Canadian Transport Emergency Phone (CANUTEC) (613) 996-6666

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance / Odor : clear / aerosol / pleasant

Immediate Concerns

: Caution
Avoid contact with skin, eyes and clothing.
Keep away from heat, sparks and flame.
Contents under pressure.
Do not puncture or incinerate.
Do not store at temperatures above 120 Deg. F (50 Deg C), as container may burst.

Potential Health Effects

Exposure routes : Eye, Skin, Inhalation, Ingestion.

Eyes : May cause:
Mild eye irritation

Skin : Prolonged or repeated contact may dry skin and cause irritation.

Inhalation : Intentional misuse by deliberately concentrating and inhaling contents can be harmful or fatal.

Ingestion : May cause irritation to mouth, throat and stomach.
May cause abdominal discomfort.

Aggravated Medical : Persons with pre-existing skin disorders may be more

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according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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Condition susceptible to irritating effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous chemicals present at or above reportable levels as defined by OSHA 29 CFR 1910.1200 or the Canadian Controlled Products Regulations are listed in this table:

Chemical Name	CAS-No.	Weight percent
Isobutane	75-28-5	10.00 - 30.00
Propane	74-98-6	5.00 - 10.00

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

- Eye contact : Rinse with plenty of water. Get medical attention if irritation develops and persists.
- Skin contact : Rinse with plenty of water. Get medical attention if irritation develops and persists.
- Inhalation : Remove to fresh air. If breathing is affected, get medical attention.
- Ingestion : Rinse mouth with water.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Specific hazards during fire fighting : Aerosol Product - Containers may rocket or explode in heat of fire.
- Further information : Fight fire from maximum distance or protected area. Cool and use caution when approaching or handling fire-exposed containers. Wear full protective clothing and positive pressure self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.
- Flash point : < -6.8 °C
< 19.76 °F
Method: Tag Closed Cup (TCC)
Note: Propellant

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Lower explosion limit : Note: no data available
Upper explosion limit : Note: no data available
NFPA Classification : NFPA Level 1 Aerosol

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Remove all sources of ignition.
Wear personal protective equipment.
Environmental precautions : Outside of normal use, avoid release to the environment.
Methods for cleaning up : If damage occurs to aerosol can:
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Use only non-sparking equipment.
Clean residue from spill site.

7. HANDLING AND STORAGE

Handling

Advice on safe handling : Do not puncture or incinerate.
Avoid breathing vapors, mist or gas.
Do not spray toward face.
Do not use in areas without adequate ventilation.
Note: Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. For more information visit www.inhalant.org.
Use only as directed.
KEEP OUT OF REACH OF CHILDREN AND PETS.

Advice on protection against fire and explosion : Keep away from heat and sources of ignition.

Storage

Requirements for storage areas and containers : Do not store at temperatures above 120 Deg. F (50 Deg C), as container may burst.
Keep in a dry, cool and well-ventilated place.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components	CAS-No.	mg/m3	ppm	Non-standard units	Basis
Isobutane	75-28-5	-	1,000 ppm	-	ACGIH TWA
Propane	74-98-6	-	1,000 ppm	-	ACGIH TWA

Personal protective equipment

Respiratory protection

Industrial setting : No personal respiratory protective equipment normally required.

Household setting : Use only with adequate ventilation.

Hand protection : No special requirements.

Eye protection

Industrial setting : No special requirements.

Household setting : Avoid contact with eyes.

Skin and body protection : No special requirements.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : aerosol
Color : clear
Odor : pleasant
pH : not applicable

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Boiling point	:	not applicable
Freezing point	:	not applicable
Flash point	:	< -6.8 °C < 19.76 °F Method: Tag Closed Cup (TCC) Propellant
Evaporation rate	:	no data available
Autoignition temperature	:	not applicable
Lower explosion limit	:	no data available
Upper explosion limit	:	no data available
Vapour pressure	:	no data available
Density	:	0.84 g/cm ³
Water solubility	:	completely soluble
Partition coefficient: n-octanol/water	:	no data available
Viscosity, dynamic	:	no data available
Volatile Organic Compounds (California Air Resource Board – CARB) Total VOC (wt. %)	:	24.6 % - does not include any applicable regulatory exemptions

10. STABILITY AND REACTIVITY

Conditions to avoid	:	Heat, flames and sparks.
Materials to avoid	:	Strong oxidizing agents
Hazardous decomposition products	:	Thermal decomposition can lead to release of irritating gases and vapours.
Hazardous reactions	:	Stable under recommended storage conditions.

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11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50
estimated
> 5,000 mg/kg

Acute inhalation toxicity : LC50
estimated
> 2 mg/l

Acute dermal toxicity : LD50
estimated
> 2,000 mg/kg

Chronic effects

Carcinogenicity : no data available

Mutagenicity : no data available

Reproductive effects : no data available

Teratogenicity : no data available

Sensitisation : no data available

12. ECOLOGICAL INFORMATION

Ecotoxicity effects : no data available

13. DISPOSAL CONSIDERATIONS

Observe all applicable Federal, Provincial and State regulations and Local/Municipal ordinances regarding disposal.
Consumer may discard empty container in trash, or recycle where facilities exist.

RCRA waste class : D001 (Ignitable Waste)

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14. TRANSPORT INFORMATION

Land transport

- **U.S. DOT and Canadian TDG Surface Transportation:**

Proper shipping name UN 1950 AEROSOLS, Flammable, 2.1
|| Class: 2.1
UN number 1950
Packaging group: None.
Note: Limited quantities derogation may be applicable to this product, please check transport documents.

Sea transport

- *IMDG:*

Proper shipping name UN 1950 AEROSOLS, Flammable, 2.1
|| Class: 2
|| UN number: 1950
Packaging group: None.
|| EmS: F-D, S-U
Note: Limited quantities derogation may be applicable to this product, please check transport documents.

Air transport

- *ICAO/IATA:*

Proper shipping name UN 1950 AEROSOLS, Flammable, 2.1
|| Class: 2.1
|| UN/ID No.: UN 1950
Packaging group: None.
Note: SC Johnson typically does not ship products via air, therefore it has not been determined if the product container meets current IATA/ICAO package criteria. Refer to IATA/ICAO Dangerous Goods Regulations for detailed instructions when shipping this item by air.

15. REGULATORY INFORMATION

Notification status : All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Notification status : All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

California Prop. 65 : This product is not subject to the reporting requirements under California's Proposition 65.

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Canada Regulations : This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

HMIS Ratings

Health	1
Flammability	4
Reactivity	0

NFPA Ratings

Health	1
Fire	4
Reactivity	0
Special	

Further information

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by:

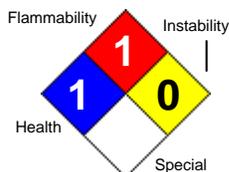
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Regulatory Affairs (GSARA)

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HEALTH		1
FLAMMABILITY		1
PHYSICAL HAZ.		0
PPE		X



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Supersedes Revision: 04/13/2010

1. Product and Company Identification

Product Code: 2465.1
Product Name: Goof Off 2
Manufacturer Information
Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113
Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892
Web site address: www.wmbarr.com
Preparer Name: W.M. Barr EHS Dept (901)775-0100
Intended Use: Multi-Purpose Remover for grease, tar, ink, paint, adhesive, etc.
Synonyms
FG641, FG641TEMP

2. Hazards Identification

GHS Precaution Phrases

Avoid breathing mist/vapors/spray. Wash hands thoroughly after handling.

Emergency Overview

CAUTION: Eye Irritant.

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

Health Hazards (Acute and Chronic)

This material has not been tested as a whole for health effects. Effects listed are those of the individually listed ingredients in this msds.

Eyes:

May cause irritation. May cause moderate corneal injury. Effects may include discomfort or pain, and redness. Effects may be slow to heal.

Skin:

Brief contact may cause slight skin irritation with local redness. Repeated exposure may cause irritation, even a burn. May cause more severe response on covered skin (under clothing, gloves).

Inhalation:

When used as directed, the consumer is not expected to experience any exposure effects. Excessive exposure may cause irritation to the upper respiratory tract. Symptoms may include a headache, dizziness, or nausea.

Ingestion:

Moderately toxic if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury. However, swallowing larger amounts may cause injury.

Target Organs: Blood (Hemolysis), Kidneys, Liver, Central Nervous System.

Primary Routes of Entry: Inhalation, Ingestion

Signs and Symptoms Of Exposure

See Potential Health Effects.

Medical Conditions Generally Aggravated By Exposure

None known.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration
1. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	3.0 -7.0 %
2. Benzenemethanol {Benzyl alcohol}	100-51-6	5.0 -10.0 %
3. Diethylene glycol monobutyl ether {2-(2-Butoxyethoxy)ethanol {(a glycol ether)}	112-34-5	1.0 -5.0 %
4. Propylene glycol phenyl ether {(not 313)}	770-35-4	1.0 -5.0 %

4. First Aid Measures

Emergency and First Aid Procedures

Skin:

Remove contaminated clothing. Immediately wash skin thoroughly with large amounts of water and mild soap, if available. Seek medical attention if irritation develops or persists.

Eyes:

Immediately begin to flush eyes with water, remove any contact lens. Continue to flush the eyes for at least 15 minutes. Seek medical attention.

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

Ingestion:

If swallowed, do NOT induce vomiting. Seek immediate medical attention. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

5. Fire Fighting Measures

Flammability Classification:

Not flammable or combustible

Flash Pt:

> 200.00 F Method Used: Setaflash Closed Cup (Rapid Setaflash)

Explosive Limits:

LEL: none UEL: none

Special Fire Fighting Procedures

Material is not flammable or combustible. No special fire fighting instructions required.

Unusual Fire and Explosion Hazards

No data available.

Hazardous Combustion Products

Material should not burn. Combustion product will be from surrounding materials involved in fire.

Suitable Extinguishing Media

Non-combustible liquid - use extinguishing media for underlying cause of fire.

Unsuitable Extinguishing Media

None known.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled

Prevent entry into waterways, sewers, or confined areas. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to compatible containers for proper disposal. For large spills, dike ahead of the spill.

7. Handling and Storage

Precautions To Be Taken in Handling

Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. A source of clean water should be kept in the immediate work area for flushing of the eyes and skin.

Follow all MSDS/label precautions even after container is emptied because they may retain product residues.

Precautions To Be Taken in Storing

Keep containers closed when not in use. Store in a cool, dry place, out of direct sunlight.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	50 ppm	20 ppm	No data.
2. Benzenemethanol {Benzyl alcohol}	100-51-6	No data.	No data.	No data.
3. Diethylene glycol monobutyl ether {2-(2-Butoxyethoxy)ethanol {(a glycol ether)}	112-34-5	No data.	No data.	No data.
4. Propylene glycol phenyl ether {(not 313)}	770-35-4	No data.	No data.	No data.

Respiratory Equipment (Specify Type)

When used by the consumer following directions for use and with adequate ventilation, respiratory protection is not expected to be needed.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

If the work area is not properly ventilated to keep airborne levels below their exposure limits, you must use a properly fitted and maintained NIOSH approved respirator for organic vapors. A dust mask does not provide protection against vapors.

Eye Protection

Where contact with the eyes or face is likely from spraying or splashing, safety glasses, a faceshield or chemical goggles should be worn to prevent eye contact.

Protective Gloves

When used as directed, protective gloves should not be required. For prolonged or repeated contact, wear gloves with as much resistance to the chemical ingredients as possible. Glove materials such as natural rubber or nitrile rubber provide protection. Glove selection should be based on chemicals being used and conditions of use. Consult your glove supplier for additional information.

Other Protective Clothing

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure.

Ventilation

Ventilation is normally not required when handling or using this product to keep exposure to airborne contaminants below the exposure limit.

Good general ventilation should be sufficient to control airborne levels.

Work/Hygienic/Maintenance Practices

Wash hands thoroughly after use and before eating, drinking, or smoking. Do not eat, drink, or smoke in the work area. Discard any clothing or other protective equipment that cannot be decontaminated.

9. Physical and Chemical Properties

Physical States:	[] Gas [X] Liquid [] Solid
Melting Point:	28.00 F
Boiling Point:	212.00 F
Autoignition Pt:	No data.
Flash Pt:	> 200.00 F Method Used: Setaflash Closed Cup (Rapid Setaflash)
Explosive Limits:	LEL: none UEL: none
Specific Gravity (Water = 1):	0.995
Density:	8.277 LB/GL
Bulk density:	No data.
Vapor Pressure (vs. Air or mm Hg):	< 0.1 MM HG
Vapor Density (vs. Air = 1):	> 1
Evaporation Rate (vs Butyl Acetate=1):	< 1
Solubility in Water:	Complete
Percent Volatile:	~ 87 % by weight.
VOC / Volume:	4.0000 % WT
Heat Value:	No data.
Particle Size:	No data.
Corrosion Rate:	No data.
pH:	8.3 - 9

Appearance and Odor

Slight yellow to clear, transparent, almond-like odor.

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability

None known.

Incompatibility - Materials To Avoid

Strong oxidizing agents, isocyanates, acetaldehyde, aluminum alkyl compounds and strong mineral acids.

Hazardous Decomposition Or Byproducts

Carbon monoxide, carbon dioxide

Possibility of Hazardous Reactions: Will occur [] Will not occur [X]

Conditions To Avoid - Hazardous Reactions

None known.

11. Toxicological Information

Material has not been tested as a whole. Data is for individual ingredients.

Acute Toxicity:

2-Butoxyethanol:

LD50 Rat oral 1.48 g/kg

LD50 Rabbit oral 0.32 g/kg

LD50 Rabbit dermal 400 mg/kg

LC50 Rat (male) inhalation 486 ppm/4 hr /from table/

LC50 Mouse inhalation 700 ppm/7 hr /from table/

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LD50 Rabbit (male) iv 280 mg/kg /from table/

Benzyl Alcohol:

LD50 Rat oral 3.1 g/kg

LD50 Rabbit oral 1.94 g/kg

LC50 Rat inhalation 1000 ppm/8 hr

Diethylene Glycol Monobutyl Ether:

LD50 Mouse oral 2400 mg/kg bw

LD50 Rat oral 4500 mg/kg bw

LD50 Rabbit dermal 2700 mg/kg bw

Skin Corrosion/Irritation:

2-Butoxyethanol is irritating to the eyes, the skin and the respiratory tract.

Diethylene Glycol Monobutyl Ether: When humans were patch tested with undiluted material, a limited number of the volunteers developed reddening of the skin. The substance is not corrosive to the skin, eyes, or respiratory tract.

Serious Eye Damage/Irritation:

Studies have shown that undiluted benzyl alcohol was moderately irritating when applied to the depilated skin of guinea pigs for 24 hr. It was moderately irritating when applied to rabbit skin. Benzyl alcohol was severely irritating to the eyes of rabbits.

Respiratory or Skin Sensitization: No Data Available.

Aspiration Hazard: No Data available.

Chronic Toxicological Effects

Material has not been tested as a whole. Data is for individual ingredients.

Germ Cell Mutagenicity:

2-Butoxyethanol: In vitro genetic toxicity studies were predominantly negative. Animal genetic toxicity studies were negative.

Reproductive Toxicity/Birth Defects/Developmental Effects:

2-Butoxyethanol: In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

STOT-Single Exposure: No data available.

STOT-Repeated Exposure: No data available.

Carcinogenicity/Other Information

No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Ethanol, 2-Butoxy- (Ethylene glycol n-butyl ether, (a glycol ether))	111-76-2	Possible	2B	A3	No

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Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
2. Benzenemethanol {Benzyl alcohol}	100-51-6	n.a.	n.a.	n.a.	n.a.
3. Diethylene glycol monobutyl ether {2-(2-Butoxyethoxy)ethanol {(a glycol ether)}	112-34-5	n.a.	n.a.	n.a.	n.a.
4. Propylene glycol phenyl ether {(not 313)}	770-35-4	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

Not determined for this product as a whole.

Toxicity:

2-Butoxyethanol: Material is moderately toxic to aquatic organisms on an acute basis. LC50 Rainbow trout, 96 hr, 1,700 mg/L; LC50, water flea daphnia magna, 835 mg/L; EC50, Green Alga, biomass growth inhibition, 72 hr, 911 mg/L; LC50 Bacteria, >1000 mg/L

Persistence and Degradability:

2-Butoxyethanol: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Benzyl Alcohol is easily biodegradable by biological sewage treatment

Bioaccumulative Potential:

2-Butoxyethanol: Bioconcentration potential is low (BCF less than 100 or LOG POW less than 3).

Diethylene glycol monobutyl ether: According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

An estimated BCF of 1 was calculated for benzyl alcohol(SRC), using a log Kow of 1.1(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low.

Mobility in Soil:

2 -Butoxyethanol: Potential for mobility in soil is high (KOC between 50 and 150).

Benzyl alcohol is expected to have very high mobility in soil.

Diethylene glycol mono-n-butyl ether is expected to have very high mobility in soil(SRC).

Other Adverse Effects: None known.

13. Disposal Considerations

Waste Disposal Method

Dispose of in accordance with all applicable local, state, and federal regulations. Do not dump into sewers or allow to enter waterways.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name Not regulated by D.O.T.

Additional Transport Information

The shipper/supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these

exceptions.

For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

15. Regulatory Information

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	No	No	Yes-Cat. N230	No
2. Benzenemethanol {Benzyl alcohol}	100-51-6	No	No	No	No
3. Diethylene glycol monobutyl ether {2-(2-Butoxyethoxy)ethanol {(a glycol ether)}	112-34-5	No	No	Yes-Cat. N230	No
4. Propylene glycol phenyl ether {(not 313)}	770-35-4	No	No	No	No

US EPA CAA, CWA, TSCA

Hazardous Components (Chemical Name)	CAS #	EPA CAA	EPA CWA NPDES	EPA TSCA	CA PROP 65
1. Ethanol, 2-Butoxy- {Ethylene glycol n-butyl ether, (a glycol ether)}	111-76-2	HAP, ODC ()	No	Inventory	No
2. Benzenemethanol {Benzyl alcohol}	100-51-6	HAP, ODC ()	No	Inventory	No
3. Diethylene glycol monobutyl ether {2-(2-Butoxyethoxy)ethanol {(a glycol ether)}	112-34-5	HAP, ODC ()	No	Inventory	No
4. Propylene glycol phenyl ether {(not 313)}	770-35-4	HAP, ODC ()	No	Inventory, 8A PAIR, 8D TERM	No

EPA Hazard Categories:

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

- Yes No Acute (immediate) Health Hazard
- Yes No Chronic (delayed) Health Hazard
- Yes No Fire Hazard
- Yes No Sudden Release of Pressure Hazard
- Yes No Reactive Hazard

16. Other Information

Company Policy or Disclaimer

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.



The Clorox Company
 1221 Broadway
 Oakland, CA 94612
 Tel. (510) 271-7000

Material Safety Data Sheet

I Product:	LEMON FRESH CLOROX® DISINFECTING WIPES	
Description:	MOISTENED TOWELETTE WITH CITRUS FRAGRANCE	
Other Designations	Distributor	Emergency Telephone Nos.
EPA Reg. No. 5813-58	Clorox Sales Company 1221 Broadway Oakland, CA 94612	For Medical Emergencies call: (800) 446-1014 For Transportation Emergencies Chemtrec (800) 424-9300

II Health Hazard Data	III Hazardous Ingredients														
<p><u>Eye Contact:</u> Can cause moderate eye irritation.</p> <p><u>Ingestion:</u> IF SWALLOWED- Drink a glassful of water. Call a physician or poison control center.</p> <p><u>Skin Contact:</u> Prolonged skin contact may produce minor irritation.</p> <p>FIRST AID: EYES- Flush with plenty of water. Call a physician if irritation persists. IF SWALLOWED- Drink a glassful of water. Call a physician or poison control center. SKIN- Wash thoroughly with soap and water after handling. INHALATION- If breathing is effected, move to fresh air.</p> <p>Under normal consumer use conditions the likelihood of any adverse health effects are low.</p>	<table border="1"> <thead> <tr> <th>Ingredient</th> <th>Concentration</th> <th>Worker Exposure Limit</th> </tr> </thead> <tbody> <tr> <td>n-Alkyl (C14, 60%; C16, 30% C12, 5%; C18, 5%) dimethylbenzyl ammonium chloride</td> <td>0.145%</td> <td>Not established</td> </tr> <tr> <td>n-Alkyl(C12, 68%, C14, 32%) Dimethyl Ethylbenzyl ammonium chloride</td> <td>0.145%</td> <td>Not established</td> </tr> <tr> <td>Isopropanol CAS #67-63-0</td> <td>1- 5%</td> <td>200 ppm/400 ppm¹ 400 ppm²</td> </tr> </tbody> </table> <p>¹TLV-TWA- Threshold Limit Value-Time Weighted Average. ²STEL- Short Term Exposure Limit ²PEL- OSHA Permissible Exposure Limit</p> <p>None of the ingredients in this product are on the IARC, NTP or OSHA carcinogen lists.</p>	Ingredient	Concentration	Worker Exposure Limit	n-Alkyl (C14, 60%; C16, 30% C12, 5%; C18, 5%) dimethylbenzyl ammonium chloride	0.145%	Not established	n-Alkyl(C12, 68%, C14, 32%) Dimethyl Ethylbenzyl ammonium chloride	0.145%	Not established	Isopropanol CAS #67-63-0	1- 5%	200 ppm/400 ppm ¹ 400 ppm ²		
Ingredient	Concentration	Worker Exposure Limit													
n-Alkyl (C14, 60%; C16, 30% C12, 5%; C18, 5%) dimethylbenzyl ammonium chloride	0.145%	Not established													
n-Alkyl(C12, 68%, C14, 32%) Dimethyl Ethylbenzyl ammonium chloride	0.145%	Not established													
Isopropanol CAS #67-63-0	1- 5%	200 ppm/400 ppm ¹ 400 ppm ²													

IV Special Protection and Precautions	V Transportation and Regulatory Data
<p>No special protection or precautions have been identified for using this product under directed consumer use conditions.</p> <p>The following recommendations are given for production facilities and for other conditions and situations where there is increased potential for accidental, large-scale or prolonged exposure.</p> <p><u>Hygienic Practices-</u> Wear safety glasses. Use rubber or nitrile gloves if in contact liquid, especially for prolonged periods.</p> <p><u>Engineering Controls:</u> Use general ventilation to minimize exposure to vapor or mist.</p> <p><u>Work Practices:</u> Avoid eye and skin contact and inhalation of vapor or mist. Avoid contact with food. Not for personal cleansing.</p> <p>KEEP OUT OF THE REACH OF CHILDREN</p>	<p><u>U.S. DOT, IATA, IMG Hazard Class:</u> Not restricted.</p> <p><u>U.S. DOT Proper Shipping Name:</u> None</p> <p><u>EPA- SARA Title III/CERCLA:</u> Product may be regulated under Sections 311/312. This product contains no chemicals regulated under Section 304/CERCLA or Section 313.</p> <p><u>TSCA/DSL:</u> All chemicals in this product are listed on the TSCA Inventory. The DSL status for some components has not been determined.</p>

VI Spill Procedures/Waste Disposal	VII Reactivity Data
<p><u>Spill Procedures:</u> Absorb and containerize. Wash residual down to sanitary sewer. Contact the sanitary treatment facility in advance to assure ability to process washed down material.</p> <p><u>Waste Disposal:</u> Disposal must be made in accordance with applicable federal, state and local regulations.</p>	<p><u>Stability:</u> Mixing with sodium hypochlorite may release small amounts of formaldehyde gas.</p> <p><u>Storage/Disposal:</u> Do not use or store near heat or open flame.</p>

VIII Fire and Explosion Data	IX Physical Data
<p>Flashpoint: >119°F Method: Closed cup. Unusual Fire and Explosion Hazards: None</p>	<p>Flashpoint..... >119°F Specific Gravity 0.99 g/cc. pH..... 5.0-6.0 Solubility in WaterLiquid is completely dispersible</p>



Revision 4

MATERIAL SAFETY DATA SHEET
Anti Spatter Spray

Revision Date: 3/24/09

Supersedes: 11/25/08

MAWT

Section 1 – Identification

Product Name: Anti Spatter Spray
Part Number: 02116, C02116
Chemical Name: Water / surfactant mixture
Product Use: A water-based emulsion for releasing welding spatter.
Manufacturer Information: LPS Laboratories, 4647 Hugh Howell Rd., Tucker, GA, USA 30084
TEL: 1 770-243-8800
Emergency Telephone Number: 1-800-424-9300 Chemtrec;
Outside U.S.: (703) 527-3887
FAX: 1 770-243-8899
Website: <http://www.lpslabs.com>

PLAIN LANGUAGE HAZARD SUMMARY

Material Safety Data Sheets can be confusing. Federal and State laws require us to include a great deal of technical information that probably won't help the non-professional. LPS includes this "PLAIN LANGUAGE HAZARD SUMMARY" to address the questions and concerns of the average worker. If you have additional health, safety or product questions, don't hesitate to call us at 800/241-8334.

Worker Toxicity

LPS Anti-Spatter spray is a non-silicone, water-based material which casts a liquid film. It is a non-flammable, water-based emulsion containing a vegetable-derived agent designed for releasing welding spatter. It is not a hazardous substance as defined by 29CFR 1910.1200. For more exposure and first aid information, refer to MSDS Sections 2, 8 and 11.

Flammability

LPS Anti-Spatter spray does not have a flash point, and is non-flammable. Please refer to handling and storage section for further information

Disposal

Dispose of in accordance with local, state and federal regulations. See section 13 for more details.



Revision 4

MATERIAL SAFETY DATA SHEET

Anti Spatter Spray

Revision Date: 3/24/09

Supersedes: 11/25/08

Section 2 • Hazards Identification

This material is considered non-hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Emergency Overview: Contents under pressure. Keep away from heat, sparks, and flame.

Primary route(s) of entry: Inhalation, eyes, skin.

Potential Acute Health Effects:

- Eyes:** Liquid may cause temporary irritation.
- Skin:** Repeated or prolonged contact may cause drying and defatting of skin.
- Inhalation:** May irritate mucosal tissue at high concentrations.
- Ingestion:** Not a likely route of exposure. Ingestion may result in nausea, abdominal discomfort, or diarrhea.

Potential Chronic Health Effects:

- Carcinogenic Effects:** NTP: No IARC: No OSHA: No
- Mutagenic Effects:** None
- Teratogenic Effects:** None
- Medical conditions aggravated by exposure:** None known.

Signs and Symptoms

Stinging in eyes. Repeated or prolonged skin contact can cause redness, irritation, and scaling of the skin (dermatitis).

Section 3 – Composition / Information on Ingredients

LPS Anti-Spatter is a fatty ester in an aqueous base. It is not a hazardous substance as defined by 29CFR 1910.1200. This preparation contains no ingredients at or above 0.1% that is classified as hazardous.

Section 4 – First Aid Measures

- Eyes:** Check for and remove contact lenses. If irritation or redness develops, flush eyes with cool, clean, low pressure water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid tissue. Do not use eye ointment. Seek medical attention if irritation takes place.
- Skin:** If irritation takes place, remove clothing and launder before reuse. Wash skin with soap and rinse with water for at least 15 minutes. Seek medical attention if irritation persists.
- Inhalation:** If liquid is inhaled and this causes irritation or some other health effect, immediately move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If breathing is difficult, seek medical attention immediately.
- Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Do not leave victim unattended. Seek medical attention immediately.



Revision 4

MATERIAL SAFETY DATA SHEET

Anti Spatter Spray

Revision Date: 3/24/09

Supersedes: 11/25/08

Section 5 – Fire Fighting Measures

Products of Combustion: Carbon Monoxide and Carbon Dioxide.

Firefighting media:

Small Fire: Use DRY chemical powder.

Large Fire: Foam, dry chemical, carbon dioxide. Cool containing vessels with water jet in order to prevent pressure build-up, auto ignition or explosions.

Sensitivity to Impact: None

Sensitivity to Static Discharge: None

Protection Clothing (Fire): Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.

Special Remarks on Explosion Hazards: Aerosols may explode upon heating.

Section 6 – Accidental Release Measures

Containment Procedures **Small Spill and Leak:** Absorb with an inert material and dispose of properly.

Large Spill and Leak: Absorb with an inert material and dispose of properly.

Clean-Up Procedures Wear appropriate personal protective equipment. Absorb spill with an inert material such as clay, vermiculite or diatomaceous earth. Place slurry in an approved chemical waste container for disposal. Wash spill area with detergent and water. Before discharging rinse water to sanitary sewer system, consult local regulations.

Evacuation Procedures Ventilate area of leak or spill. Keep unnecessary and unprotected people away.

Special Procedures Ventilate area. Wear appropriate protective equipment during cleanup.

Section 7 – Handling and Storage

Handling procedures; DO NOT spray into or around ignition sources. After handling, always wash hands thoroughly with soap and water. Use only with adequate ventilation. Use appropriate personal protective equipment and avoid direct contact with skin.

Storage Precautions: Keep container in a cool, well-ventilated area. DO NOT store near sources of ignition (spark or flame). Store below 120°F. Keep out of the reach of children.



Revision 4

MATERIAL SAFETY DATA SHEET
Anti Spatter Spray

Revision Date: 3/24/09

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Section 8 – Exposure Controls / Personal Protection

Engineering measures Provide local and/or general exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits.

Personal protective equipment

Eye protection None normally anticipated. Safety goggles/Glasses should be worn if there is possibility of splashing.

Hand protection Use protective gloves as needed to prevent prolonged or repeated contact.

Respiratory protection None required.

Section 9 • Physical and Chemical Properties

Appearance:	Liquid	Color:	Straw, Opaque, Milky
Odor/Taste:	Bland	Vapor Pressure:	Not Established
Solubility Description:	Soluble in water	Evaporation Rate:	1(Water =1)
Boiling Point:	98.9°C (210°F)	Flash Point (°C):	None
Specific Gravity (Water=1):	0.985	Flash Point Method:	TCC
Vapor Density (air=1):	Not Established	Auto Ignition Temperature (°C):	Not Established
Flammable limits (estimated):	Not Established	Partition Coefficient (octanol/water):	Not Established
pH:	8.5 – 9.0	% Volatility volume:	25%

Section 10 – Chemical Stability and Reactivity

Chemical Stability: Product is stable under recommended storage conditions.

Conditions to Avoid: Extreme heat and freezing.

Incompatibility: None under typical use circumstances. Reacts with substances that react with water.

Hazardous Decomposition: Will not occur.

Hazardous Polymerization: Will not occur.

Section 11 – Toxicological Information

A: General Product Information

An acute toxicity study of this product has not been conducted. Information given in this section relates only to individual constituents contained in this preparation.

B: Component Analysis

This preparation contains no ingredients at or above 0.1% that is classified as hazardous.



MATERIAL SAFETY DATA SHEET

Anti Spatter Spray

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Section 12 – Ecological Information

Mobility: Low volatility. Will absorb into soil. **Persistence and degradability:** 100% biodegradable / inert.

Bioaccumulative potential: No bioaccumulation potential **Other adverse effects:** None known.

Section 13 – Disposal Considerations

Waste Status: Aerosol products, if depressurized and emptied to less than 2.5 cm of fluid contents are classified as non-hazardous waste under 40 CFR 261.7 (U.S.). If disposed of in its received form, an aerosol carries waste codes D003. (U.S.).

Disposal: Waste must be disposed of in accordance with national, regional, provincial, and local environmental control regulations.

Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information inaccurate, incomplete, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive than federal laws and regulations.

Section 14 – Transportation Information

D.O.T. Ground	Shipping Name:	Consumer Commodity	UN Number:	NA
	Hazard Class:	ORM-D	Technical Name:	NA
	Subclass:	NA	Hazard Label:	ORM-D Already on box
Road/Rail - ADR/RID :	UN no:	1950	ADR Class:	2
	Packing group:	N/A	Classification code:	5A
	Name and Description:	AEROSOLS, asphyxiant	Hazard ID no:	N/A
	Labeling:	2.2		
IMDG-IMO	UN no:	1950	Class:	2.2
	Shipping Name:	AEROSOLS	Subsidiary Risk:	N/A
	Labeling:	Non-flammable Gas	Packing group:	N/A
	Marine pollutant:	NO	EmS:	F-D, S-U
IATA-ICAO:	UN no:	1950	Class:	2.2
	Shipping Name:	Aerosols, non-flammable	Subclass:	N/A
	Packing group:	203, Y203 (Ltd. Qty.)	Packing instructions:	N/A
	Labeling:	Non-Flammable gas		



Revision 4

MATERIAL SAFETY DATA SHEET

Anti Spatter Spray

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Section 15 – Regulatory Information

U.S. Federal Regulations

RCRA Hazardous Waste No.: D003

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA): None

Toxic Substances Control Act (TSCA):

All components of this product are TSCA inventory listed and/or are exempt.

Superfund Amendments and Reauthorization Act (SARA) Title III

SARA Section 311/312 (40 CFR 370) Hazard Categories:

Sudden Release of Pressure

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372): None

Section 112 Hazardous Air Pollutants (HAPs): None

State Regulations

California: This product does not contain chemical(s) known to the State of California to cause cancer, birth defects or reproductive harm.

California and OTC States: This product is not regulated by consumer product regulations.

New Jersey Right to Know:

Water 7732-18-5 • Lecithin 8002-43-5 • Nitrogen 7727-37-9 • Nonylphenoxyethoxyethanol 127087-87-0 • 2-Amino-2-methyl-1-propanol 124-68-5

International Regulations

Canadian Environmental Protection Act: All of the components of this product are included on the Canadian Domestic Substances list (DSL).

Canadian Workplace Hazardous Materials Information System WHMIS:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Classification: Class A



Montreal Protocol listed ingredients:	None.
Stockholm Convention listed ingredients:	None.
Rotterdam Convention listed ingredients:	None.
RoHS Compliant:	Yes.



Revision 4

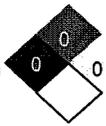
MATERIAL SAFETY DATA SHEET

Anti Spatter Spray

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Section 16 • Other Information

MSDS#12116 Responsible Name: Clea Johnson Regulatory Affairs Coordinator	HMIS 1996		HMIS III		<p>NFPA Flammability</p>  <p>Health 0 0 Reactivity</p>
	Health:	0	Health:	0	
	Flammability:	0	Flammability:	0	
	Reactivity:	0	Physical Hazard:	2	

Notice to Reader:

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Clea L Johnson, Regulatory Affairs Coordinator
LPS Laboratories
A division of Illinois Tool Works

MATERIAL SAFETY DATA SHEET

U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200

The Steco Corporation
2330 Cantrell Road
P.O. Box 2238
Little Rock, AR 72203

Emergency Response: (800) 255-3924
Information: (800) 643-8026
Fax: (501) 374-4278
Date Reviewed: **August 15, 2011**

TRADE NAME	TAP MAGIC PROTAP Cutting Fluid
CHEMICAL NAME & SYNONYMS	Hydrocarbon Mixture
DOT SHIPPING NAME	Not a Regulated Material
IATA SHIPPING NAME	No hazard label required, no limit on quantity
HMSI/NFPA CODE	Health 0; Fire 1; Reactivity 0
MANUFACTURING CODE NO.:	8358
COMMODITY CODE NO.:	332-9150

I. HAZARDOUS INGREDIENTS

This product contains no toxic or hazardous ingredients by OSHA criteria; however, as with any chemical product, exposure to liquids, vapors, mists and fumes should be minimized.

II. INGREDIENTS

Aliphatic Organic Acid	:	CAS# 112-80-1	>75% mixture
Aliphatic Organic Ester	:	CAS# 112-62-9	<15% mixture
Organic Polyol	:	CAS# None Assigned	<10% mixture

III. PHYSICAL DATA

BOILING RANGE, (760 mm Mercury)	:	680 to 1000° F
SPECIFIC GRAVITY (Water = 1) (lbs/gal)	:	(0.894) 7.46 lbs/gal
VAPOR PRESSURE (mm of Mercury) @ 75° F	:	Less Than 1
VAPOR DENSITY (Air = 1)	:	Greater Than 5
SOLUBILITY IN WATER, % by weight	:	Less Than 1 (Insoluble)
EVAPORATION RATE (Butyl Acetate = 1)	:	Less Than 0.01
% VOLATILE BY VOLUME @ 75° F	:	Less Than 1
APPEARANCE	:	Yellow Liquid
ODOR	:	Pleasant
pH	:	Nonaqueous

IV. FIRE & EXPLOSION DATA

LOWER FLAMMABLE LIMIT IN AIR (% by Volume)	:	1.0
UPPER FLAMMABLE LIMIT IN AIR (% by Volume)	:	15
FLASH POINT, PMCC	:	370° F
AUTOIGNITION TEMPERATURE	:	685° F
EXTINGUISHING MEDIA	:	Foam, Carbon Dioxide, Dry Chemical

V. HEALTH HAZARD INFORMATION

ROUTES OF ENTRY	:	Ingestion is the primary method of possible entry.
EFFECTS OF ACUTE OVEREXPOSURE:		INHALATION: (Unlikely due to low vapor pressure). Mist may cause headache, nasal, respiratory and eye irritation. INGESTION: Headache, drowsiness, nausea, fatigue. EYES: May cause pain and irritation.

EFFECTS OF CHRONIC OVEREXPOSURE: **SKIN CONTACT:** Prolonged or repeated exposure may cause irritation.

CARCINOGENICITY : Not a carcinogen or suspect carcinogen.

EMERGENCY AND FIRST AID PROCEDURES:**EYE:** Flush eyes gently with water for at least 15 minutes. Supportive treatment is recommended.

SKIN: Wash with mild soap and water. Remove wetted clothing.

INHALATION: Remove to fresh air.

INGESTION: Do not induce vomiting. Call a physician and/or transport to emergency medical facility.

VI. REACTIVITY DATA

Materials such as sawdust or cloth rags which have been wetted with lubricant may be subject to spontaneous combustion during storage.

VII. DISPOSAL, SPILL OR LEAK PROCEDURES

AQUATIC TOXICITY : Aquatic toxicity is low: Product is not soluble in water. Biodegradable.

SPILL OR LEAK PROCEDURES: Absorb with inert materials. Remove to out of doors and incinerate.

WASTE DISPOSAL METHOD : PROTAP contains no environmentally hazardous substances. Small amounts may be incinerated in compliance with local, state and federal regulations. The recommended method of disposal for large quantities is recycling by a reclaimer or incineration. "If inert absorbents are employed in spill containment or cleanup, these absorbents must be non-biodegradable materials if destined for landfill disposal. Suitable absorbents include natural minerals (clay), activated charcoal, man-made polymers (HD polyethylene)."

VIII. SPECIAL PROTECTION INFORMATION

EYE PROTECTION: Standard eye protection should be worn when using this product.

SKIN PROTECTION: No special protection is needed. However, good personal hygiene practices should be followed.

RESPIRATORY: If application to which this product is being applied generates excessive mist or fumes, then appropriate respiratory protective equipment should be used. No special requirements under ordinary condition and use and proper ventilation of work area.

VENTILATION: No special requirements under ordinary conditions of use and with adequate ventilation.

IX. SPECIAL PRECAUTIONS

Product is ignitable, keep away from open flames. Do not expose to ignition sources. Do not store with strong oxidizers such as nitrates or perchlorates or oxygen under pressure. May cause swelling of some plastics and synthetic rubbers.

X. ADDITIONAL INFORMATION

Tap Magic PROTAP DOES NOT CONTAIN 1,1,1-trichloroethane or any ozone depleting substances. PROTAP does not contain chlorine, phosphorous, active sulfur, nitrates, nitrite derivatives, amines, polynuclear aromatic compounds either as ingredients or trace contaminants. Shelf life is indefinite at ambient temperatures and left in original containers.

Tap Magic PROTAP does not contain any chemical compound listed on the SARA list of 'Extremely Hazardous Chemicals', and is in compliance with all of the requirements of the TSCA at the time of shipment.

Caution: Any cutting fluid can be "overworked" or "overheated", causing it to break down. This overuse is identified by the sight of or strong odor of vapors or fumes not normally present. The effects of these vapors or fumes on human health have not been fully determined. After use of this product, clean and lubricate

metal surfaces to avoid staining and/or corrosion.

By: Asa L. Morton, Chief Chemist, American Interplex Corporation, Little Rock, AR 72204, (501) 224-5060

CRC MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: Brakleen® Non-Chlorinated Brake Parts Cleaner (bulk)
50 State Formula

Product Number (s): 05051, 05052, 05053

Product Use: Brake parts cleaner

Manufacturer / Supplier Contact Information:

In United States:

CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
www.crcindustries.com
1-215-674-4300 (General)
(800) 521-3168 (Technical)
(800) 272-4620 (Customer Service)

In Canada:

CRC Canada Co.
2-1246 Lorimar Drive
Mississauga, Ontario L5S 1R2
www.crc-canada.ca
1-905-670-2291

In Mexico:

CRC Industries Mexico
Av. Benito Juárez 4055 G
Colonia Orquídea
San Luis Potosí, SLP CP 78394
www.crc-mexico.com
52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

DANGER: Extremely Flammable. Vapors May Cause Flash Fires. Harmful or fatal if swallowed. Eye and Skin Irritant.

Appearance & Odor: Clear colorless liquid, solvent odor

Potential Health Effects:

ACUTE EFFECTS:

EYE: Eye irritant. Contact may cause moderate to severe eye irritation including stinging, watering and redness.

SKIN: Skin irritant. Contact may cause redness, itching, burning, and skin damage. Prolonged or repeated contact can worsen irritation by causing drying and cracking of the skin, leading to dermatitis (inflammation).

INHALATION: Low to moderate degree of toxicity by inhalation. Effects of overexposure may include irritation to the respiratory tract and signs of nervous system depression (headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue).

INGESTION: Main hazard is aspiration. This material can enter lungs during swallowing or vomiting and cause lung inflammation and damage. Swallowing this material may also cause nausea and diarrhea. Acetone poisoning may result in liver and kidney damage.

CHRONIC EFFECTS: Exposure to high concentrations of this material may increase the sensitivity of the heart to certain drugs. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TARGET ORGANS: Liver, kidney, central nervous system

Medical Conditions Aggravated by Exposure: Skin disorders, respiratory (asthma-like) disorders

Product Name: Brakleen® Non-Chlorinated Brake Parts Cleaner (bulk) 50 State Formula
Product Number (s): 05051, 05052, 05053

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Heptane isomers	142-82-5	5 - 15
Acetone	67-64-1	85 - 95

Section 4: First Aid Measures

- Eye Contact:** Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.
- Skin Contact:** Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.
- Inhalation:** Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.
- Ingestion:** Do NOT induce vomiting or give anything by mouth because material can enter the lungs and cause severe lung damage. Seek medical attention immediately.
- Note to Physicians:** Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents. The use of other drugs with less arrhythmogenic potential should be considered.

Section 5: Fire-Fighting Measures

Flammable Properties: As defined by OSHA, this product is a Class 1B flammable liquid.
Flash Point: < 0°F / -18°C (TCC) Upper Explosive Limit: 12.8
Autoignition Temperature: 869°F / 465°C Lower Explosive Limit: 2.5

Fire and Explosion Data:

- Suitable Extinguishing Media:** Dry chemical, carbon dioxide or foam is recommended.
- Products of Combustion:** Oxides of carbon
- Explosion Hazards:** Containers, when exposed to heat from fire, may build pressure and rupture. Vapors may accumulate in a confined space and create a flammable atmosphere.
- Protection of Fire-Fighters:** Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition. Avoid spreading burning liquid with water used for cooling purposes.

Section 6: Accidental Release Measures

- Personal Precautions:** Use personal protection recommended in Section 8.
- Environmental Precautions:** Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Product Name: Brakleen® Non-Chlorinated Brake Parts Cleaner (bulk) 50 State Formula
Product Number (s): 05051, 05052, 05053

Methods for Containment & Clean-up: Eliminate all potential sources of ignition. Dike area to contain spill. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Do not use on or around any potential sources of ignition or live equipment. Wash thoroughly after use and before handling food. Use proper grounding and bonding procedures when transferring material. For product use instructions, please see the product label.

Storage Procedures: Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Keep away from incompatible material.

Aerosol Storage Level: NA

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
Heptane isomers	500	NE	400	500	NE		ppm
Acetone	750 (v)	1000 (v)	500	750	NE		ppm

N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as nitrile, PVA or Viton®. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State: liquid
Color: clear, colorless
Odor: solvent
Odor Threshold: ND

Product Name: Brakleen® Non-Chlorinated Brake Parts Cleaner (bulk) 50 State Formula
Product Number (s): 05051, 05052, 05053

Specific Gravity: 0.780
Initial Boiling Point: 132°F / 56°C
Freezing Point: < -100°F / -73°C
Vapor Pressure: ND
Vapor Density: 2 (air = 1)
Evaporation Rate: fast
Solubility: slightly soluble in water
Coefficient of water/oil distribution: ND
pH: NA
Volatile Organic Compounds: wt %: 10 g/L: 78 lbs./gal: 0.65

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: Sources of ignition, temperature extremes

Incompatible Materials: Avoid contact with acids and oxidizers such as chlorine and other halogens, chromates, perchlorates, peroxides and oxygen.

Hazardous Decomposition Products: Oxides of carbon

Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

<u>Component</u>	<u>Oral LD50 (rat)</u>	<u>Dermal LD50 (rabbit)</u>	<u>Inhalation LC50 (rat)</u>
Heptane isomers	> 5000 mg/kg	> 3000 mg/kg	3400 ppm/4H
Acetone	5800 mg/kg	> 5000 mg/kg	> 16,000 ppm/4H

Chronic Toxicity:

<u>Component</u>	<u>OSHA Carcinogen</u>	<u>IARC Carcinogen</u>	<u>NTP Carcinogen</u>	<u>Irritant</u>	<u>Sensitizer</u>
Heptane isomers	No	No	No	Skin	No
Acetone	No	No	No	Eye	No

Reproductive Toxicity: No information available

Teratogenicity: No information available

Mutagenicity: No information available

Synergistic Effects: No information available

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Product Name: Brakleen® Non-Chlorinated Brake Parts Cleaner (bulk) 50 State Formula
Product Number (s): 05051, 05052, 05053

Ecotoxicity: n-heptane - 24 Hr EC50 Daphnia magna: >10 mg/L
acetone - 48 Hr EC50 Daphnia magna: 12600 mg/L
Persistence / Degradability: No information available
Bioaccumulation / Accumulation: No information available
Mobility in Environment: No information available

Section 13: Disposal Considerations

Waste Classification: This product is a RCRA hazardous waste for the characteristic of ignitability with the following potential waste codes: D001, F003. (See 40 CFR Part 261.20 – 261.33)
Empty containers may be recycled. Any liquid product should be managed as a hazardous waste.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

Section 14: Transport Information

US DOT (ground): UN1993, Flammable liquids, N.O.S. (Acetone & Heptane), 3, PGII
ICAO/IATA (air): UN1993, Flammable liquids, N.O.S. (Acetone & Heptane), 3, PGII
IMO/IMDG (water): UN1993, Flammable liquids, N.O.S. (Acetone & Heptane), 3, PGII
Special Provisions: None

Section 15: Regulatory Information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients: Acetone (5000 lbs)

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:	Fire Hazard	Yes
	Reactive Hazard	No
	Release of Pressure	No
	Acute Health Hazard	Yes
	Chronic Health Hazard	No

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
None

Product Name: Brakleen® Non-Chlorinated Brake Parts Cleaner (bulk) 50 State Formula
Product Number (s): 05051, 05052, 05053

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): None

Occupational Safety and Health Administration:

This product is regulated by the Hazard Communications Standard.

U.S. State Regulations:

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: toluene (< 0.005%)

Consumer Products VOC Regulations: In states with Consumer Products VOC regulations, this product is compliant as a Brake Cleaner.

State Right to Know:

New Jersey: 142-82-5, 67-64-1
Pennsylvania: 142-82-5, 67-64-1
Massachusetts: 142-82-5, 67-64-1
Rhode Island : 142-82-5, 67-64-1

Canadian Regulations:

Controlled Products Regulations:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Hazard Class: B2, D2B

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

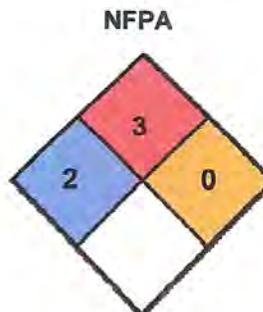
European Union Regulations:

RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

Additional Regulatory Information: None

Section 16: Other Information

HMIS® (II)	
Health:	2
Flammability:	3
Reactivity:	0
PPE:	B



Ratings range from 0 (no hazard) to 4 (severe hazard)

Prepared By: Michelle Rudnick
CRC #: 920B
Revision Date: 01/15/2013

Product Name: Brakleen® Non-Chlorinated Brake Parts Cleaner (bulk) 50 State Formula
Product Number (s): 05051, 05052, 05053

Changes since last revision: Section 11: Toxicological Information
Section 14: Transport Information
Section 15: State Right to Know

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

ACGIH: American Conference of Governmental Industrial Hygienists	NA: Not Applicable
CAS: Chemical Abstract Service	ND: Not Determined
CFR: Code of Federal Regulations	NIOSH: National Institute of Occupational Safety & Health
DOT: Department of Transportation	NFPA: National Fire Protection Association
DSL: Domestic Substance List	NTP: National Toxicology Program
g/L: grams per Liter	OSHA: Occupational Safety and Health Administration
HMIS: Hazardous Materials Identification System	PMCC: Pensky-Martens Closed Cup
IARC: International Agency for Research on Cancer	PPE: Personal Protection Equipment
IATA: International Air Transport Association	ppm: Parts per Million
ICAO: International Civil Aviation Organization	RoHS: Restriction of Hazardous Substances
IMDG: International Maritime Dangerous Goods	STEL: Short Term Exposure Limit
IMO: International Maritime Organization	TCC: Tag Closed Cup
lbs./gal: pounds per gallon	TWA: Time Weighted Average
LC: Lethal Concentration	WHMIS: Workplace Hazardous Materials Information System
LD: Lethal Dose	

MATERIAL SAFETY DATA SHEET

MSDS 0011

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	RectorSeal No. 5	HMIS CODES	Health 1 Flammability 2 Reactivity 0 PPI B
PRODUCT CODES	25112, 25191, 25271, 25300, 25431, 25551, 25552, 25631, 25633, 25780, 25790, 25793		
CHEMICAL FAMILY	Organic		
USE	Pipe Thread Sealant		
MANUFACTURER'S NAME	The RectorSeal Corporation 2601 Spenwick Drive Houston, Texas 77055 USA	EMERGENCY TELEPHONE NO.	Chemtrec 24 Hours (800)424-9300 USA (703)527-3887 International
DATE OF VALIDATION	January 9, 2013	TECHNICAL SERVICE TELEPHONE NO.	(800)231-3345 or (713)263-8001
DATE OF PREPARATION	January 9, 2013		

Section 2 -- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

OSHA Hazards
Combustable

TARGET ORGANS
Not Classified

GHS CLASSIFICATION

PHYSICAL HAZARDS
Combustable liquid (Category 4)

HEALTH HAZARDS

Acute Toxicity:
Oral: Not Classified
Dermal: Not Classified
Inhalation: Not Classified
Skin Corrosion/Irritation: Not Classified
Serious Eye Damage/Eye Irritation: Not Classified
Skin Sensitization: Not Classified
Respiratory Sensitization: Not Classified
Germ Cell Mutagenicity: Not Classified
Carcinogenicity: See Section 11
Reproductive Toxicology: Not Classified
Target Organ Systemic Toxicity - Single Exposure: Not Classified
Target Organ Systemic Toxicity - Repeated Exposure: Not Classified
Aspiration Toxicity: Not Classified

GHS Label elements, including precautionary statements

Pictogram: Harmful / Irritant

Signal Word: Warning

Hazard Statements

H303 - May be harmful if swallowed.
H313 - May be harmful in contact with skin.
H335 + H336 - May cause respiratory irritation, and drowsiness or dizziness.

Precautionary Statements

P102 - Keep out of reach of children.
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P240 - Ground/Bond container and receiving equipment
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P262 - Do not get in eyes, on skin, or on clothing.
P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P362 - Take off contaminated clothing and wash before reuse.
EUH066 - Repeated exposure may cause skin dryness or cracking

Precautionary Statements - EU No. 1272/2008

SUMMARY OF ACUTE HAZARDS

Irritation to eyes, nose and throat; drowsiness, narcosis, tremors and other CNS effects at high concentration.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION

Nasal and respiratory irritation, dizziness, narcosis, headache, nausea, CNS depression and unconsciousness.

EYE CONTACT

Watering, blurred vision, inflammation and irritation which can result in corneal injury.

SKIN CONTACT

Irritation, dermatitis.

INGESTION

Nausea, vomiting; CNS depression; irritation of gastrointestinal tract, liver and peritoneal wall; lung congestion.

SUMMARY OF CHRONIC HAZARDS

Skin irritation and dermatitis. Possible liver and kidney damage.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with pre-existing or chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver or kidneys may have increased susceptibility to excessive exposures.

=====
Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS
=====

INGREDIENT: Diacetone Alcohol

PERCENTAGE BY WEIGHT: 20-30

CAS NUMBER: 123-42-2

EC# : 204-626-7
=====

Section 4 -- FIRST AID MEASURES
=====

If INHALED: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

If on SKIN: Wash with soap and water. If irritation occurs, seek medical attention.

If in EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

If SWALLOWED: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

=====
Section 5 -- FIRE FIGHTING MEASURES
=====

EXTINGUISHING MEDIA

Foam, dry chemical, carbon dioxide or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus (SCBA) and other protective clothing. Hazardous decomposition products possible (see Section 10).

UNUSUAL FIRE AND EXPLOSION HAZARDS: Combustible - moderate flash point.

Vapors heavier than air and may travel along the ground or to low spots at considerable distances to a source of ignition resulting in potential flashback. Burning liquid may float on water. Heat may build up pressure and rupture containers.

=====
Section 6 -- ACCIDENTAL RELEASE MEASURES
=====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. Use absorbent materials to prevent footing hazard and to contain. Ventilate area with natural or explosion-proof, forced air ventilation. Avoid flushing into sewers, drains, waterways, and soil. Wear protective clothing and respiratory protection during cleanup.

=====
Section 7 -- HANDLING AND STORAGE
=====

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use. Do not store near heat, sparks, or open flames.

OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues; treat as if full and observe all products precautions. Do not reuse empty containers.

KEEP OUT OF REACH OF CHILDREN.

=====
Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION
=====

INGREDIENT UNITS

Diacetone Alcohol

ACGIH TLV 50 ppm

OSHA PEL 50 ppm
=====

RESPIRATORY PROTECTION (SPECIFY TYPE): In confined poorly ventilated areas, use NIOSH/MSHA approved air purifying or supplied air purifying or supplied air respirators.

VENTILATION - LOCAL EXHAUST: Acceptable

SPECIAL: Explosion-proof equipment.

MECHANICAL (GENERAL): Preferable

OTHER: N/A

PROTECTIVE GLOVES: Wear rubber gloves.

EYE PROTECTION: Chemical splash goggles (ANSI Z-87.1 or equivalent)

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls recommended.

WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 322 F (161 C) @ 760mm Hg
SPECIFIC GRAVITY (H2O = 1): 1.38
VAPOR PRESSURE (mm Hg): 0.3 @ 68 F (20 C)
MELTING POINT: N/A
VAPOR DENSITY (AIR = 1): 1.1
EVAPORATION RATE (ETHYL ACETATE = 1): 0.14
APPEARANCE/ODOR: Yellow Paste/Mild Odor
SOLUBILITY IN WATER: 23%
VOLATILE ORGANIC COMPOUNDS(VOC)Content (Theoretical Percentage By Weight): 23% or (317 g/L)
Flash POINT: 150 F (65 C) SETA CC
LOWER EXPLOSION LIMIT: N/D
UPPER EXPLOSION LIMIT: N/D

Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: Heat, sparks, open flames, and strong oxidizing. Temperatures above 500 F (260 C).
INCOMPATIBILITY (MATERIALS TO AVOID): Gaseous oxygen, strong oxidizing materials, molten alkali metals.
HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO2 and fragmented hydrocarbons.
HAZARDOUS POLYMERIZATION: Will not occur.

Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS
No ingredients in this product is an IARC, NTP or OSHA Lister carcinogen.

TOXICOLOGY DATA

Ingredient Name

Diacetone Alcohol

Oral-Rat LD50:4000 mg/kg
Inhalation-Human TCLO: 100 ppm

Section 12 -- Ecological Information

ECOLOGICAL DATA

Ingredient Name

Diacetone Alcohol

Food Chain Concentration Potential N/A
WATERFOWL TOXICITY N/A
BOD N/A
AQUATIC TOXICITY N/A

Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: Non-regulated solid waste
Disposal Method: Approved landfill
Waste from this product is not considered hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

Section 14 -- TRANSPORTATION INFORMATION

DOT: Non-Regulated
OCEAN (IMDG): Non-Regulated
AIR (IATA): Non-Regulated
WHMIS (CANADA): Non-Regulated

Section 15 -- REGULATORY INFORMATION

REGULATORY DATA

Ingredient Name

Diacetone Alcohol

SARA 313 N/A
TSCA Inventory Yes
CERCLA RQ N/A

RCRA Code N/A

=====
Section 16 -- OTHER INFORMATION

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001

=====
 Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

	HMIS CODES
PRODUCT NAME	Health 1
RectorSeal T Plus 2	Flammability 1
	Reactivity 0
PRODUCT CODES	PPI B
23112, 23191, 23271, 23391, 23431, 23551, 23552, 23631, 23633, 23710, 23714	
CHEMICAL FAMILY:	
Organic	
USE	
Pipe Thread Sealant	
MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
The RectorSeal Corporation	Chemtrec 24 Hours
2601 Spenwick Drive	(800)424-9300 USA
Houston, Texas 77055 USA	001-527-3887 International
DATE OF VALIDATION	TECHNICAL SERVICE TELEPHONE NO.
April 5, 2012	(800)231-3345 or (713)263-8001
DATE OF PREPARATION	
April 5, 2012	

 =====
 Section 2 -- HAZARDS IDENTIFICATION

GHS CLASSIFICATION

PHYSICAL HAZARDS: None

HEALTH HAZARDS

Acute Toxicity:

Oral: Not Classified

Dermal: Not Classified

Inhalation: Not Classified

Skin Corrosion/Irritation: Not Classified

Serious Eye Damage/Eye Irritation: Not Classified

Respiratory or Skin Sensitization: Not Classified

Germ Cell Mutagenicity: Not Classified

Carcinogenicity: Not Classified

Reproductive Toxicology: Not Classified

Target Organ Systemic Toxicity - Single Exposure: Not Classified

Target Organ Systemic Toxicity - Repeated Exposure: Not Classified

Aspiration Toxicity: Not Classified

ENVIRONMENTAL HAZARDS

Hazardous to the Aquatic Environment: Not Classified

Acute aquatic toxicity: Not Classified

Chronic aquatic toxicity: Not Classified

Bioaccumulation potential: Not Classified

Rapid degradability: Not Classified

GHS Label elements, including precautionary statements

Pictogram: None

Signal Word: None

Hazard Statements: None

Precautionary Statements:

P102 - Keep out of reach of children.

P264 - Wash hands thoroughly after handling.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

LABELING SYMBOLS: None

RISK R-PHRASES: None

SAFETY S-PHRASES:

S2 : Keep out of the reach of children.

 SUMMARY OF ACUTE HAZARDS

May produce slight to moderate skin and eye irritation.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION

None known.

EYE CONTACT

Irritation, watering may occur.

SKIN CONTACT

Frequent or prolonged contact may irritate and cause dermatitis.

INGESTION

May cause nausea and vomiting. Not expected to produce toxic effects unless large amounts are ingested.

SUMMARY OF CHRONIC HAZARDS

None known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with pre-existing or chronic diseases of the eyes, skin or persons with chemical sensitivity may have increased susceptibility to excessive exposures.

Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS
None as defined by OSHA Hazard Communication Standard 29 CFR 1910.1200.			

Section 4 -- FIRST AID MEASURES

If INHALED: N/A

If on SKIN: Wash with soap and water. Seek medical attention if irritation persists.

If in EYES: Flush with large amounts of water. Get medical attention if irritation persists.

If SWALLOWED: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Section 5 -- FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Foam, dry chemical, carbon dioxide or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus (SCBA) and other protective clothing. Hazardous decomposition products possible (see Section 10).

UNUSUAL FIRE AND EXPLOSION HAZARDS: Heat may build up pressure and rupture closed containers. Above 500 F (260 C) the fumes are acutely toxic.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wipe or scrape up spilled material to prevent footing hazard and place in trash.

Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use.

OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues; treat as if full and observe all products precautions. Do not reuse empty containers. KEEP OUT OF REACH OF CHILDREN.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE): None required.

VENTILATION - LOCAL EXHAUST: N/A

SPECIAL: N/A

MECHANICAL (GENERAL): N/A

OTHER: N/A

PROTECTIVE GLOVES: Wear rubber gloves.

EYE PROTECTION: Chemical splash goggles (ANSI Z-87.1 or equivalent)

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls recommended.

WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	N/D
SPECIFIC GRAVITY (H2O = 1):	1.32
VAPOR PRESSURE (mm Hg):	< 1 @ 77 F (25 C)
MELTING POINT:	N/A
VAPOR DENSITY (AIR = 1):	N/A
EVAPORATION RATE (ETHYL ACETATE = 1):	N/A
APPEARANCE/ODOR:	White Paste/Slight Odor
SOLUBILITY IN WATER:	Negligible
VOLATILE ORGANIC COMPOUNDS(VOC)Content (Theoretical Percentage By Weight):	0% or (0 g/L)

FLASH POINT >300 F (149 C) SETA CC
LOWER EXPLOSION LIMIT N/D
UPPER EXPLOSION LIMIT N/D

=====
Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: None known.
INCOMPATIBILITY (MATERIALS TO AVOID): Gaseous oxygen and strong oxidizing materials.
HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO2 and fragmented hydrocarbons.
HAZARDOUS POLYMERIZATION: Will not occur.

=====
Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS
No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA

Ingredient Name

Oral-Rat LD50: N/A

Inhalation-Rat LC50: N/A

=====
Section 12 -- Ecological Information

ECOLOGICAL DATA

Ingredient Name

Food Chain Concentration Potential N/A

WATERFOWL TOXICITY N/A

BOD N/A

AQUATIC TOXICITY N/A

=====
Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: Non-regulated solid waste
Disposal Method: Approved landfill
Waste from this product is not considered hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

=====
Section 14 -- TRANSPORTATION INFORMATION

DOT: Non-Regulated

OCEAN (IMDG): Non-Regulated

AIR (IATA): Non-Regulated

WHMIS (CANADA): Non-Regulated

=====
Section 15 -- REGULATORY INFORMATION

REGULATORY DATA

Ingredient Name

SARA 313 N/A

TSCA Inventory All components listed

CERCLA RQ N/A

RCRA Code N/A

=====
Section 16 -- OTHER INFORMATION

LABELING SYMBOLS: None
RISK R-PHRASES: None
SAFETY S-PHRASES:
S2 : Keep out of the reach of children.

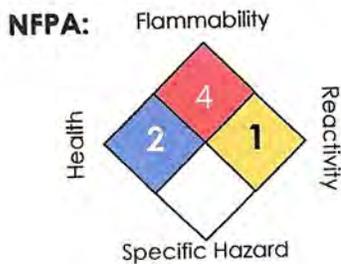
This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001

Material Safety Data Sheet
HHS-K

Version 4.0

Revision Date 03/13/2013

Print Date 03/19/2013



HMIS III:

HEALTH	2*
FLAMMABILITY	4
PHYSICAL	1

0 = Insignificant, 1 = Slight,
 2 = Moderate, 3 = High, 4 = Extreme

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Commercial Product Name : HHS-K
 Product code : 0893106050
 MSDS-Identcode : 10039787
 Product Use Description : Polishing agent and lubricant
 Company : Wurth USA Inc.
 93 Grant St.
 07446 Ramsey, NJ
 USA
 Telephone : +1 201 825 27 10
 Telefax : +1 201 825 16 43
 Responsible/issuing person : prodsafe@wuerth.com
 Emergency telephone number : +1 800 255 3924

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Regulatory status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Signal Word : DANGER
 Form : aerosol
 Colour : brown
 Odour : solvent-like
 Odour - Control parameters : no data available

Carcinogenicity:
ACGIH

: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP

: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC

: low boiling point hydrogen treated naphtha (CAS-No.: 64742-49-0)

OSHA

: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

CA Prop 65

: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Material Safety Data Sheet

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Version 4.0

Revision Date 03/13/2013

Print Date 03/19/2013

Hazard Summary : Extremely flammable.
May cause fire.
Possible cancer hazard
Pressurized container. Protect from sunlight and do not
expose to temperatures exceeding 50°C / 122 °F.
Irritant

Potential Health Effects

Target Organs : Eyes
Skin
Respiratory system
Central nervous system

Eyes : May cause eye irritation.

Skin : May cause skin irritation.

Material Safety Data Sheet

HHS-K

Version 4.0

Revision Date 03/13/2013

Print Date 03/19/2013

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight percent- Weight percent
low boiling point hydrogen treated naphtha	64742-49-0	>= 35 - < 40
isobutane	75-28-5	>= 25 - < 35
propane	74-98-6	>= 3 - < 5
n-hexane	110-54-3	>= 1.5 - < 2
butane	106-97-8	>= 1.5 - < 2

SECTION 4. FIRST AID MEASURES

- General advice : If you feel unwell, seek medical advice (show the label where possible). First aider needs to protect himself. Move out of dangerous area. Never give anything by mouth to an unconscious person. Take off contaminated clothing and shoes immediately.
- Inhalation : If breathed in, move person into fresh air. In the case of inhalation of aerosol/mist consult a physician if necessary. Keep patient warm and at rest. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
- Skin contact : In case of contact, immediately flush skin with soap and plenty of water. Do NOT use solvents or thinners. If skin irritation persists, call a physician.
- Eye contact : Protect unharmed eye. If easy to do, remove contact lens, if worn. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- Ingestion : If swallowed, seek medical advice immediately and show this container or label. If swallowed, DO NOT induce vomiting. If a person vomits when lying on his back, place him in the recovery position.

SECTION 5. FIREFIGHTING MEASURES

- Form : aerosol
- Ignition temperature : ca.350 °C (662 °F)
- Lower explosion limit : 1.8 %(V)
- Upper explosion limit : 11.2 %(V)

Material Safety Data Sheet

HHS-K

Version 4.0

Revision Date 03/13/2013

Print Date 03/19/2013

- Suitable extinguishing media : Dry powder
Foam
Carbon dioxide (CO₂)
Water mist
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not use a solid water stream as it may scatter and spread fire.
Hazardous decomposition products may be formed under fire conditions (see section 10).
Exposure to decomposition products may be a hazard to health.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.
- Further information : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
In the event of fire and/or explosion do not breathe fumes.
Use water spray to cool unopened containers.
Collect contaminated fire extinguishing water separately.
This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Refer to protective measures listed in sections 7 and 8.
Use personal protective equipment.
Remove all sources of ignition.
Avoid contact with skin and eyes.
Ensure adequate ventilation, especially in confined areas.
-

Material Safety Data Sheet

HHS-K

Version 4.0

Revision Date 03/13/2013

Print Date 03/19/2013

Contaminated surfaces will be extremely slippery.
Immediately evacuate personnel to safe areas.
Avoid inhalation of vapour or mist.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions : Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities. Avoid release to the environment. Refer to special instructions/ Safety data sheets.

Methods for cleaning up : Clean contaminated surface thoroughly. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

CERCLA Hazardous substances and corresponding RQs:

110-54-3	5,000 lbs <i>final RQ</i>
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SECTION 7. HANDLING AND STORAGE**Handling**

Handling : Limit the stocks at work place.
Use only in well-ventilated areas.
Do not breathe vapours or spray mist.
Avoid contact with skin and eyes.
Do not spray on a naked flame or any incandescent material.
Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits.
Take precautionary measures against static discharges.
Do not carry cloths that have come into contact with the product in your clothing.
For personal protection see section 8.
Use appropriate container to avoid environmental contamination.

Advice on protection : Normal measures for preventive fire protection.

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against fire and explosion Vapours are heavier than air and may spread along floors.
 Vapours may form explosive mixtures with air.
 Keep away from heat and sources of ignition.
 Do not smoke.
 No sparking tools should be used.
 Electrical equipment should be protected to the appropriate standard.

Dust explosion class : not applicable

Storage

Requirements for storage areas and containers : Store in original container.
 BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.
 Keep containers tightly closed in a dry, cool and well-ventilated place.
 Please observe the storage instructions for aerosols!

Advice on common storage : Keep away from food, drink and animal feedingstuffs.
 Do not store together with oxidizing and self-igniting products.

Other data : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Components	CAS-No.	List	Type:	Value	Update
low boiling point hydrogen treated naphtha	64742-49-0	OSHA P1	TWA	500 ppm 2,000 mg/m3	2007-01-01
isobutane	75-28-5	ACGIH	TWA	1,000 ppm	2007-01-01
		NIOSH REL	TWA	800 ppm 1,900 mg/m3	2005-09-01
		ACGIH	TWA	1,000 ppm	2007-01-01
propane	74-98-6	OSHA P1	TWA	1,000 ppm 1,800 mg/m3	1997-08-04
		ACGIH	TWA	1,000 ppm	2007-01-01
		NIOSH REL	TWA	1,000 ppm 1,800 mg/m3	2005-09-01

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n-hexane	110-54-3	ACGIH	TWA	50 ppm	2007-01-01
		OSHA P1	TWA	500 ppm 1,800 mg/m3	1997-08-04
		NIOSH REL	TWA	50 ppm 180 mg/m3	2005-09-01
butane	106-97-8	ACGIH	TWA	1,000 ppm	2007-01-01
		NIOSH REL	TWA	800 ppm 1,900 mg/m3	2005-09-01
		ACGIH	TWA	1,000 ppm	2007-01-01

- Engineering measures : Provide sufficient air exchange and/or exhaust in work rooms.
- Eye protection : Tightly fitting safety goggles
- Hand protection
Glove material : Nitrile rubber
- Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer.
- Skin and body protection : Flame retardant antistatic protective clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Product contains low-boiling liquids. Respiratory protective equipment must be air supplied respirators.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
General industrial hygiene practice.
Do not inhale aerosol.
Avoid contact with skin, eyes and clothing.
When using do not eat, drink or smoke.
Wash hands before breaks and at the end of workday.
Follow the skin protection plan.
Wash contaminated clothing before re-use.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: aerosol
Colour	: brown
Odour	: solvent-like
Ignition temperature	: ca.350 °C (662 °F)
Lower explosion limit	: 1.8 %(V)
Upper explosion limit	: 11.2 %(V)
pH	: not applicable
Boiling point/boiling range	: no data available
Relative vapour density	: no data available
Density	: 0.742 g/cm ³ Active ingredient
Water solubility	: insoluble
Partition coefficient: n-octanol/water	: no data available
Viscosity, dynamic	: no data available
Viscosity, kinematic	: no data available
Volatile organic compounds (VOC) content	: 76.92 %

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	: Heat, flames and sparks.
Materials to avoid	: Avoid contact with other chemicals.
Hazardous decomposition products	: Build-up of dangerous/toxic fumes possible in cases of fire/high temperature.
Hazardous reactions	: Note: No decomposition if stored and applied as directed.

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SECTION 11. TOXICOLOGICAL INFORMATION

Skin irritation	:	Classification: Irritating to skin. Result: Skin irritation
Eye irritation	:	May irritate eyes.
Sensitisation	:	no data available
Carcinogenicity	:	No data is available on the product itself.
Reproductive toxicity	:	No data is available on the product itself.
Teratogenicity	:	No data is available on the product itself.
Further information	:	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Vapours may cause drowsiness and dizziness.

Component:

n-hexane

110-54-3

Skin irritation: Result: Severe skin irritationReproductive toxicity: Suspected human reproductive toxicant
Suspected of damaging fertility.**SECTION 12. ECOLOGICAL INFORMATION**

Adsorbed organic bound halogens (AOX)	:	not included
Volatile organic compounds (VOC) content	:	76.92 %
Additional ecological information	:	The product should not be allowed to enter drains, water courses or the soil.

SECTION 13. DISPOSAL CONSIDERATIONS

Adequate disposal	:	In accordance with local and national regulations. This material and its container must be disposed of as hazardous waste.
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SECTION 14. TRANSPORT INFORMATION**DOT 49 CFR**

ID No : UN 1950
Proper shipping name : Aerosols
Class : 2.1
Labels : 2.1
Emergency Response : 126
Guidebook Number

TDGR

ID No : UN 1950
Proper shipping name : AEROSOLS
Class : 2.1
Labels : 2.1

ICAO/IATA-DGR

ID No : UN 1950
Proper shipping name : Aerosols, flammable
Class : 2.1
ICAO-Labels : 2.1
Packing instruction (cargo aircraft) : 203
Packing instruction (passenger aircraft) : 203
Packing instruction (passenger aircraft) : Y203
Environmentally hazardous : no

IMDG-Code

ID No : UN 1950
Description of the goods : AEROSOLS
(low boiling point hydrogen treated naphtha)
Class : 2.1
IMDG-Labels : 2.1
EmS Number 1 : F-D
EmS Number 2 : S-U
Marine pollutant : yes

SECTION 15. REGULATORY INFORMATION

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OSHA Hazards : EXTREMELY FLAMMABLE AEROSOLModerate skin irritant
Carcinogen
Reproductive hazard**SARA 311/312 Hazards** : Fire Hazard
Acute Health Hazard
Chronic Health Hazard
Acute Health Hazard
Chronic Health Hazard**CERCLA Reportable Quantity** : 308,661 lbs**MASS RTK** US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

Components	CAS-No.
butane	106-97-8
propane	74-98-6
n-hexane	110-54-3
isobutane	75-28-5

EPCRA_313 US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

The following components are subject to reporting levels established by SARA Title III, Section 313:

Components	CAS-No.
n-hexane	110-54-3

EPCRA_302 US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

PENN RTK US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

Components	CAS-No.
butane	106-97-8
propane	74-98-6
n-hexane	110-54-3
isobutane	75-28-5

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low boiling point hydrogen treated naphtha	64742-49-0
baseoil - unspecified	90640-95-2
Unknown substance - without labeling & classification	

NJ RTK

US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

Components	CAS-No.
butane	106-97-8
propane	74-98-6
n-hexane	110-54-3
isobutane	75-28-5
low boiling point hydrogen treated naphtha	64742-49-0
baseoil - unspecified	90640-95-2
Unknown substance - without labeling & classification	

California Prop. 65

: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16. OTHER INFORMATION

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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Germany
Telephone: +49-(0)271-88072-0

Revision Date : 03/13/2013

DOCK OFFICE #24

ITEM: 2FP66 - Spray Paint Flat Black 15 Oz

PICK REQ: 1043089242

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: B0784

This MSDS should be attached or kept with the respective product with which it is associated.

MATERIAL SAFETY DATA SHEET - B0784

Associated Grainger Item: 2FP66 - Spray Paint Flat Black 15 Oz
SW168, 4CH76, SW158, 4TH64, SW156, 2FP65, SW172, 5U707, SW173, 4TH68, SW171
5U708, 4CH73, 2FP64, SW155, 4TH62, SW163, 2FP66, SW164, SW155

MATERIAL SAFETY DATA SHEET
24 HOUR ASSISTANCE:
1-847-367-7700 RUST-OLEUM CORP.
WWW.RUSTOLEUM.COM

SECTION 1 - CHEMICAL PRODUCT / COMPANY INFORMATION

PRODUCT NAME:
RUST-OLEUM HIGH PERFORMANCE INDUSTRIAL
ENAMEL AEROSOL TOPCOATS (HARD HAT)

IDENTIFICATION NUMBER:
V2123838, V2134838, V2147838,
V2155838, V2156838, V2167838,
V2170838, V2171838, V2174838,
V2175838, V2178838, V2179838,
V2183838, V2184838, V2188838,
V2124838, V2125838, V2133838,
V2137838, V2138838, V2143838,
V2148838, V2163838, V2164838,
V2177838, V2187838, V2190838,
V2192838, V2196838, 209567

REVISION DATE: 04/05/2006
PRODUCT USE/CLASS: TOPCOATS/AEROSOL

SUPPLIER:
RUST-OLEUM CORPORATION
11 HAWTHORN PARKWAY
VERNON HILLS, IL 60061
USA

MANUFACTURER:
RUST-OLEUM CORPORATION
11 HAWTHORN PARKWAY
VERNON HILLS, IL 60061
USA

PREPARER: REGULATORY DEPARTMENT

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Table with 4 columns: CHEMICAL NAME, CAS NUMBER, WEIGHT %, ACGIH TLV-TWA LESS THAN. Rows include ACETONE, LIQUEFIED PETROLEUM GAS, TITANIUM DIOXIDE, MAGNESIUM SILICATE, n-BUTYL ACETATE, XYLENE, METHYL ETHYL KETONE, STODDARD SOLVENTS, ETHYLENE GLYCOL MONOBUTYL ETHER, TOLUENE, ETHYLBENZENE, AROMATIC HYDROCARBON, 1,2,4-TRIMETHYLBENZENE, PIGMENT BLACK 7, PIGMENT YELLOW 17, PIGMENT VIOLET 32, PIGMENT RED 122.

Table with 4 columns: CHEMICAL NAME, ACGIH TLV-STEL, OSHA PEL-TWA, OSHA PEL-CEILING. Rows include ACETONE, LIQUEFIED PETROLEUM GAS, TITANIUM DIOXIDE, MAGNESIUM SILICATE, n-BUTYL ACETATE, XYLENE.

Table with 4 columns: CHEMICAL NAME, TLV-TWA, STEL, PEL-CEILING. Rows include METHYL ETHYL KETONE, STODDARD SOLVENTS, ETHYLENE GLYCOL MONOBUTYL ETHER, TOLUENE, ETHYLBENZENE, AROMATIC HYDROCARBON, 1,2,4-TRIMETHYLBENZENE, PIGMENT BLACK 7, PIGMENT YELLOW 17, PIGMENT VIOLET 32, PIGMENT RED 122.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:
HARMFUL IF INHALED. MAY AFFECT THE BRAIN OR NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. VAPORS MAY CAUSE FLASH FIRE OR EXPLOSION. EXTREMELY FLAMMABLE LIQUID AND VAPOR. CONTENTS UNDER PRESSURE. HARMFUL IF SWALLOWED.
EFFECTS OF OVEREXPOSURE - EYE CONTACT: CAUSES EYE IRRITATION.
EFFECTS OF OVEREXPOSURE - SKIN CONTACT: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. PROLONGED OR REPEATED CONTACT MAY CAUSE SKIN IRRITATION. SUBSTANCE MAY CAUSE SLIGHT SKIN IRRITATION.
EFFECTS OF OVEREXPOSURE - INHALATION: HIGH VAPOR CONCENTRATIONS ARE IRRITATING TO THE EYES, NOSE, THROAT AND LUNGS. AVOID BREATHING VAPORS OR MISTS. HIGH GAS, VAPOR, MIST OR DUST CONCENTRATIONS MAY BE HARMFUL IF INHALED. HARMFUL IF INHALED.
EFFECTS OF OVEREXPOSURE - INGESTION: ASPIRATION HAZARD IF SWALLOWED; CAN ENTER LUNGS AND CAUSE DAMAGE. SUBSTANCE MAY BE HARMFUL IF SWALLOWED.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS:
IARC LISTS ETHYLBENZENE AS A POSSIBLE HUMAN CARCINOGEN (GROUP 2B). MAY CAUSE CENTRAL NERVOUS SYSTEM DISORDER (E.G., NARCOSIS INVOLVING A LOSS OF COORDINATION, WEAKNESS, FATIGUE, MENTAL CONFUSION, AND BLURRED VISION) AND/OR DAMAGE. REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OCCUPATIONAL OVEREXPOSURE TO XYLENE WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. ABNORMALITIES, KIDNEY, LUNG, SPLEEN, EYE AND BLOOD DAMAGE AS WELL AS REPRODUCTIVE DISORDER. EFFECTS IN HUMANS, DUE TO CHRONIC OVEREXPOSURE, HAVE INCLUDED LIVER, CARDIAC ABNORMALITIES AND NERVOUS SYSTEM DAMAGE. OVEREXPOSURE TO TOLUENE IN LABORATORY ANIMALS HAS BEEN ASSOCIATED WITH LIVER ABNORMALITIES, KIDNEY, LUNG AND SPLEEN DAMAGE. EFFECTS IN HUMANS HAVE INCLUDED LIVER AND CARDIAC ABNORMALITIES. OVEREXPOSURE TO METHYL ETHYL KETONE IN LABORATORY ANIMALS HAS BEEN ASSOCIATED WITH LIVER ABNORMALITIES, KIDNEY AND LUNG DAMAGE. FETOTOXIC/EMBRYOTOMIC EFFECTS FROM INHALATION HAVE BEEN SEEN IN RATS EXPOSED TO >1000PPM DURING GESTATION.

CONTAINS CARBON BLACK. CHRONIC INFLAMMATION, LUNG FIBROSIS, AND LUNG TUMORS HAVE BEEN OBSERVED IN SOME RATS EXPERIMENTALLY EXPOSED FOR LONG PERIODS OF TIME TO EXCESSIVE CONCENTRATIONS OF CARBON BLACK AND SEVERAL INSOLUBLE FINE DUST PARTICLES. TUMORS HAVE NOT BEEN OBSERVED IN OTHER ANIMAL SPECIES (I.E., MOUSE AND HAMSTER) UNDER SIMILAR CIRCUMSTANCES AND STUDY CONDITIONS. EPIDEMIOLOGICAL STUDIES OF NORTH AMERICAN WORKERS SHOW NO EVIDENCE OF CLINICALLY SIGNIFICANT ADVERSE HEALTH EFFECTS DUE TO OCCUPATIONAL EXPOSURE TO CARBON BLACK.

CARBON BLACK IS LISTED AS A GROUP 2B - "POSSIBLY CARCINOGENIC TO HUMANS" BY IARC AND IS PROPOSED TO BE LISTED AS A4 - "NOT CLASSIFIED AS A HUMAN CARCINOGEN" BY THE AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS. SIGNIFICANT EXPOSURE IS NOT ANTICIPATED DURING BRUSH APPLICATION OR DRYING. RISK OF OVEREXPOSURE DEPENDS ON DURATION AND LEVEL OF EXPOSURE TO DUST FROM REPEATED SANDING OF SURFACES OR SPRAY MIST AND THE ACTUAL CONCENTRATION OF CARBON BLACK IN THE FORMULA.

PRIMARY ROUTE(S) OF ENTRY:
SKIN CONTACT
SKIN ABSORPTION
INHALATION
EYE CONTACT

SECTION 4 - FIRST AID MEASURES

FIRST AID - EYE CONTACT:
HOLD EYELIDS APART AND FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION.

FIRST AID - SKIN CONTACT:
WASH WITH SOAP AND WATER. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS OR PERSISTS.

FIRST AID - INHALATION:
IF YOU EXPERIENCE DIFFICULTY IN BREATHING, LEAVE THE AREA TO OBTAIN FRESH AIR. IF CONTINUED DIFFICULTY IS EXPERIENCED, GET MEDICAL ASSISTANCE IMMEDIATELY.

FIRST AID - INGESTION:
ASPIRATION HAZARD: DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH BECAUSE THIS MATERIAL CAN ENTER THE LUNGS AND CAUSE SEVERE LUNG DAMAGE. GET IMMEDIATE MEDICAL ATTENTION.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: -156 F (SETAFLASH)
 LOWER EXPLOSIVE LIMIT: 0.7 %
 UPPER EXPLOSIVE LIMIT: 32.5 %

EXTINGUISHING MEDIA: DRY CHEMICAL, FOAM, WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS:

FLASH POINT IS LESS THAN 20 DEG. F.:
 EXTREMELY FLAMMABLE LIQUID AND VAPOR.

WATER SPRAY MAY BE INEFFECTIVE. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. VAPORS MAY FORM EXPLOSIVE MIXTURES WITH AIR. VAPORS CAN TRAVEL TO A SOURCE OF IGNITION AND FLASH BACK. KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS AND OPEN FLAME. PERFORATION OF THE PRESSURIZED CONTAINER MAY CAUSE BURSTING OF THE CAN.

SPECIAL FIREFIGHTING PROCEDURES:
 EVACUATE AREA AND FIGHT FIRE FROM A SAFE DISTANCE.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
 CONTAIN SPILLED LIQUID WITH SAND OR EARTH. DO NOT USE COMBUSTIBLE MATERIALS SUCH AS SAWDUST. REMOVE ALL SOURCES OF IGNITION, VENTILATE AREA AND REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS. DISPOSE OF ACCORDING TO LOCAL, STATE (PROVINCIAL) AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.

SECTION 7 - HANDLING AND STORAGE

HANDLING:
 USE ONLY IN A WELL-VENTILATED AREA. AVOID BREATHING VAPOR OR MIST. FOLLOW ALL MSDS/LABEL PRECAUTIONS EVEN AFTER CONTAINER IS EMPTIED BECAUSE IT MAY RETAIN PRODUCT RESIDUES. WASH THOROUGHLY AFTER HANDLING. WASH HANDS BEFORE EATING.

STORAGE:
 CONTENTS UNDER PRESSURE. DO NOT EXPOSE TO HEAT OR STORE ABOVE 120 DEG. F. DO NOT STORE ABOVE 120 DEG. F. STORE LARGE QUANTITIES IN BUILDINGS DESIGNED AND PROTECTED FOR STORAGE OF NEPA CLASS 1 FLAMMABLE LIQUIDS. KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS AND OPEN FLAME.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:
 USE PROCESS ENCLOSURES, LOCAL EXHAUST VENTILATION, OR OTHER ENGINEERING CONTROLS TO CONTROL AIRBORNE LEVELS BELOW RECOMMENDED EXPOSURE LIMITS. PREVENT BUILD-UP OF VAPORS BY OPENING ALL DOORS AND WINDOWS TO ACHIEVE CROSS-VENTILATION. USE EXPLOSION-PROOF VENTILATION EQUIPMENT.

RESPIRATORY PROTECTION:
 A RESPIRATORY PROTECTION PROGRAM THAT MEETS OSHA 1910.134 AND ANSI Z89.2 REQUIREMENTS MUST BE FOLLOWED WHENEVER WORKPLACE CONDITIONS WARRANT A RESPIRATOR'S USE. A NIOSH/MSHA APPROVED AIR PURIFYING RESPIRATOR WITH AN ORGANIC VAPOR CARTRIDGE OR CANISTER MAY BE PERMISSIBLE UNDER CERTAIN CIRCUMSTANCES WHERE AIRBORNE CONCENTRATIONS ARE EXPECTED TO EXCEED EXPOSURE LIMITS.

PROTECTION PROVIDED BY AIR PURIFYING RESPIRATORS IS LIMITED. USE A POSITIVE PRESSURE AIR SUPPLIED RESPIRATOR IF THERE IS ANY POTENTIAL FOR AN UNCONTROLLED RELEASE. EXPOSURE LEVELS ARE NOT KNOWN, OR ANY OTHER CIRCUMSTANCES WHERE AIR PURIFYING RESPIRATORS MAY NOT PROVIDE ADEQUATE PROTECTION.

SKIN PROTECTION:
 NITRILE OR NEOPRENE GLOVES MAY AFFORD ADEQUATE SKIN PROTECTION. USE IMPERVIOUS GLOVES TO PREVENT SKIN CONTACT AND ABSORPTION OF THIS MATERIAL THROUGH THE SKIN.

EYE PROTECTION:
 USE SAFETY EYEWEAR DESIGNED TO PROTECT AGAINST SPLASH OF LIQUIDS.

OTHER PROTECTIVE EQUIPMENT:
 REFER TO SAFETY SUPERVISOR OR INDUSTRIAL HYGIENIST FOR FURTHER INFORMATION REGARDING PERSONAL PROTECTIVE EQUIPMENT AND ITS APPLICATION.

HYGIENIC PRACTICES:
 WASH THOROUGHLY WITH SOAP AND WATER BEFORE EATING, DRINKING OR SMOKING.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE: -34 - 900 F

ODOR: SOLVENT-LIKE

APPEARANCE: LIQUID

SOLUBILITY IN H2O: SLIGHT

FREEZE POINT: ND

VAPOR PRESSURE: ND

PHYSICAL STATE: LIQUID

VAPOR DENSITY: HEAVIER THAN AIR

ODOR THRESHOLD: ND

EVAPORATION RATE: FASTER THAN ETHER

SPECIFIC GRAVITY: 0.8660

pH: ND

(SEE SECTION 16 FOR ABBREVIATION LEGEND)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID:

AVOID TEMPERATURES ABOVE 120 DEG. F. AVOID ALL POSSIBLE SOURCES OF IGNITION.

INCOMPATIBILITY:
 INCOMPATIBLE WITH STRONG OXIDIZING AGENTS, STRONG ACIDS AND STRONG ALKALIES.

HAZARDOUS DECOMPOSITION:
 BY OPEN FLAME, CARBON MONOXIDE AND CARBON DIOXIDE. WHEN HEATED TO DECOMPOSITION, IT EMITS ACRID SMOKE AND IRRITATING FUMES.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR UNDER NORMAL CONDITIONS.

STABILITY: THIS PRODUCT IS STABLE UNDER NORMAL STORAGE CONDITIONS.

SECTION 11 - TOXICOLOGICAL INFORMATION

PRODUCT LD50: ND

PRODUCT LC50: ND

CHEMICAL NAME	LD50	LC50
ACETONE	N.D.	N.D.
LIQUEFIED PETROLEUM GAS	N.D.	N.D.
TITANIUM DIOXIDE	>7500 MG/KG (ORAL, RAT)	N.D.
MAGNESIUM SILICATE	N.D.	TCLO: 11 MG/M3 1NH.
n-BUTYL ACRYLATE	13100 MG/KG (ORAL, RAT)	2000 PEM (INH 4 HR, RAT)
XYLENE	N.D.	N.D.
METHYL ETHYL KETONE	N.D.	N.D.
STODDARD SOLVENTS	N.D.	N.D.
ETHYLENE GLYCOL MONOBUTYL ETHER	1519 MG/KG (ORAL, MOUSE)	700 PEM (INH 7 HR, RAT)
TOLUENE	N.D.	N.D.
ETHYLBENZENE	3500 MG/KG (ORAL, RAT)	N.D.
AROMATIC HYDROCARBON	N.D.	N.D.
1,2,4-TRIMETHYLBENZENE	N.D.	18000 MG/M3 (RAT, 4 HR)
PIGMENT BLACK 7	>8000 MG/KG (ORAL, RAT)	N.D.
PIGMENT YELLOW 17	N.D.	N.D.
PIGMENT VIOLET 32	>10000 MG/KG (ORAL, RAT)	N.D.
PIGMENT RED 122	N.D.	N.D.

SECTION 12 - ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: PRODUCT IS A MIXTURE OF LISTED COMPONENTS.

SECTION 13 - DISPOSAL INFORMATION

DISPOSAL INFORMATION:
 DISPOSE OF MATERIAL IN ACCORDANCE TO LOCAL, STATE AND FEDERAL REGULATIONS AND ORDINANCES. DO NOT ALLOW TO ENTER STORM DRAINS OR SEWER SYSTEMS.

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: AEROSOL

DOT TECHNICAL NAME:

DOT HAZARD CLASS: 2.1

DOT UN/NA NUMBER: UN1950

PACKING GROUP:

HAZARD SUBCLASS:

RESP. GUIDE PAGE: 126

SECTION 15 - REGULATORY INFORMATION

CERCLA - SARA HAZARD CATEGORY:
 THIS PRODUCT HAS BEEN REVIEWED ACCORDING TO THE EPA "HAZARD CATEGORIES" PROMULGATED UNDER SECTIONS 311 AND 312 OF THE SUPERFUND AMENDMENT AND REAUTHORIZATION ACT OF 1986 (SARA TITLE III) AND IS CONSIDERED, UNDER APPLICABLE DEFINITIONS, TO MEET THE FOLLOWING CATEGORIES:

IMMEDIATE HEALTH HAZARD
 CHRONIC HEALTH HAZARD
 FIRE HAZARD

SARA SECTION 313:
 LISTED BELOW ARE THE SUBSTANCES (IF ANY) CONTAINED IN THIS PRODUCT THAT ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENT AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372:

CHEMICAL NAME	CAS NUMBER
XYLENE	1330-20-7
METHYL ETHYL KETONE	78-93-3
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2
TOLUENE	108-88-3
ETHYLBENZENE	100-41-4
1,2,4-TRIMETHYLBENZENE	95-63-6

TOXIC SUBSTANCES CONTROL ACT:

LISTED BELOW ARE THE SUBSTANCES (IF ANY) CONTAINED IN THIS PRODUCT THAT ARE SUBJECT TO THE REPORTING REQUIREMENTS OF TSCA 12(B) IF EXPORTED FROM THE UNITED STATES: NONE KNOWN

U.S. STATE REGULATIONS: AS FOLLOWS

NEW JERSEY RIGHT-TO-KNOW:
THE FOLLOWING MATERIALS ARE NON-HAZARDOUS, BUT ARE AMONG THE TOP FIVE COMPONENTS IN THIS PRODUCT.

CHEMICAL NAME	CAS NUMBER
ALKYD RESIN	MIXTURE

PENNSYLVANIA RIGHT-TO-KNOW:
THE FOLLOWING NON-HAZARDOUS INGREDIENTS ARE PRESENT IN THE PRODUCT AT GREATER THAN 3%.

CHEMICAL NAME	CAS NUMBER
ALKYD RESIN	MIXTURE
BARIUM SULFATE	7727-43-7
CALCIUM CARBONATE	1317-65-3
YELLOW IRON OXIDE	51274-00-1

CALIFORNIA PROPOSITION 65:

WARNING!

THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN BY THE STATE OF CALIFORNIA TO CAUSE CANCER.

WARNING!

THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

INTERNATIONAL REGULATIONS: AS FOLLOWS

CANADIAN WHMIS:
THIS MSDS HAS BEEN PREPARED IN COMPLIANCE WITH CONTROLLED PRODUCT REGULATIONS EXCEPT FOR THE USE OF THE 16 HEADINGS.

CANADIAN WHMIS CLASS:
A05
D2A
D2B

SECTION 16 - OTHER INFORMATION

HMS RATINGS:
HEALTH 2
FLAMMABILITY 4
REACTIVITY 0
PERSONAL PROTECTION X

VOLATILE ORGANIC COMPOUNDS, G/L:

REASON FOR REVISION:

LEGEND:
N.A. : NOT APPLICABLE
N.E. : NOT ESTABLISHED
N.D. : NOT DETERMINED

THE INFORMATION CONTAINED ON THIS MSDS HAS BEEN CHECKED AND SHOULD BE ACCURATE. HOWEVER, IT IS THE RESPONSIBILITY OF THE USER TO COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.

Product Description:
 NORD GEAR
 9800001
 STAINLESS SILVER

Material Safety Data Sheet

API

Section 1: Manufacturer Identification

Manufactured By:
 Custom-Pak Products Inc.
 N118 W18981 Bunsen Drive
 Germantown, WI 53022

Formula # 38A418M12C
 Chemtrec 24-hour Emergency Phone: (800) 424-9300
 Chemtrec Foreign Emergency Phone: (703) 527-3887
 Product Information Phone Number: (262) 251-6180

Date MSDS Printed & Reviewed: 03/13/12
 Last Formula Revision Date: 06/17/09

MANUFACTURED FOR: (C3132)
 NORD GEAR LTD
 CANADA L6T 4A1

Section 2: Composition/Information on Ingredients

#	COMPONENT	CAS#	% by WT.	SARA 313	LISTED CARCINOGEN BY:		
				LISTED	NTP	IARC	OSHA
1	ACETONE	67-64-1	35-40	N	N	N	N
2	PROPANE	74-98-6	15-21	N	N	N	N
3	XYLENE	1330-20-7	10-16	Y	N	N	N
4	N-BUTANE	106-97-8	5-8	N	N	N	N
5	*ETHYLBENZENE	100-41-4	3-5	Y	N	Y	N
6	PM ACETATE	108-65-6	1-3	N	N	N	N
7	ETHYL ESTER	763-69-9	1-3	N	N	N	N

*See Section 15 and Section 11

Section 3: Hazards Identification

Emergency Overview: DANGER! Extremely Flammable. Contents Under Pressure.

Appearance/Odor: Liquid Spray Mist / Solvent Odor

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Eye contact, skin contact, ingestion, and inhalation

Eye: Contact may cause redness, irritation, tearing, and blurred vision

Skin: Contact may dry skin causing cracks and irritation

Ingestion: May be harmful if swallowed

Inhalation: Exposure to high concentrations of vapors may cause drowsiness, breathing difficulty, respiratory irritation, or headaches. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Product Description: **Material Safety Data Sheet**
NORD GEAR
9800001
STAINLESS SILVER

AP1

Medical Conditions Aggravated by Exposure:

Asthma and other respiratory ailments.

Target Organs: Kidney Liver Lung Brain

Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Section 4: First Aid Measures

Eye Contact: Immediately flush eyes with water for at least 15 minutes. If irritation develops get medical attention.

Skin Contact: Remove contaminated clothing and wash before reuse. Wash skin with soap and water. Get medical attention if irritation develops.

Inhalation: Move to fresh air. Contact emergency medical support if breathing stops or is irregular.

Ingestion: Do NOT induce vomiting. Get medical attention immediately.

Section 5: Fire Fighting Measures

Suitable Extinguishing Media: CO₂ (Carbon Dioxide), dry chemical, or water fog.

Unsuitable Extinguishing Media: Water spray may be unsuitable. However, if water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible explosion when exposed to extreme heat.

Products of Combustion: These products are carbon oxides (CO, CO₂).

Protection of Firefighters: Full protective equipment including self-contained breathing apparatus should be used.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: None known.

Product Description: **Material Safety Data Sheet**
 NORD GEAR
 9800001
 STAINLESS SILVER

API

Methods of Containment: Absorb spilled liquid in suitable material.
Methods of Clean-up: Use spark-proof tools to sweep or scrape up and containerize.
Other Information: Ventilate the area.

Section 7: Handling and Storage**Handling:**

Vapors may ignite explosively. Prevent buildup of vapors; use with adequate ventilation. Keep from sparks, heat, flame or other heat sources. Do not smoke. Turn off pilot lights, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Do not puncture or incinerate (burn) container.

Storage:

Store in dry, well-ventilated area and in accordance with federal, state, and local regulations. Do not expose to heat or store at temperatures above 120 F (48 C). Storage conditions should comply with NFPA 30B and OSHA 1910.106. If storing in cold temperatures, allow product to warm to room temperature before use.

Section 8: Exposure Controls/Personal Protection**Exposure Guidelines**

#	COMPONENT	ACGIH TLV-STEL	ACGIH TLV-TWA	OSHA PEL-TWA
1	ACETONE	750 ppm	500 ppm	1000 ppm
2	PROPANE	1800 ppm	2500 ppm	1000 ppm
3	XYLENE	150 ppm	100 ppm	100 ppm
4	N-BUTANE	N/E	800 ppm	800 ppm
5	*ETHYLBENZENE	125 ppm	100 ppm	100 ppm
6	PM ACETATE	N/E		N/E
7	ETHYL ESTER	100 ppm	50 ppm	N/E

*See Section 15 and Section 11

Engineering Controls: Not generally required if product is applied in small quantities. If product is applied in larger quantities, provide ventilation to keep air contamination below OSHA permissible exposure limits and ACGIH TLV exposure levels.

Eye/face Protection: Wear safety glasses with side shields. Have eye wash facilities immediately available.

Skin Protection: Chemical resistant gloves if contact is likely.

Product Description: **Material Safety Data Sheet**
NORD GEAR
9800001
STAINLESS SILVER

API

Respiratory Protection: Use NIOSH-approved air-purifying respirator with organic cartridge or canister if exposure cannot be controlled within applicable limits with ventilation.

General Hygiene Considerations: Wash thoroughly after handling.

Section 9: Physical and Chemical Properties

Color: see product description
Odor: Solvent Odor
Physical State: Aerosol - Pressurized Liquid
Freezing Point: Not Established (mixture)
Boiling Range: N.A. (Pressurized Mixture)
Flash Point: <-18C/-28F (TCC)
Evaporation Rate: Faster than ether
Upper Flammability Limit: Not Established (mixture)
Lower Flammability Limit: Not Established (mixture)
Vapor Pressure: Approximately 50 psig @ 20 C (68 F)
Specific Gravity: 0.759 @15 C (60 F)
Solubility (water): Negligible
Percent Volatile, wt. %: 83.55
VOC Percent: 46.55
MIR Data: EFI (MAX 2.05) MIR - 1.602

Section 10: Stability and Reactivity

Stability: Stable under normal conditions.

Conditions to Avoid: Keep away from heat, sparks, and flames.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition Products: by fire - Carbon Dioxide and Carbon Monoxide

Possibility of Hazardous Reactions: Will not occur.

Product Description:
 NORD GEAR
 9800001
 STAINLESS SILVER

Material Safety Data Sheet

API

Section 11: Toxicological Information

#	COMPONENT	LD50 Oral	LD50 Dermal
1	ACETONE	1000 mg/kg	2400 mg/kg
2	PROPANE	1000 mg/kg	1800 mg/kg
3	XYLENE	4300 mg/kg	2000 mg/kg
4	N-BUTANE	N/E	N/E
5	*ETHYLBENZENE	3500 mg/kg	5000 mg/kg
6	PM ACETATE	8535 mg/kg	5000 mg/kg
7	ETHYL ESTER	5000 mg/kg	10000 mg/kg

*See Section 15

See Section 3 for other acute effect information.

Chronic Effects: Prolonged over-exposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary, cardiovascular and reproductive systems. Reports have associated the repeated and prolonged occupational OVER-EXPOSURE to solvents with brain and nervous system damage. The deliberate misuse by concentrating and inhaling the vapors may be harmful or fatal.
Carcinogenicity: See Section 2 for additional information.

Section 12: Ecological Information

No data available.

Section 13: Disposal Considerations

Do not puncture, incinerate or place container in trash compactor. Dispose of product in accordance with Federal, State, and Local regulations. Empty containers are 95% steel; recycle where allowed.

Product Description: **Material Safety Data Sheet**
 NORD GEAR
 9800001
 STAINLESS SILVER

API

Section 14: Transportation Information**US DOT (Ground)**

Proper Shipping Name: Consumer Commodity
 Hazard Class: ORM-D

US DOT (Air)

Proper Shipping Name: Consumer Commodity
 Hazard Class: ORM-D-AIR

IATA/ICAO (International Air)

Proper Shipping Name: Aerosols, Flammable
 ID no.: UN1950
 Hazard Class: 2.1
 Hazard Label: Flammable Gas
 Packing Instruction: 203 (NOTE, must be shipped in proper U.N.-certified box!)

No component of this product is a listed Marine Pollutant (49 CFR 172,101,Appendix B).

Section 15: Regulatory Information**International Chemical Inventory**

All components of this product are listed on or exempt from the following inventories:

TSCA: United States

DSL: Canada

AICS: Australia

IECSC: China

Section 313 Toxic Chemicals

See section 2. Chemicals marked with a "Y" are subject to the SARA reporting requirements under 40 cfr 372.45(c)(5).

*California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)
 This product contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

Section 16: Other Information

HMIS (American Coatings Association's Hazardous Material Identification System):

Health = 2 Flammability = 4 Physical Hazard = 1 Personal Protection (PPE) = X

NFPA 704 (National Fire Protection Association's Hazard Identification ratings system):

Health = 2 Flammability = 4 Instability = 1 Special Hazard = N/A

Hazard Scale: 0=minimal, 1=slight, 2=moderate, 3=serious, 4=severe

This MSDS is based on information believed to be reliable and accurate. Because of changing reporting requirements and other variables it is impossible to guarantee the accuracy of the information contained in this document. It is the responsibility of the user to determine proper personal protection based on the actual condition of use and to comply with all Federal, State and Local laws and regulations.

 Close this window

MSDS

Common Name: TAN SPRAY STENCIL INK
Manufacturer: MARSH SHIPPING SUPPLY
MSDS Revision Date: 2/14/2007

Grainger Item Number(s): 3U572, 5XT12
Manufacturer Model Number(s):

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MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MARSH TAN SPRAY STENCIL INK

CAS #: MIXTURE

PRODUCT USE: SPRAY INK

MANUFACTURER:
MARSH SHIPPING SUPPLY COMPANY, LLC
926 MCDONOUGH LAKE ROAD, UNIT E
COLLINSVILLE, IL 62234
US

PHONE: (618) 343-1006

FAX: (618) 343-1016

EMERGENCY PHONE: (800) 424-9300 (USA)

EMERGENCY PHONE: (703) 527-3887 (INTERNATIONAL)

HMIS/NFPA:
HEALTH *2



FLAMMABILITY 4
 PHYSICAL HAZARD 1
 PERSONAL PROTECTION B

NFPA:

2
 4
 1

LEGEND:

SEVERE: 4
 SERIOUS: 3
 MODERATE: 2
 SLIGHT: 1
 MINIMAL: 0

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

DANGER:

EXTREMELY FLAMMABLE. CONTENTS UNDER PRESSURE. CONTAINERS MAY EXPLODE WHEN HEATED. EYE AND SKIN IRRITANT. MAY CAUSE CHRONIC TOXIC EFFECTS. CONTAINS MATERIAL WHICH MAY CAUSE CANCER.

POTENTIAL SHORT TERM HEALTH EFFECTS:

ROUTES OF EXPOSURE: EYE, SKIN CONTACT, SKIN ABSORPTION, INHALATION.

EYES: MAY CAUSE IRRITATION. CONTACT WITH LIQUID MAY CAUSE FROSTBITE.

SKIN: MAY CAUSE IRRITATION. CONTACT WITH LIQUID MAY CAUSE FROSTBITE.

INHALATION:

EXCESSIVE INTENTIONAL INHALATION MAY CAUSE RESPIRATORY TRACT IRRITATION AND CENTRAL NERVOUS SYSTEM EFFECTS (HEADACHE, DIZZINESS).

INGESTION:

NOT A NORMAL ROUTE OF EXPOSURE. MAY CAUSE STOMACH DISTRESS, NAUSEA OR VOMITING.

TARGET ORGANS: EYES. SKIN. RESPIRATORY SYSTEM.

CHRONIC EFFECTS:

PROLONGED OR REPEATED EXPOSURE CAN CAUSE DRYING, DEFATTING AND DERMATITIS.

SIGNS AND SYMPTOMS:

SYMPTOMS MAY INCLUDE REDNESS, EDEMA, DRYING, DEFATTING AND CRACKING OF THE SKIN. SYMPTOMS OF OVEREXPOSURE MAY BE HEADACHE, DIZZINESS, TIREDNESS, NAUSEA AND VOMITING.

3. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT(S)	CAS #	PERCENT
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	64742-89-8	7 - 13
HYDROUS MAGNESIUM SILICATE	14807-96-6	3 - 7
ACETONE	67-64-1	15 - 40
BUTANE	106-97-8	10 - 30
PROPANE	74-98-6	10 - 30

2-PROPANOL, 1-METHOXY-, ACETATE	108-65-6	1 - 5
CARBONIC ACID CALCIUM SALT (1:1)	471-34-1	1 - 5
TITANIUM OXIDE	13463-67-7	1 - 5
1,2,4-TRIMETHYLBENZENE	95-63-6	0.1 - 1

4. FIRST AID MEASURES

FIRST AID PROCEDURES:

EYE CONTACT:

FLUSH WITH COOL WATER. REMOVE CONTACT LENSES, IF APPLICABLE, AND CONTINUE FLUSHING. OBTAIN MEDICAL ATTENTION IF IRRITATION PERSISTS.

SKIN CONTACT:

FLUSH WITH COOL WATER. WASH WITH SOAP AND WATER. OBTAIN MEDICAL ATTENTION IF IRRITATION PERSISTS. CLOTHING FROZEN TO THE SKIN SHOULD BE THAWED BEFORE BEING REMOVED.

INHALATION:

IF SYMPTOMS DEVELOP, MOVE VICTIM TO FRESH AIR. IF SYMPTOMS PERSIST, OBTAIN MEDICAL ATTENTION. IF BREATHING HAS STOPPED, TRAINED PERSONNEL SHOULD ADMINISTER CPR IMMEDIATELY.

INGESTION:

NOT A NORMAL ROUTE OF EXPOSURE. DO NOT INDUCE VOMITING. RINSE MOUTH WITH WATER, THEN DRINK ONE OR TWO GLASSES OF WATER. OBTAIN MEDICAL ATTENTION. NEVER GIVE ANYTHING BY MOUTH IF VICTIM IS UNCONSCIOUS, OR IS CONVULSING.

NOTES TO PHYSICIAN: SYMPTOMS MAY BE DELAYED.

GENERAL ADVICE:

IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE (SHOW THE LABEL WHERE POSSIBLE). ENSURE THAT MEDICAL PERSONNEL ARE AWARE OF THE MATERIAL(S) INVOLVED, AND TAKE PRECAUTIONS TO PROTECT THEMSELVES. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

FLAMMABLE BY WHMIS/OSHA CRITERIA. CONTAINERS MAY EXPLODE WHEN HEATED.

EXTINGUISHING MEDIA:

SUITABLE EXTINGUISHING MEDIA:

CARBON DIOXIDE. ALCOHOL FOAM. DRY CHEMICAL. FOAM. WATER FOG.

UNSUITABLE EXTINGUISHING MEDIA: NOT AVAILABLE

PROTECTION OF FIREFIGHTERS:

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:

CONTENTS UNDER PRESSURE. PRESSURIZED CONTAINER MAY EXPLODE WHEN EXPOSED TO HEAT OR FLAME. COOL CONTAINERS WITH FLOODING QUANTITIES OF WATER UNTIL WELL AFTER FIRE IS OUT.

PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:

FIREFIGHTERS SHOULD WEAR FULL PROTECTIVE CLOTHING INCLUDING SELF CONTAINED BREATHING APPARATUS.

HAZARDOUS COMBUSTION PRODUCTS:

MAY INCLUDE AND ARE NOT LIMITED TO: OXIDES OF CARBON. PHOSGENE.

EXPLOSION DATA:
 SENSITIVITY TO MECHANICAL IMPACT: NOT AVAILABLE
 SENSITIVITY TO STATIC DISCHARGE: NOT AVAILABLE

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:
 KEEP UNNECESSARY PERSONNEL AWAY. DO NOT TOUCH DAMAGED CONTAINERS OR SPILLED MATERIAL UNLESS WEARING APPROPRIATE PROTECTIVE CLOTHING. KEEP PEOPLE AWAY FROM AND UPWIND OF SPILL/LEAK.

METHODS FOR CONTAINMENT
 ELIMINATE ALL IGNITION SOURCES (NO SMOKING, FLARES, SPARKS, OR FLAMES IN IMMEDIATE AREA). STOP LEAK IF YOU CAN DO SO WITHOUT RISK. PREVENT ENTRY INTO WATERWAYS, SEWERS, BASEMENTS OR CONFINED AREAS.

METHODS FOR CLEANING UP:
 BEFORE ATTEMPTING CLEAN UP, REFER TO HAZARD DATA GIVEN ABOVE. REMOVE SOURCES OF IGNITION. ALTHOUGH THE CHANCE OF A SIGNIFICANT SPILL OR LEAK IS UNLIKELY IN AEROSOL CONTAINERS, IN THE EVENT OF SUCH AN OCCURRENCE, ABSORB SPILLED MATERIAL WITH A NON-FLAMMABLE ABSORBENT SUCH AS SAND OR VERMICULITE. NEVER RETURN SPILLS IN ORIGINAL CONTAINERS FOR RE-USE.

7. HANDLING AND STORAGE

HANDLING: USE GOOD INDUSTRIAL HYGIENE PRACTICES IN HANDLING THIS MATERIAL.

STORAGE:
 KEEP OUT OF REACH OF CHILDREN. DO NOT STORE AT TEMPERATURES ABOVE 49 DEG. C. KEEP AWAY FROM HEAT, OPEN FLAMES OR OTHER SOURCES OF IGNITION. STORE IN A TIGHTLY CLOSED CONTAINER.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS:

INGREDIENT (S)	EXPOSURE LIMITS
1,2,4-TRIMETHYLBENZENE	ACGIH-TLV: TWA: 25 PPM OSHA-PEL: TWA: 25 PPM
2-PROPANOL, 1-METHOXY-, ACETATE	ACGIH-TLV: NOT ESTABLISHED OSHA-PEL: NOT ESTABLISHED
ACETONE	ACGIH-TLV: TWA: 500 PPM STEL: 750 PPM OSHA-PEL: TWA: 1000 PPM
BUTANE	ACGIH-TLV: TWA: 1000 PPM OSHA-PEL: NOT ESTABLISHED
CARBONIC ACID CALCIUM SALT (1:1)	ACGIH-TLV: TWA: 10 MG/M3

HYDROUS MAGNESIUM SILICATE	OSHA-PEL: NOT ESTABLISHED ACGIH-TLV: TWA: 2 MG/M3
PROPANE	OSHA-PEL: NOT ESTABLISHED ACGIH-TLV: TWA: 1000 PPM
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	OSHA-PEL: TWA: 1000 PPM
TITANIUM OXIDE	ACGIH-TLV: NOT ESTABLISHED OSHA-PEL: NOT ESTABLISHED
	ACGIH-TLV: TWA: 10 MG/M3
	OSHA-PEL: TWA: 15 MG/M3

ENGINEERING CONTROLS:
USE ONLY UNDER GOOD VENTILATION CONDITIONS OR WITH RESPIRATORY PROTECTION.

PERSONAL PROTECTIVE EQUIPMENT:

EYE / FACE PROTECTION: SAFETY GOGGLES OR GLASSES.

HAND PROTECTION: RUBBER GLOVES. CONFIRM WITH A REPUTABLE SUPPLIER FIRST.

SKIN AND BODY PROTECTION: AS REQUIRED BY EMPLOYER CODE.

RESPIRATORY PROTECTION:
NOT NORMALLY REQUIRED IF GOOD VENTILATION IS MAINTAINED AND EXPOSURE GUIDELINES ARE NOT EXCEEDED. WHERE EXPOSURE GUIDELINE LEVELS MAY BE EXCEEDED, USE AN APPROVED NIOSH RESPIRATOR.

GENERAL HYGIENE CONSIDERATIONS:
HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE. WHEN USING DO NOT EAT OR DRINK. WASH HANDS AND FACE BEFORE BREAKS AND IMMEDIATELY AFTER HANDLING THE PRODUCT.

9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE: AEROSOL.

COLOR: TAN

FORM: SPRAY

ODOR: SOLVENT.

ODOR THRESHOLD: NOT AVAILABLE

PHYSICAL STATE: LIQUID

PH: NOT AVAILABLE

MELTING POINT: NOT AVAILABLE

FREEZING POINT: NOT AVAILABLE

BOILING POINT: NOT AVAILABLE

FLASH POINT: NOT DETERMINED

EVAPORATION RATE: <1 (ETHER = 1)

FLAMMABILITY LIMITS IN AIR, LOWER, % BY VOLUME: 1.8
 FLAMMABILITY LIMITS IN AIR, UPPER, % BY VOLUME: 12.8

VAPOR PRESSURE: NOT AVAILABLE

VAPOR DENSITY: NOT AVAILABLE

SPECIFIC GRAVITY: NOT AVAILABLE

OCTANOL/WATER COEFFICIENT: NOT AVAILABLE

AUTO-IGNITION TEMPERATURE: NOT AVAILABLE

PERCENT VOLATILE: NOT AVAILABLE

10. CHEMICAL STABILITY & REACTIVITY INFORMATION

CHEMICAL STABILITY: STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

CONDITIONS TO AVOID:
 AEROSOL CONTAINERS ARE UNSTABLE AT TEMPERATURES ABOVE 49 DEG. C
 (120 DEG. F).

INCOMPATIBLE MATERIALS: STRONG ACIDS, ALKALIES AND OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS:
 MAY INCLUDE AND ARE NOT LIMITED TO: OXIDES OF CARBON. PHOSGENE.

POSSIBILITY OF HAZARDOUS REACTIONS:
 HAZARDOUS POLYMERIZATION DOES NOT OCCUR.

11. TOXICOLOGICAL INFORMATION

COMPONENT ANALYSIS - LC50:

INGREDIENT(S)	LC50
1,2,4-TRIMETHYLBENZENE	3661 PPM RAT
2-PROPANOL, 1-METHOXY-, ACETATE	NOT AVAILABLE
ACETONE	>16000 MG/M3 RAT
BUTANE	658 MG/M3 RAT
CARBONIC ACID CALCIUM SALT (1:1)	NOT AVAILABLE
HYDROUS MAGNESIUM SILICATE	NOT AVAILABLE
PROPANE	NOT AVAILABLE
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	1400 MG/L/4H RAT
TITANIUM OXIDE	NOT AVAILABLE

COMPONENT ANALYSIS - ORAL LD50:

INGREDIENT(S)	LD50
1,2,4-TRIMETHYLBENZENE	3280 MG/KG RAT
2-PROPANOL, 1-METHOXY-, ACETATE	8532 MG/KG RAT

ACETONE	5800 MG/KG RAT
BUTANE	NOT AVAILABLE
CARBONIC ACID CALCIUM SALT (1:1)	6450 MG/KG RAT
HYDROUS MAGNESIUM SILICATE	NOT AVAILABLE
PROPANE	NOT AVAILABLE
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	5000 MG/KG RAT
TITANIUM OXIDE	24000 MG/KG RAT

EFFECTS OF ACUTE EXPOSURE:

EYE: MAY CAUSE IRRITATION. CONTACT WITH LIQUID MAY CAUSE FROSTBITE.

SKIN: MAY CAUSE IRRITATION. CONTACT WITH LIQUID MAY CAUSE FROSTBITE.

INHALATION:

EXCESSIVE INTENTIONAL INHALATION MAY CAUSE RESPIRATORY TRACT IRRITATION AND CENTRAL NERVOUS SYSTEM EFFECTS (HEADACHE, DIZZINESS).

INGESTION:

NOT A NORMAL ROUTE OF EXPOSURE. MAY CAUSE STOMACH DISTRESS, NAUSEA OR VOMITING.

SENSITIZATION: NON-HAZARDOUS BY WHMIS/OSHA CRITERIA.

CHRONIC EFFECTS:

REPEATED OR PROLONGED EXPOSURE TO HYDROUS MAGNESIUM SILICATE (TALC) MAY CAUSE SCARRING OF THE LUNGS WITH SHORTNESS OF BREATH, CHRONIC COUGH, AND HEART FAILURE.

CARCINOGENICITY: CONTAINS A POTENTIAL CARCINOGEN.

ACGIH - THRESHOLD LIMITS VALUES - CARCINOGENS:

ACETONE	67-64-1	A4 - NOT CLASSIFIABLE AS A HUMAN CARCINOGEN
HYDROUS MAGNESIUM SILICATE	14807-96-6	A4 - NOT CLASSIFIABLE AS A HUMAN CARCINOGEN (CONTAINING NO ASBESTOS FIBERS) A1 - CONFIRMED HUMAN CARCINOGEN (CONTAINING ASBESTOS FIBERS)
TITANIUM OXIDE	13463-67-7	A4 - NOT CLASSIFIABLE AS A HUMAN CARCINOGEN

IARC - GROUP 2B (POSSIBLY CARCINOGENIC TO HUMANS):

TITANIUM OXIDE	13463-67-7	MONOGRAPH 93 POSTED, MONOGRAPH 47 (1989)
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IARC - GROUP 3 (NOT CLASSIFIABLE):

HYDROUS MAGNESIUM SILICATE	14807-96-6	MONOGRAPH 93 POSTED (INHALED), SUPPLEMENT 7 (1987), MONOGRAPH 42 (1987)
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MUTAGENICITY: NON-HAZARDOUS BY WHMIS/OSHA CRITERIA.

REPRODUCTIVE EFFECTS: NON-HAZARDOUS BY WHMIS/OSHA CRITERIA.

TERATOGENICITY: NON-HAZARDOUS BY WHMIS/OSHA CRITERIA.

12. ECOLOGICAL INFORMATION

ECOTOXICITY:
COMPONENTS OF THIS PRODUCT HAVE BEEN IDENTIFIED AS HAVING POTENTIAL ENVIRONMENTAL CONCERNS.

ECOTOXICITY - FRESHWATER ALGAE DATA:

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	64742-89-8	72 HR EC50 SELENASTRUM CAPRICORNUTUM: 4700 MG/L
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ECOTOXICITY - FRESHWATER FISH SPECIES DATA:

1,2,4-TRIMETHYLBENZENE	95-63-6	96 HR LC50 PIMEPHALES PROMELAS: 7.72 MG/L (FLOW-THROUGH)
2-PROPANOL, 1-METHOXY-, ACETATE	108-65-6	96 HR LC50 PIMEPHALES PROMELAS: 161 MG/L (STATIC)
ACETONE	67-64-1	96 HR LC50 ONCORHYNCHUS MYKISS: 5540 MG/L (STATIC)
		96 HR LC50 PIMEPHALES PROMELAS: 6210 MG/L (FLOW-THROUGH)
		96 HR LC50 LEPOMIS MACROCHIRUS: 8300 MG/L (STATIC)
HYDROUS MAGNESIUM SILICATE	14807-96-6	96 HR LC50 BRACHYDANIO RERIO: >100 G/L (SEMI-STATIC)

ECOTOXICITY - MICROTOX DATA:

ACETONE	67-64-1	15 MIN EC50 PHOTOBACTERIUM PHOSPHOREUM: 14500 MG/L
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ECOTOXICITY - WATER FLEA DATA:

1,2,4-TRIMETHYLBENZENE	95-63-6	48 HR EC50 DAPHNIA MAGNA: 6.14 MG/L
2-PROPANOL, 1-METHOXY-, ACETATE	108-65-6	48 HR EC50 DAPHNIA MAGNA: >500 MG/L
ACETONE	67-64-1	48 HR EC50 WATER FLEA: 0.0039 MG/L
		48 HR EC50 WATER FLEA: 12700 MG/L (STATIC)
		48 HR EC50 DAPHNIA MAGNA: 12600 MG/L

ENVIRONMENTAL EFFECTS: HARMFUL TO AQUATIC LIFE.

AQUATIC TOXICITY: NOT AVAILABLE

PERSISTENCE / DEGRADABILITY: NOT AVAILABLE

BIOACCUMULATION / ACCUMULATION: NOT AVAILABLE

PARTITION COEFFICIENT: NOT AVAILABLE

MOBILITY IN ENVIRONMENTAL MEDIA: NOT AVAILABLE

CHEMICAL FATE INFORMATION: NOT AVAILABLE

13. DISPOSAL CONSIDERATIONS

WASTE CODES: NOT AVAILABLE

DISPOSAL INSTRUCTIONS:
REVIEW FEDERAL, PROVINCIAL, AND LOCAL GOVERNMENT REQUIREMENTS PRIOR TO DISPOSAL. DO NOT PUNCTURE OR INCINERATE CONTAINER.

WASTE FROM RESIDUES / UNUSED PRODUCTS: NOT AVAILABLE

CONTAMINATED PACKAGING: NOT AVAILABLE

14. TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION (DOT):

BASIC SHIPPING REQUIREMENTS:

PROPER SHIPPING NAME:
CONSUMER COMMODITY, ORM-D (APPLICABLE TO CONTAINERS UP TO 1L)

TRANSPORTATION OF DANGEROUS GOODS (TDG):

BASIC SHIPPING REQUIREMENTS:

PROPER SHIPPING NAME:
CONSUMER COMMODITY (APPLICABLE TO CONTAINERS UP TO 1L)**15. REGULATORY INFORMATION**CANADIAN FEDERAL REGULATIONS:
THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CONTROLLED PRODUCTS REGULATIONS AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CONTROLLED PRODUCTS REGULATIONS.

CANADA - WHMIS - INGREDIENT DISCLOSURE LIST:

1,2,4-TRIMETHYLBENZENE	95-63-6	0.1%
ACETONE	67-64-1	1%
BUTANE	106-97-8	1%

US FEDERAL REGULATIONS:
THIS PRODUCT IS A "HAZARDOUS CHEMICAL" AS DEFINED BY THE OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200.

U.S. - CERCLA/SARA - HAZARDOUS SUBSTANCES AND THEIR REPORTABLE QUANTITIES:

ACETONE	67-64-1	5000 LB FINAL RQ
		2270 KG FINAL RQ

U.S. - CERCLA/SARA - SECTION 313 - EMISSION REPORTING:

1,2,4-TRIMETHYLBENZENE	95-63-6	1.0% DE MINIMIS CONCENTRATION
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OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA):

29 CFR 1910.1200 HAZARDOUS CHEMICAL: YES

CERCLA (SUPERFUND) REPORTABLE QUANTITY:
2-PROPANONE: 5000.0000
BENZENE, 1,3-DIMETHYL-: 1000.0000

BENZENE, (1-METHYLETHYL)-: 5000.0000

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA):

HAZARD CATEGORIES
 IMMEDIATE HAZARD: YES
 DELAYED HAZARD: YES
 FIRE HAZARD: YES
 PRESSURE HAZARD: NO
 REACTIVITY HAZARD: NO

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCE: NO

SECTION 311 HAZARDOUS CHEMICAL: YES

CLEAN AIR ACT (CAA): NOT AVAILABLE

CLEAN WATER ACT (CWA): NOT AVAILABLE

SAFE DRINKING WATER ACT (SDWA): NOT AVAILABLE

DRUG ENFORCEMENT AGENCY (DEA): NOT AVAILABLE

FOOD AND DRUG ADMINISTRATION (FDA): NOT AVAILABLE

WHMIS STATUS: CONTROLLED

WHMIS CLASSIFICATION:
 CLASS A - COMPRESSED GAS
 CLASS B - DIVISION 5 - FLAMMABLE AEROSOL
 CLASS D - DIVISION 2A
 2B

WHMIS LABELING:
 A - COMPRESSED GAS
 B - FLAMMABLE AND COMBUSTIBLE MATERIAL
 D2 - MATERIALS CAUSING OTHER TOXIC EFFECTS

STATE REGULATIONS:
 THIS PRODUCT DOES NOT CONTAIN A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

U.S. - CALIFORNIA - 8 CCR SECTION 339 - DIRECTOR'S LIST OF HAZARDOUS SUBSTANCES:

1,2,4-TRIMETHYLBENZENE	95-63-6	(PRESENT)
ACETONE	67-64-1	PRESENT
BUTANE	106-97-8	PRESENT
HYDROUS MAGNESIUM SILICATE	14807-96-6	PRESENT (EXEMPT EXCEPT WHEN INHALABLE DUST IS PRESENT OR CAN BE GENERATED)

U.S. - ILLINOIS - TOXIC AIR CONTAMINANTS:

1,2,4-TRIMETHYLBENZENE	95-63-6	PRESENT
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U.S. - LOUISIANA - REPORTABLE QUANTITY LIST FOR POLLUTANTS:

ACETONE	67-64-1	5000 LB FINAL RQ 2270 KG FINAL RQ
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U.S. - MASSACHUSETTS - RIGHT TO KNOW LIST:

1,2,4-TRIMETHYLBENZENE	95-63-6	PRESENT
ACETONE	67-64-1	PRESENT

BUTANE	106-97-8	PRESENT
HYDROUS MAGNESIUM SILICATE	14807-96-6	PRESENT (EXEMPT WHEN ENCAPSULATED OR IF PARTICULATES ARE NOT PRESENT AND CANNOT BE SUBSTANTIALLY GENERATED THROUGH USE OF THE PRODUCT)
PROPANE	74-98-6	PRESENT
TITANIUM OXIDE	13463-67-7	PRESENT
U.S. - MINNESOTA - HAZARDOUS SUBSTANCE LIST:		
1,2,4-TRIMETHYLBENZENE	95-63-6	PRESENT
ACETONE	67-64-1	PRESENT
BUTANE	106-97-8	PRESENT
HYDROUS MAGNESIUM SILICATE	14807-96-6	PRESENT (NONASBESTIFORM, RESPIRABLE, AND FIBROUS)
PROPANE	74-98-6	SIMPLE ASPHYXIAN
TITANIUM OXIDE	13463-67-7	PRESENT
U.S. - NEW JERSEY - RIGHT TO KNOW HAZARDOUS SUBSTANCE LIST:		
1,2,4-TRIMETHYLBENZENE	95-63-6	SN 2716
ACETONE	67-64-1	SN 0006
BUTANE	106-97-8	SN 0273
HYDROUS MAGNESIUM SILICATE	14807-96-6	SN 1773
PROPANE	74-98-6	SN 1594
TITANIUM OXIDE	13463-67-7	SN 1861
U.S. - NEW YORK - REPORTING OF RELEASES PART 597 - LIST OF HAZARDOUS SUBSTANCES:		
ACETONE	67-64-1	5000 LB RQ (AIR) 1 LB RQ (LAND/WATER)
U.S. - PENNSYLVANIA - RTK (RIGHT TO KNOW) LIST:		
1,2,4-TRIMETHYLBENZENE	95-63-6	ENVIRONMENTAL HAZARD
ACETONE	67-64-1	ENVIRONMENTAL HAZARD
BUTANE	106-97-8	PRESENT
HYDROUS MAGNESIUM SILICATE	14807-96-6	PRESENT
PROPANE	74-98-6	PRESENT
TITANIUM OXIDE	13463-67-7	PRESENT
U.S. - RHODE ISLAND - HAZARDOUS SUBSTANCE LIST:		
1,2,4-TRIMETHYLBENZENE	95-63-6	TOXIC
ACETONE	67-64-1	TOXIC; FLAMMABLE
BUTANE	106-97-8	TOXIC; FLAMMABLE

HYDROUS MAGNESIUM SILICATE	14807-96-6	TOXIC
PROPANE	74-98-6	TOXIC; FLAMMABLE
TITANIUM OXIDE	13463-67-7	TOXIC

INVENTORY NAME:

COUNTRY(S) OR REGION	INVENTORY NAME	ON INVENTORY (YES/NO) *
CANADA	DOMESTIC SUBSTANCES LIST (DSL)	YES
CANADA	NON-DOMESTIC SUBSTANCES LIST (NDSL)	NO
UNITED STATES & PUERTO RICO	TOXIC SUBSTANCES CONTROL ACT (TSCA) INVENTORY	YES

A "YES" INDICATES THAT ALL COMPONENTS OF THIS PRODUCT COMPLY WITH THE INVENTORY REQUIREMENTS ADMINISTERED BY THE GOVERNING COUNTRY(S)

16. OTHER INFORMATION

DISCLAIMER:

INFORMATION CONTAINED HEREIN WAS OBTAINED FROM SOURCES CONSIDERED TECHNICALLY ACCURATE AND RELIABLE. WHILE EVERY EFFORT HAS BEEN MADE TO ENSURE FULL DISCLOSURE OF PRODUCT HAZARDS, IN SOME CASES DATA IS NOT AVAILABLE AND IS SO STATED. SINCE CONDITIONS OF ACTUAL PRODUCT USE ARE BEYOND CONTROL OF THE SUPPLIER, IT IS ASSUMED THAT USERS OF THIS MATERIAL HAVE BEEN FULLY TRAINED ACCORDING TO THE REQUIREMENTS OF ALL APPLICABLE LEGISLATION AND REGULATORY INSTRUMENTS. NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE AND SUPPLIER WILL NOT BE LIABLE FOR ANY LOSSES, INJURIES OR CONSEQUENTIAL DAMAGES WHICH MAY RESULT FROM THE USE OF OR RELIANCE ON ANY INFORMATION CONTAINED IN THIS DOCUMENT.

ISSUE DATE: 14-FEB-2007

EFFECTIVE DATE: 15-FEB-2007

EXPIRY DATE: 15-FEB-2010

PREPARED BY:

DELL TECH LABORATORIES LTD.: (519) 858-5021

#15362

07300039F

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND MANUFACTURER'S INFORMATION						
NFPA Rating: Health-1; Flammability-3; Reactivity-0; Special---			HMIS Rating: Health-1; Flammability-3; Reactivity-0; Personal Protection-B			
Manufactured For: WAXIE Sanitary Supply Address: 9353 Waxie Way Address: San Diego, CA 92123-1036			DOT Hazard Classification: ORM-D Identity (trade name as used on label): Pina Colada Dry Deodorizer & Odor Counteractant #160264			
Phone: 1-800-995-4466			MSDS Number: A00239SB		Revision-5	
EMERGENCY RESPONSE NUMBER: 1-800-255-3924			Date Prepared: 02/01/07		Prepared By: TR/IB	
NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA			Information Calls: (770)422-2071			
SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION						
COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)		CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
ACETONE		67-64-1	No	1000	750	d
ISOBUTANE / PROPANE BLEND		75-28-5	No	800	800	d
		74-98-6	No	1000	1000	d
SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS						
Boiling Point: N/A			Specific Gravity (H2O=1): Concentrate Only = < 1			
Vapor Pressure: PSIG @ 70°F (Aerosols): 50-60			Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A			
Vapor Density (Air = 1): N/E			Evaporation Rate (= 1): N/E			
Solubility in Water: Soluble			Water Reactive: No			
Appearance and Odor: Clear liquid with fragrance.						
SECTION 3 - FIRE AND EXPLOSION HAZARD DATA						
FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols): flame projection with spray through cap: projection greater than 18" with flashback: Categorized as EXTREMELY FLAMMABLE			Auto Ignition Temperature N/E	Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E		
FLASH POINT AND METHOD USED (non-aerosols): N/A		SPECIAL FIRE FIGHTING PROCEDURES: Provide shielding for personnel. Wear self-contained breathing apparatus. Cool containers with water fog to prevent rupturing & spewing.				
EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide, water.		Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 120°F or the container may rupture.				
SECTION 4 - REACTIVITY HAZARD DATA						
STABILITY <input checked="" type="checkbox"/> STABLE <input type="checkbox"/> UNSTABLE			HAZARDOUS POLYMERIZATION <input type="checkbox"/> WILL <input checked="" type="checkbox"/> WILL NOT OCCUR			
Incompatibility (Mat. to avoid): Alkalis, oxidizing materials, amines.			Conditions to Avoid: Open flame, welding arcs, heat.			
Hazardous Decomposition Products: CO, CO2.						
SECTION 5 - HEALTH HAZARD DATA						
PRIMARY ROUTES OF ENTRY: <input checked="" type="checkbox"/> INHALATION <input type="checkbox"/> INGESTION <input type="checkbox"/> SKIN ABSORPTION <input type="checkbox"/> EYE <input type="checkbox"/> NOT HAZARDOUS						
ACUTE EFFECTS Vapor concentrations around 1000 ppm may cause slight transient irritation to the upper respiratory tract.						
Inhalation: Excessive inhalation of vapors can be harmful and may cause headache, dizziness, asphyxia, anesthetic effects and possible unconsciousness.						
Eye Contact: Irritation.			Skin Contact: May cause slight irritation.			
Ingestion: Possible chemical pneumonitis if aspirated into lungs. Nausea.						
CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) May cause mucous membrane irritation, overnight headache, and general weakness.						
Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.						
EMERGENCY FIRST AID PROCEDURES						
Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.						
Skin Contact: Wash with soap and water. If irritated, seek medical attention.						
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.						
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.						
SECTION 6 - CONTROL AND PROTECTIVE MEASURES						
Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by U.S. Bureau of Mines / NIOSH for organic vapor.						
Protective Gloves: Latex, if skin easily irritated.			Eye Protection: Safety glasses recommended.			
Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.						
Other Protective Clothing & Equipment: None						
Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.						
SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE						
Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations. DO NOT FLUSH TO SEWER.						
Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.						
Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 120°F.						
Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination. Avoid breathing vapors. Remove ignition sources.						

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

THIS MSDS IS CURRENT AS OF November 2, 2010. The DATE PREPARED section is the original date assembled and remains current until a change is necessary. This is tracked internally at the manufacturer by these date codes and therefore must remain as the originating date

STAPLES CONTRACT & COMMERCIAL, INC.
500 Staples Drive
Framingham, MA 01702
1-888-322-0912
24-HR MEDICAL AND DOT EMERGENCIES: 1-888-322-0912

MSDS #: MSDS SEB5000

Hazard Rating	HMIS	NFPA
Health	1	1
Flammability	2	2
Reactivity	0	0
Special	None	None

MATERIAL SAFETY DATA SHEET

Complies with ANSI Z400.1 Format

SECTION 1: PRODUCT IDENTIFICATION

Product: **WHITEBOARD CLEANER Sustainable Earth By Staples** ^{TM/MC}
This MSDS applies to Manufacturer Item Number: SEB500008-A MSDS CODE: SEB5000.0111

GENERIC DESCRIPTION	DATE ISSUED	SUPERSEDES	PREPARED BY
Whiteboard Cleaner	01-20-11	11-17-10	Regulatory Specialist

SECTION 2: HAZARDS IDENTIFICATION

Primary Entry Routes: Eyes and skin. **Signs & Symptoms of Exposure:** Incidental skin contact is not expected to cause any significant irritation. Eye contact may cause slight reddening. **Effects of Overexposure:** None known.

SECTION 3: COMPOSITION/ INFORMATION ON INGREDIENTS

Components	% by Wt.	CAS #	Exposure Limit
Ethanol	3-5	64-17-5	1000 ppm TLV-TW, 1000 ppm OSHA PEL
Glycol ether DPnB	1-3	29911-28-2	None established

Balance is water and similar non-hazardous ingredients. No fragrance or dye added.

SECTION 4: FIRST AID MEASURES

Emergency First Aid Procedures:

Eyes: Immediately flush eyes with water for at least 15 minutes while holding eyelids open. If reddening occurs and persists, seek medical attention or advice.

Skin: Rinse thoroughly with water.

Ingestion: Drink large amounts of water or milk, consult a physician.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point: >130°F **Flammable Limits:** Not known. **Extinguishing Media:** Use standard firefighting measures to extinguish fires involving this material (water spray, dry chemicals or foam). **Special Fire Fighting Procedures:** Appropriate personal protective equipment. **Unusual Fire and Explosion Hazards:** Not known. Use water spray to cool nearby containers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Release or Spill: Recover liquid with wet mop or wet/dry vacuum. Rinse area with water and flush residue to sanitary sewer. Keep spill out of storm sewers and waterways. Use care, floor may become slippery. Wear appropriate protective gear to avoid eye contact. Follow good industrial hygiene practices. Wash thoroughly after clean up.

SECTION 7: HANDLING AND STORAGE

Avoid contact with skin and eyes. Wash thoroughly after handling. As with all chemicals, good industrial hygiene practices should be followed when handling this material. Keep containers closed until used. Store in original containers in areas inaccessible to children. Do not store on side. Avoid creasing or impacting of side walls.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls: Use with adequate ventilation.

Respiratory Protection: No special requirements for normal use conditions.

Protective Gloves: No special requirements for normal use conditions.

Eye Protection: No special requirements for normal use conditions.

Other Protective Measures: Use good personal hygiene practices. Launder contaminated clothing/equipment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor: Clear, colorless liquid/Mild	Boiling Point: >212°F	Evap. Rate: Not known.
pH (as is): 7.0	Vapor Density: Not known.	Vapor Pressure: Not known.
Specific Gravity: 1.01	Solubility in Water: Soluble	V.O.C. Content (by weight): <5% (<50g/L)

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable **Conditions to Avoid:** Heat, sparks and fire **Incompatibility:** None known.
Hazardous Decomposition Products: None known. **Hazardous Polymerization:** Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Oral Toxicity: This product is non-toxic based upon current information available to Staples Contract & Commercial, Inc. and provided by all ingredient manufacturers. **No PBTs:** This product contains none of the persistent, bioaccumulative and toxic chemicals (PBT) as listed by EPA: dioxins & furans, toxaphene, PCBs, Mirex, Mercury & compounds, Octachlorostyrene, alkyl-lead, DDT, Hexachlorobenzene, aldrin/dieldrin, benzo(a)pyrene and chlordane. **No Butyl:** Contains no 2-butoxyethanol (butyl). **No Endocrine Modifiers:** Based upon information provided by manufacturers of all ingredients used to manufacture this product, none of the ingredients used in this product contain APE, OPE, NPE or dibutyl phthalate.

SECTION 12: ECOLOGICAL INFORMATION

All components of this product are readily biodegradable based upon the Modified OECD screening tests. After this product's use, it will biodegrade in sewage systems and/or the environment. Contains no nonyl phenol ethoxylates or alkyl phenol ethoxylates. This product contains no ozone-depleting chlorinated compounds as specified by the Montreal Protocol. This product contains no paradichlorobenzene 1,4-dioxane, sodium hypochlorite, NTA or sodium EDTA.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Information: Discarded product is not a hazardous waste according to RCRA, 40 CFR 261. Dispose of in compliance with all Federal, state and local laws and regulations.

SECTION 14: TRANSPORT INFORMATION

DOT EMERGENCY 24-HR: 1-888-322-0912 **U.S. DOT Hazard Class:** Not regulated.
DOT LABEL: None **DOT Shipping Name:** Compound, Cleaning Liquid

SECTION 15: REGULATORY INFORMATION

There are no components in this product currently reportable or listed as carcinogens by NTP, IARC or OSHA; on CERCLA (Comprehensive Environmental Response, Compensation and Liability Act of 1980); on SARA Title III, Sections 302/304 or Section 313, or on California Proposition 65. All components of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

SARA Title III Sections 311/312:

Chemical Name	CAS#	*Hazard Categories
Glycol ether DPnB	29911-28-2	A
Ethanol	64-17-5	A, C, F

*The five hazard categories are as follows: F=FIRE HAZARD; S=SUDDEN RELEASE OF PRESSURE; R=REACTIVE; A=IMMEDIATE (ACUTE) HEALTH HAZARD; C=DELAYED (CHRONIC) HEALTH HAZARD

MASSACHUSETTS Right-to-Know – The following components of this material are included in the Massachusetts Hazardous Substance List and are present at or above reportable levels:

Chemical Name	CAS #	Typical Maximum Concentration
Ethanol	64-17-5	5%

NEW JERSEY Right-to-Know – The following components of this material are included in the New Jersey Hazardous Substance List and are present at or above reportable levels:

Chemical Name	CAS #	Typical Maximum Concentration
Ethanol	64-17-5	5%

PENNSYLVANIA Right-to-Know – The following components of this material are included in the Pennsylvania Hazardous Substance List and are present at or above reportable levels:

Chemical Name	CAS #	Typical Maximum Concentration
Ethanol	64-17-5	5%

SECTION 16: OTHER INFORMATION

This product has been formulated in partnership with EPA Design for the Environment (DfE) Formulator Initiative.

Always follow label directions carefully when using this or any other chemical product. If information about this product is required, please contact Staples at 1-888-322-0912 or visit our website at www.staples.com. Keep MSD Sheets filed and organized in an area accessible to workers according to the OSHA Hazard Communication Standard.

All information contained in this Material Safety Data Sheet is provided to the best of Staples Contract & Commercial, Inc's knowledge. No warranty is made with respect to this information, expressed or implied, including warranties of merchantability or fitness for a particular purpose. Users are responsible for verifying the information under their own operating conditions to determine whether the products listed in the MSDS are suitable for their intended use. Users are responsible for compliance with all laws and regulations as may be required by their receipt of the information and use of the products provided with this MSDS. This MSDS was prepared for the sole purpose of compliance with the Occupational Safety and Health Administration's Hazard Communication Standard and that is its only intended use.

STAPLES CONTRACT & COMMERCIAL, INC.
500 Staples Drive
Framingham, MA 01702
1-888-322-0912
EMERGENCIAS MÉDICAS Y DEL DOT LAS 24 HORAS:
1-888-322-0912

MSDS #: MSDS SEB5000

Clasificación Riesgos	HMIS	NFPA
Salud	1	1
Inflamabilidad	2	2
Reactividad	0	0
Especial	Ninguno	Ninguno

HOJA DE DATOS DE SEGURIDAD DE MATERIAL

Cumple con el Formato ANSI Z400.1

SECCIÓN 1: IDENTIFICACIÓN DEL PRODUCTO

Producto: PIZARRA LIMPIADOR Sustainable Earth By Staples^{TM/MC}

Este MSDS aplica a los artículos del fabricante con número: SEB500008-A

CÓDIGO DE MSDS: SEB5000.0111

DESCRIPCIÓN GENÉRICA	FECHA DE EXPEDICIÓN	REEMPLAZA	PREPARADO POR
Pizarra Limpiador	01-20-11	11-17-10	Especialista Regulador

SECCIÓN 2: IDENTIFICACIÓN DE RIESGOS

Principales rutas de entrada: Ojos y piel **Signos y síntomas de exposición:** No se espera que el contacto incidental con la piel provoque ninguna irritación significativa. El contacto con los ojos puede provocar un ligero enrojecimiento.

Efectos de la sobreexposición: Ninguno conocido.

SECCIÓN 3: COMPOSICIÓN / INFORMACIÓN SOBRE LOS INGREDIENTES

Componentes	% por peso	CAS #	Límite de Exposición
Etanol	3-5	64-17-5	1000 ppm TLV-TW, 1000 ppm OSHA PEL
Glicol éter BNDP	1-3	29911-28-2	Ninguno establecido

El balance es el agua e ingredientes similares no peligrosos. No hay perfume o colorante añadido.

SECCIÓN 4: MEDIDAS DE PRIMEROS AUXILIOS

Procedimientos de primeros auxilios en caso de emergencia:

Ojos: Enjuague inmediatamente los ojos con agua durante al menos 15 minutos, sosteniendo los párpados abiertos. En caso de enrojecimiento y si éste persiste, busque atención u orientación médica.

Piel: Enjuague abundantemente con agua.

Ingestión: Beba grandes cantidades de agua y consulte a un médico.

SECCIÓN 5: MEDIDAS PARA EL COMBATE DE INCENDIOS

Punto de inflamación: >130°F **Límites de inflamabilidad:** Desconocido **Medios de extinción:** Utilice las medidas contra incendios habituales para apagar incendios provocados por este material (agua atomizada, polvos químicos secos o espuma). **Procedimientos especiales para el combate de incendios:** Equipo de protección personal apropiado.

Riesgos inusuales de incendio y explosión: Desconocidos. Use agua atomizada para enfriar los recipientes cercanos.

SECCIÓN 6: MEDIDAS PARA LOS DERRAMES ACCIDENTALES

Fugas o derrames: Recupere el líquido con un trapeador húmedo o con una aspiradora en seco/húmedo. Enjuague el área con agua y tire los residuos a la alcantarilla sanitaria. Evite que el material derramado vaya al colector y los cauces de aguas pluviales. Tenga cuidado, el piso puede volverse resbaloso. Use el equipo de protección apropiado para evitar el contacto con los ojos. Cumpla con las buenas prácticas de higiene industrial. Lave abundantemente después de limpiar.

SECCIÓN 7: MANEJO Y ALMACENAMIENTO

Evite el contacto con la piel y los ojos. Lávese abundantemente después de manipular el producto. Al igual que con todos los productos químicos, se debe cumplir con las buenas prácticas de higiene industrial al manipular este material. Conserve los recipientes cerrados hasta su uso. Almacene el producto en los recipientes originales y en áreas fuera del alcance de los niños. No almacene de lado. Evite golpear las paredes.

SECCIÓN 8: CONTROLES DE EXPOSICIÓN Y PROTECCIÓN PERSONAL

Controles de ingeniería: Utilícese con ventilación adecuada.

Protección respiratoria: No hay requisitos especiales para las condiciones normales de uso.

Guantes de protección: No hay requisitos especiales para las condiciones normales de uso.

Protección para los ojos: No hay requisitos especiales para las condiciones normales de uso.

Otras medidas de protección: Cumpla con las buenas prácticas de higiene personal. Lave el equipo y la ropa contaminada.

SECCIÓN 9: PROPIEDADES FÍSICAS Y QUÍMICAS

Apariencia y olor: Líquido claro, incoloro/Suave **Punto de ebullición:** >212°F **pH (Como tal):** 7.0
Velocidad de evaporación: Desconocido **Densidad de vapor:** Desconocido **Presión de vapor:** Desconocido
Gravedad específica: 1.01 **Solubilidad en agua:** Soluble **Contenido de C.O.V. (por peso):** <5% (<50g/L)

SECCIÓN 10: ESTABILIDAD Y REACTIVIDAD

Estabilidad: Estable **Condiciones que se deben evitar:** calor, las chispas y el fuego **Incompatibilidad:** Ninguna conocida. **Productos peligrosos de la descomposición:** Ninguno conocido **Polimerización peligrosa:** No ocurrirá.

SECCIÓN 11: INFORMACIÓN TOXICOLÓGICA

Toxicidad oral: De acuerdo con la información actual disponible para Staples Contract & Commercial, Inc. y la proporcionada por los fabricantes de todos los ingredientes, este producto no es tóxico. Presenta valores orales agudos LD₅₀ mayores a 5 g/kg. **Sin PBT:** Este producto no contiene ninguno de los contaminantes químicos persistentes, bioacumulativos y tóxicos (**PBT**) señalados por la Agencia de Protección Ambiental de EE.UU. (EPA): dioxinas y furanos, toxafeno, PCB, Mirex, mercurio y sus compuestos, octaclorostireno, alquilo de plomo, DDT, hexaclorobenceno, aldrina o dieldrina, benzopireno y clordano. **Sin butilo:** No contiene 2-butoxietanol (butilo).
Sin modificadores endocrinos: De acuerdo con la información proporcionada por los fabricantes de todos los ingredientes empleados en la fabricación de este producto, ninguno de los ingredientes usados en este producto contiene APE, OPE, NPE o DBP.

SECCIÓN 12: INFORMACIÓN ECOLÓGICA

Todos los componentes de este producto son fácilmente biodegradables basados en las pruebas de detección de la OCDE modificada. Después de utilizar este producto, que se va a deshacer de los sistemas de alcantarillado y / o el medio ambiente. No contiene nonil fenol etoxilados y alquilfenoles etoxilados. Este producto no contiene compuestos que agotan el ozono con cloro como se especifica en el Protocolo de Montreal. Este producto no contiene paradiclorobenceno 1,4-dioxano, el hipoclorito de sodio, NTA o EDTA sódico.

SECCIÓN 13: CONSIDERACIONES PARA EL DESECHO

Información de eliminación de residuos: El producto desechado no es un desperdicio peligroso de acuerdo con la Ley de Conservación y Recuperación de Recursos de EE.UU. (RCRA), Título 40, Artículo 261 del Código de Reglamentos Federales de EE.UU. (CFR). Deséchese en cumplimiento con todas las leyes y reglamentos federales, estatales y locales.

SECCIÓN 14: INFORMACIÓN SOBRE TRANSPORTE

EMERGENCIA DEL DEPARTAMENTO DE TRANSPORTE DE EE.UU. (DOT) LAS 24 HORAS: 1-888-322-0912

Clase de riesgo del DOT: No regulado. **ETIQUETA DEL DOT:** Ninguna

Nombre para embarque del DOT: Compuesto, líquido limpiador

SECCIÓN 15: INFORMACIÓN NORMATIVA

Este producto no contiene componentes actualmente reportables o que estén enlistados como carcinógenos por el Programa Nacional de Toxicología de EE.UU. (NTP), la Agencia Internacional para la Investigación sobre el Cáncer (IARC) o la Administración de Seguridad y Salud Ocupacional de EE.UU. (OSHA); bajo la Ley de Responsabilidad, Compensación y Recuperación Ambiental de EE.UU. (CERCLA) de 1980; bajo los Artículos 302/304 o 313 del Título III de la Ley de Reautorización y Enmiendas de Superfondo de EE.UU. (SARA); o en la PROPUESTA 65 DE CALIFORNIA. Todos los componentes de este producto están enlistados o han sido excluidos del Inventario de Sustancias Químicas de la Ley de Control de Sustancias Tóxicas de EE.UU. (TSCA).

Artículos 311 y 312 del Título III de la Ley SARA:

Nombre químico	CAS No.	* Categorías de riesgo
Glicol éter BNDP	29911-28-2	A
Ethanol	64-17-5	A, C, F

* Las cinco categorías de riesgo son las siguientes: F = RIESGO DE INCENDIO; S = LIBERACIÓN REPENTINA DE PRESIÓN; R = REACTIVO; A = RIESGO INMEDIATO PARA LA SALUD (AGUDO); C = RIESGO RETRASADO PARA LA SALUD (CRÓNICO)

Derecho a Saber de MASSACHUSETTS – Los siguientes componentes de este material están incluidos en la Lista de Sustancias Peligrosas de Massachusetts y están presentes a los niveles reportables o por encima de ellos:

Nombre químico	CAS No.	Concentración máxima típica
Ethanol	64-17-5	5%

Derecho a Saber de NUEVA JERSEY – Los siguientes componentes de este material están incluidos en la Lista de Sustancias Peligrosas de Nueva Jersey y están presentes a los niveles reportables o por encima de ellos:

<u>Nombre químico</u>	<u>CAS No.</u>	<u>Concentración máxima típica</u>
Ethanol	64-17-5	5%

Derecho a Saber de PENNSILVANIA – Los siguientes componentes de este material están incluidos en la Lista de Sustancias Peligrosas de Pensilvania y están presentes a los niveles reportables o por encima de ellos:

<u>Nombre químico</u>	<u>CAS No.</u>	<u>Concentración máxima típica</u>
Etanol	64-17-5	5%

SECCIÓN 16: OTRA INFORMACIÓN

Este producto ha sido formulado en asociación con la Iniciativa del Programa de Diseño para el Medio Ambiente (DfE) de la EPA.

Al usar éste o cualquier otro producto químico, siempre siga cuidadosamente las instrucciones de la etiqueta. Si desea más información acerca de este producto, comuníquese a Staples al teléfono 1-888-322-0912 o visite nuestra página Web www.staples.com. Conserve las Hojas de Datos de Seguridad de Materiales archivadas y organizadas en un área accesible para los trabajadores de acuerdo con las Normas de Comunicación de Riesgos de la OSHA.

Este MSDS fue elaborado con el único objeto y fin previsto de cumplir con la Norma de Comunicación de Riesgos de la OSHA. Toda la información contenida en esta Hoja de Datos de Seguridad de Material es proporcionada al leal saber y entender de Staples Contract & Commercial, Inc. No existe garantía alguna respecto a esta información, expresa o implícita, incluyendo garantías de comerciabilidad o idoneidad para un objeto en particular. Los usuarios son responsables de verificar la información bajo sus propias condiciones de operación a fin de determinar si los productos enlistados en el MSDS son apropiados para el uso previsto. Asimismo, los usuarios son responsables de cumplir con todas las leyes y reglamentos que puedan requerir el receptor de la información y el uso de los productos que acompañan este MSDS.



Close this window

MSDS

Common Name: PARTS WASHER SOLVENT

Manufacturer: ZEP MANUFACTURING

MSDS Revision Date: 7/8/2009

Grainger Item Number(s): 4UZE6, 4UZE7

Manufacturer Model Number(s):

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MATERIAL SAFETY DATA SHEET

ZEP PROFESSIONAL

ZEP INC.

1310 SEABOARD INDUSTRIAL BLVD.

ATLANTA, GA 30318

1-877-793-7776

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION



PRODUCT NAME: PARTS WASHER SOLVENT

PRODUCT USE: PARTS CLEANER SOLVENT

PRODUCT CODE: R198

DATE OF ISSUE: 07/08/09

SUPERSEDES:

EMERGENCY TELEPHONE NUMBERS:

FOR MSDS INFORMATION:

COMPLIANCE SERVICES: 1-877-793-7776

FOR MEDICAL EMERGENCY:

(877) 541-2016 TOLL FREE - ALL CALLS RECORDED

FOR TRANSPORTATION EMERGENCY:

CHEMTREC: (800) 424-9300 - ALL CALLS RECORDED

IN THE DISTRICT OF COLUMBIA: (202) 483-7616

PREPARED BY:

COMPLIANCE SERVICES

1420 SEABOARD INDUSTRIAL BLVD.

ATLANTA, GA 30318

SECTION 2. HAZARDS IDENTIFICATION



*HAZARD DETERMINATION SYSTEM (HDS):

HEALTH 1

FLAMMABILITY 2

REACTIVITY 0

EMERGENCY OVERVIEW:

WARNING!

COMBUSTIBLE LIQUID AND VAPOR. CAUSES EYE IRRITATION.

HARMFUL IF SWALLOWED.

NOTE:

MSDS DATA PERTAINS TO THE PRODUCT AS DELIVERED IN THE ORIGINAL SHIPPING CONTAINER(S). RISK OF ADVERSE EFFECTS ARE LESSENERED BY FOLLOWING ALL PRESCRIBED SAFETY PRECAUTIONS, INCLUDING THE USE OF PROPER PERSONAL PROTECTIVE EQUIPMENT.

ACUTE EFFECTS:

ROUTES OF ENTRY: DERMAL CONTACT. INHALATION.

EYES:

CAUSES EYE IRRITATION. INFLAMMATION OF THE EYE IS CHARACTERIZED BY REDNESS, WATERING AND ITCHING.

SKIN:

MAY CAUSE SKIN IRRITATION. SKIN INFLAMMATION IS CHARACTERIZED BY ITCHING, SCALING, OR REDDENING.

INHALATION:

AVOID BREATHING VAPORS, SPRAY OR MISTS. OVER-EXPOSURE BY INHALATION MAY CAUSE RESPIRATORY IRRITATION. CAN CAUSE CENTRAL NERVOUS SYSTEM (CNS) DEPRESSION.

INGESTION:

HARMFUL IF SWALLOWED. ASPIRATION HAZARD IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE.

CHRONIC EFFECTS:

PROLONGED OR REPEATED CONTACT CAN DEFAT THE SKIN AND LEAD TO IRRITATION, CRACKING AND/OR DERMATITIS.

PRODUCT/INGREDIENT NAME: NOT AVAILABLE.

ADDITIONAL INFORMATION: SEE TOXICOLOGICAL INFORMATION (SECTION 11)

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS



LIGHT ALIPHATIC NAPHTHA; SOLVENT NAPHTHA (PETROLEUM), MEDIUM ALIPHATICS	64742-88-7	90 - 100
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SECTION 4. FIRST AID MEASURES



EYE CONTACT:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER, OCCASIONALLY LIFTING THE UPPER AND LOWER EYELIDS. CHECK FOR AND REMOVE ANY CONTACT LENSES. CONTINUE TO RINSE FOR AT LEAST 10 MINUTES. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN CONTACT:

FLUSH AFFECTED SKIN WITH PLENTY OF WATER. REMOVE CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE REUSE. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS.

INHALATION:

MOVE EXPOSED PERSON TO FRESH AIR. IF BREATHING IS DIFFICULT, GIVE OXYGEN. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. GET MEDICAL ATTENTION.

INGESTION:

ASPIRATION HAZARD IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE. DO NOT INDUCE VOMITING UNLESS DIRECTED TO DO SO BY MEDICAL PERSONNEL. IF VOMITING OCCURS, THE HEAD SHOULD BE KEPT LOW SO THAT VOMIT DOES NOT ENTER THE LUNGS.

IF AFFECTED PERSON IS CONSCIOUS, GIVE PLENTY OF WATER TO DRINK. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION IMMEDIATELY.

SECTION 5. FIRE FIGHTING MEASURES



NATIONAL FIRE PROTECTION ASSOCIATION (U.S.A.):

1
2
0

FLASH POINT:

CLOSED CUP: 61.667 DEG. C (143 DEG. F) (PENSKY-MARTENS.)

FLAMMABLE LIMITS:

LOWER: 1%
UPPER: 7%

FLAMMABILITY: COMBUSTIBLE LIQUID.

FIRE HAZARD:

COMBUSTIBLE LIQUID. IN A FIRE OR IF HEATED, A PRESSURE INCREASE WILL OCCUR AND THE CONTAINER MAY BURST, WITH THE RISK OF A SUBSEQUENT EXPLOSION. THE VAPOR/GAS IS HEAVIER THAN AIR AND WILL SPREAD ALONG THE GROUND. VAPORS MAY ACCUMULATE IN LOW OR CONFINED AREAS OR TRAVEL A CONSIDERABLE DISTANCE TO A SOURCE OF IGNITION AND FLASH BACK.

FIRE-FIGHTING PROCEDURES: USE DRY CHEMICAL, CO2, WATER SPRAY (FOG) OR FOAM.

SECTION 6. ACCIDENTAL RELEASE MEASURES



SPILL CLEAN UP:

ELIMINATE ALL IGNITION SOURCES. PUT ON APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (SEE SECTION 8). STOP LEAK IF WITHOUT RISK. MOVE CONTAINERS FROM SPILL AREA. DILUTE WITH WATER AND MOP UP IF WATER-SOLUBLE OR ABSORB WITH AN INERT DRY MATERIAL AND PLACE IN AN APPROPRIATE WASTE DISPOSAL CONTAINER. USE SPARK-PROOF TOOLS AND EXPLOSION-PROOF EQUIPMENT.

SECTION 7. HANDLING AND STORAGE



HANDLING:

PUT ON APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (SEE SECTION 8). AVOID CONTACT WITH EYES, SKIN AND CLOTHING. DO NOT BREATHE VAPOR OR MIST. DO NOT INGEST. USE ONLY WITH ADEQUATE VENTILATION. STORE AND USE AWAY FROM HEAT, SPARKS, OPEN FLAME OR ANY OTHER IGNITION SOURCE. WASH THOROUGHLY AFTER HANDLING. DO NOT REUSE CONTAINER.

STORAGE:

STORE IN ORIGINAL CONTAINER PROTECTED FROM DIRECT SUNLIGHT IN A DRY, COOL AND WELL-VENTILATED AREA, AWAY FROM INCOMPATIBLE MATERIALS (SEE SECTION 10) AND FOOD AND DRINK. ELIMINATE ALL IGNITION SOURCES. KEEP CONTAINER TIGHTLY CLOSED AND SEALED UNTIL READY FOR USE.

STORE BETWEEN THE FOLLOWING TEMPERATURES:

40 DEG. F - 120 DEG. F (4.4 DEG. C - 49 DEG. C). KEEP OUT OF THE REACH OF CHILDREN.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION



PRODUCT NAME

EXPOSURE LIMITS

LIGHT ALIPHATIC NAPHTHA; SOLVENT
 NAPHTHA (PETROLEUM), MEDIUM
 ALIPHATICS

ACGIH TLV (UNITED STATES).
 TWA: 100 PPM 8 HOUR(S).

SUPPLIER SUGGESTED TLV (UNITED STATES).
 TWA: 100 PPM 8 HOUR(S).

PERSONAL PROTECTIVE EQUIPMENT (PPE):

SAFETY GLASSES
 GLOVES

EYES: SAFETY GLASSES.

BODY: WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT.
 RECOMMENDED: NEOPRENE GLOVES. RUBBER GLOVES. NITRILE GLOVES.

RESPIRATORY:

USE WITH ADEQUATE VENTILATION. PROVIDE EXHAUST VENTILATION OR OTHER ENGINEERING CONTROLS TO KEEP THE AIRBORNE CONCENTRATIONS OF VAPORS BELOW THEIR RESPECTIVE OCCUPATIONAL EXPOSURE LIMITS. WEAR APPROPRIATE RESPIRATOR WHEN VENTILATION IS INADEQUATE.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES



PHYSICAL STATE: LIQUID.

COLOR: CLEAR. COLORLESS.

pH: NOT APPLICABLE

ODOR: SOLVENT. (SLIGHT)

BOILING POINT: 186.67 DEG. C (368 DEG. F)

VAPOR PRESSURE: 0.067 KPA (0.5 MMHg)

SPECIFIC GRAVITY: 0.79

VAPOR DENSITY: >1 (AIR = 1)

SOLUBILITY:

INSOLUBLE IN THE FOLLOWING MATERIALS: COLD WATER.

EVAPORATION RATE: 0.14 (BUTYL ACETATE. = 1)

VOC (CONSUMER): 100% (789 G/L; 6.58 LBS/GAL)

SECTION 10. STABILITY AND REACTIVITY



STABILITY AND REACTIVITY: THE PRODUCT IS STABLE.

INCOMPATIBILITY: KEEP AWAY FROM HEAT, SPARKS AND FLAME.

REACTIVE OR INCOMPATIBLE WITH THE FOLLOWING MATERIALS: OXIDIZING MATERIALS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON OXIDES (CO, CO2)

SECTION 11. TOXICOLOGICAL INFORMATION



ACUTE TOXICITY: NOT AVAILABLE.

SECTION 12. ECOLOGICAL INFORMATION



ENVIRONMENTAL EFFECTS: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

AQUATIC ECOTOXICITY: NOT AVAILABLE.

SECTION 13. DISPOSAL CONSIDERATIONS



WASTE INFORMATION:

WASTE MUST BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL ENVIRONMENTAL CONTROL REGULATIONS. CONSULT YOUR LOCAL OR REGIONAL AUTHORITIES FOR ADDITIONAL INFORMATION.

WASTE STREAM: NON-HAZARDOUS WASTE

SECTION 14. TRANSPORT INFORMATION



REGULATORY INFORMATION	UN NUMBER	PROPER SHIPPING NAME	CLASSES	PG*	LABEL
DOT CLASSIFICATION	NOT REGULATED.	NOT A DOT CONTROLLED MATERIAL (UNITED STATES).			

IMDG CLASS

NOTE:
DOT CLASSIFICATION APPLIES TO MOST PACKAGE SIZES. FOR SPECIFIC CONTAINER SIZE CLASSIFICATIONS OR FOR SIZE EXCEPTIONS, REFER TO THE BILL OF LADING WITH YOUR SHIPMENT.

PG*: PACKING GROUP

SECTION 15. REGULATORY INFORMATION



U.S. FEDERAL REGULATIONS:

SARA 313 TOXIC CHEMICAL NOTIFICATION AND RELEASE REPORTING:
NO PRODUCTS WERE FOUND.

CLEAN WATER ACT (CWA) 307: NO PRODUCTS WERE FOUND.

CLEAN WATER ACT (CWA) 311: NO PRODUCTS WERE FOUND.

CLEAN AIR ACT (CAA) 112 REGULATED TOXIC SUBSTANCES: NO PRODUCTS WERE FOUND.

ALL COMPONENTS OF THIS PRODUCT ARE LISTED OR EXEMPT FROM LISTING ON TSCA INVENTORY.

STATE REGULATIONS:

CALIFORNIA PROP 65: NO PRODUCTS WERE FOUND.

SECTION 16. OTHER INFORMATION



TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE. HOWEVER, NEITHER THE ABOVE NAMED SUPPLIER NOR ANY OF ITS SUBSIDIARIES ASSUMES ANY LIABILITY WHATSOEVER FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION CONTAINED HEREIN.

FINAL DETERMINATION OF SUITABILITY OF ANY MATERIAL IS THE SOLE RESPONSIBILITY OF THE USER. ALL MATERIALS MAY PRESENT UNKNOWN HAZARDS AND SHOULD BE USED WITH CAUTION. ALTHOUGH CERTAIN HAZARDS ARE DESCRIBED HEREIN, WE CANNOT GUARANTEE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

*NOTE :

HAZARD DETERMINATION SYSTEM (HDS) RATINGS ARE BASED ON A 0-4 RATING SCALE, WITH 0 REPRESENTING MINIMAL HAZARDS OR RISKS, AND 4 REPRESENTING SIGNIFICANT HAZARDS OR RISKS ALTHOUGH THESE RATINGS ARE NOT REQUIRED ON MSDSS UNDER 29 CFR 1910.1200, THE PREPARER MAY CHOOSE TO PROVIDE THEM. HDS RATINGS ARE TO BE USED WITH A FULLY IMPLEMENTED PROGRAM TO RELAY THE MEANINGS OF THIS SCALE.

BUILDINGS 59) (TRIDENT SEAFOODS)

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

Date 3/7/14 Time: 11:30 am

Address: 401 Alexander Ave E, Building 595, Tacoma WA 98421

Building Owner: Port of Tacoma

Occupant Name: Trident Seafoods

Contact Name: Steve Besaw Telephone (work): 253-502-5318

Cell:

How long has owner/tenant/occupant occupied building? 1911

Occupation: Boat Repair and Maintenance

Number of Occupants Adults: 1 Ages: 30 Children: Ages:

BUILDING CONSTRUCTION CHARACTERISTICS:

Building Use: Commercial/Industrial

Building Type: One story X Two storey Other

General Description of Building Construction Materials: Metal, Other

Year Constructed: NA

GARAGE: Do you have an attached garage? Yes No

Has the building been weatherized with any of the following? Insulation, Storm Windows, Energy-Efficient Windows, Other (specify) No

What type of basement does the building have?

Table with 5 columns: None, Finished, Unfinished, Depth below reference point (meters), and checkboxes for Partial, Full, Crawl space.

Number of floors at or above grade:

Depth of basement below grade: ft. Basement Size: ft²

Foundation construction: Poured concrete X Cinder block Stone

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

Any visual evidence of leakage through basement walls or floor

Floor Construction: Poured concrete Wood Earth Brick Other: _____

Floor condition (cracks, drains): _____

Condition at floor/wall joint (if visible): _____

Any exterior openings from the basement:

- Vents
- Fans
- Windows
- Wall openings
- Utility pipe penetrations
- Other: _____

Type of ground cover outside of building: grass / concrete / **asphalt** / other (specify): _____

Sub-slab vapor/moisture barrier in place? Yes / No / **Don't know**

Type of barrier: _____

Do you have a sump?: Yes No

Where: _____

If yes, sealed open NA

If yes, is there water in the sump?: Yes No

Is building serviced with municipal water? Yes No

Do you have a water well?: Yes No Don't know

Well location: _____

Do you drink the water obtained from the well? _____

What do you use the well for?: _____

Do you have a cistern?: Yes No

If yes, describe its location: _____

Do you have a septic system?: Yes No If Yes is it still active Yes No

If yes, describe its location: _____

If yes, describe how septic system is cleaned: _____

Have there ever been a fire in the building?: Yes No

If yes, describe its location and extent: _____

Is there a laundry room located inside the house?: Yes No

If yes, describe its location: _____

Is there a Radon System in the building: Yes No

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

HEATING AND VENTILATION SYSTEM(S) PRESENT:

What type of heating system(s) is/are used in the building?

Hot Air Circulation Heat Pump Steam Radiation Wood Stove
Hot Air Radiation Unvented Kerosene heater Electric Baseboard Other (specific)

Where are they located? _____ None _____

Is there outside air vent for heating system? _____ No _____

What type(s) of fuel(s) are used in this building?

Natural Gas Electric Coal Other (specific)
Fuel Oil Wood Solar

What type of mechanical ventilation systems are present and/or currently operating in the building?

Central Air Conditioning Mechanical Fans Bathroom Ventilation
Fan Kitchen Range Hood Open Windows
Individual Air Conditioning Units Air-to-Air Heat Exchanger Other (specify)

Where are they located? _____ None _____

SOURCES OF CHEMICAL CONTAMINANTS

1. When was the last time dry-cleaned clothes were brought into the building?
 0 to 5 days ago 6 to 10 days ago More than 10 days ago Don't dry-clean

2. How recently were the carpets installed?
 In the last six months More than six months ago No Carpet

3. When was the last time the carpet was cleaned?
 In the last six months More than six months ago Never

4. Was there any recent remodeling or painting done in the building?
 Yes No Details: _____

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

5. Are there any pressed wood products in the building (e.g., hardwood plywood wall paneling, particleboard, fiberboard)? No

6. Are there any new upholstery, drapes, or textiles in the building? No

7. Do you have any spot removers in the building?

Yes No Details: None

8. Do you perform automotive or other vehicle maintenance or repair within the building (e.g., attached garage)?

Yes No Details: None

9. Which of these items are present in the building? (Check all that apply)

<i>Potential VOC Source</i>	<i>Location of Source</i>	<i>Removed 48 hours prior to sampling? (Yes/No/NA)</i>
-----------------------------	---------------------------	--

- Paints or paint thinners
- Gas-powered equipment
- Gasoline storage cans
- Cleaning solvents
- Air fresheners
- Oven cleaners
- Carpet/upholstery cleaners
- Hairspray
- Nail polish/polish remover
- Bathroom cleaner
- Appliance cleaner
- Furniture/floor polish
- Moth balls
- Fuel tank
- Wood stove
- Fireplace
- Perfume/colognes
- Hobby supplies (e.g., solvents, paints, lacquers, glues, photographic darkroom chemicals)
- Scented trees, wreaths, potpourri, etc.
- Other
- Other
- Other
- Other

10. Do you have MSDS for the above referenced chemicals?

Yes No Unsure

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

11. Do you have pesticides in the building?

- Yes No Unsure

12. Do you have any spray insecticides in the building?

- Yes No Unsure

13. Have you painted any area of the interior of the building in the last 12 months?

- Yes No

If yes, please indicate what paint you used

- Enamel Vinyl Latex Other

14. Have you painted the exterior of the building in the last 12 months? Yes No

If yes, please indicate what paint you used

- Enamel Vinyl Latex Other

15. Where are paint, thinner, pesticides, insecticides stored?

	<i>Paint</i>	<i>Thinner</i>	<i>Pesticides</i>	<i>Insecticides</i>
Garage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Basement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storage shed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- I don't store these items in the building

16. Have you purchased one of the following items in the last 12 months?

- Rubberized door mat Computer Wiring
 Plastic shower curtain Printer Linoleum
 Wood stains or paint

17. Do you have a computer printer in the building?

- Yes No

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

18. Are there any pets in the building?

Yes No

If yes, what type? _____

If yes, number _____

19. Questions asked by Occupant that require follow-up.



Patrick Domres

Signature and Printed Name of Conducting the Survey



Material Safety Data Sheet

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Chemical Product Name	Sodium Chloride (Salt) - Treated with Yellow Prussiate of Soda (YPS)
Chemical Family	Alkali Metal/Halide
Chemical Name	Sodium Chloride
Formula	NaCl
Molecular Weight	58.44
Commercial Name	Diamond Crystal® Granulated Salt, Flo-Ever® Evaporated Salt - CMF®, Gulf Shore Boat & Boil® Salt, Flo-Ever® Fine Evaporated Salt - CMF®, Top-Flo® Plus Evaporated Salt, Top-Flo® Evaporated Salt, Hi-Tex® Evaporated Salt, Fine Blending Evaporated Salt - YPS Treated, Premier Extra Coarse Flake Salt, Premier Select Coarse Flake Salt, Premier Topping Flake Salt, Premier Fine Flake Salt, Dendritic Salt, Purified Sea Salt with YPS, Private Label Granulated Salt, Seafarer's® Fine Salt

Manufacturer
Cargill Incorporated
Salt Division
P. O. Box 5621
Minneapolis, MN 55440

Emergency Telephone Numbers
CHEMTREC (800) 424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Description
White crystalline solid.

Ingredient Name	Exposure Limits	Concentration (%)
CAS Number Sodium Chloride 7647-14-5		99.9987 - 99.9995
Sodium Ferrocyanide Decahydrate 13601-19-9		0.0005 - 0.0013

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

None for Salt - GRAS Substance (Generally Recognized As Safe)

Potential Health Effects

Route(s) Of Entry: Ingestion, skin/eye contact, inhalation.

Human Effects and Symptoms of Overexposure:

Acute Inhalation: Irritation of the respiratory tract.

Chronic Inhalation: No applicable information found for chronic systemic effects

Acute Skin Contact: Large amounts can cause irritation and if applied to damaged skin, absorption can occur with effects similar to those via ingestion.

Chronic Skin Contact: No applicable information found for chronic systemic effects.

Acute Eye Contact: Irritation with burning and tearing (salt concentrations greater than the normal saline present).

Chronic Eye Contact: No applicable information found for chronic systemic effects.

Acute Ingestion: Intake of large amounts has generally occurred for deliberate reasons: suicide, absorption, and to induce vomiting. The following effects were observed; nausea and vomiting, diarrhea, cramps, restlessness, irritability, dehydration, water retention, nose bleed, gastrointestinal tract damage, fever, sweating, sunken eyes, high blood pressure, muscle weakness, dry mouth and nose, shock, cerebral (fluid on brain) or pulmonary edema (fluid in lungs), blood cell shrinkage, and brain damage (due to dehydration of brain cells). Death is generally due to cardiovascular collapse or CNS damage. Less than a few grams would not be harmful. For larger quantities, drink large amounts of water or milk.

Chronic Ingestion: No applicable information found for chronic systemic effects.

Carcinogenicity

NTP: Not listed as a carcinogen or mutagen.

IARC: Not listed as a carcinogen or mutagen.

OSHA: Not listed as a carcinogen or mutagen.

Medical Conditions Aggravated by Exposure: In some cases of confirmed hypertension, ingestion may result in elevated blood pressure.

HMIS Health: 1, Flammability: 0, Reactivity: 0, Protective Equipment: A

4. FIRST AID MEASURES

First Aid For Eyes: For eye contact, flush with water immediately, lifting eyelids occasionally.

First Aid For Skin: Remove clothing from affected area. Wash skin thoroughly. Rinse carefully.

First Aid For Inhalation: If person breathes large quantities, remove to fresh air at once. If breathing stops, apply artificial respiration immediately.

First Aid For Ingestion: Less than a few grams would not be harmful. For larger quantities, drink large amounts of water or milk.

5. FIRE AND MEASURES

Flash Point: N/A

Extinguishing Media: N/A. This product is nonflammable.

Special Fire Fighting Procedures: N/A.

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Contain spills to prevent contamination of water supply or sanitary sewer system. Vacuum or sweep into containers for proper disposal.

7. HANDLING AND STORAGE

Storage Temperature (min./max.): Avoid humid or wet conditions as product will cake and become hard.

Special Sensitivity: Avoid contact with strong acids.

Handling and Storage Precautions: Becomes hygroscopic at 70% Relative Humidity

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection Requirements: Eyeglasses or goggles should be worn in dusty areas.

Skin Protection Requirements: Protective clothing may be worn in dusty areas, but is generally not required.

Respiratory/Ventilation Requirements: NIOSH/MSHA approved respirator for particulates.

Exposure Limits: Not listed.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: White crystalline solid with slight halogen odor.

Color: White crystalline solid

Odor: Halogen odor

Boiling Point (760mm Hg) (°C): 760 mm Hg. 1465 degrees C.

Melt Point/Freeze Point (°C): 801 degrees C.

PH: 4.0 – 9.0

Solubility In Water (g/cc, %): 26.4%

Specific Gravity (H₂O=1): 2.16 (H₂O)

Bulk Density: 53-83 Lbs/Ft³

% Volatile By Weight: N/A

Vapor Pressure (mm Hg/747°C): = 2.4

Vapor Density (Air=1): (Air=1) N/A

10. REACTIVITY

Stability: Stable

Incompatibilities: Avoid contact with strong acids. Becomes corrosive to metals when wet.

Decomposition Products: May evolve chlorine gas when in contact with strong acids.

11. TOXICOLOGICAL INFORMATION

Description: Not Listed

12. ECOLOGICAL INFORMATION

Ecotoxicity: Not Listed.

Environmental Degradation: Not Listed.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Follow applicable Federal, state and local regulations.

14. TRANSPORTATION INFORMATION

D.O.T. Shipping Name: Not Listed

Technical Shipping Name: Not Listed

D.O.T Hazard Class: Not Listed

U.N./N.A. Number: Not Listed

Product Rq (lbs.): N/A

D.O.T. Label: Not Listed

D.O.T. Placard: N/A

Freight Class Bulk: N/A

Freight Class Package: N/A

Product Label: N/A

15. REGULATORY INFORMATION

OSHA Status: Not Listed

TSCA Status: Listed as non hazardous.

Cercla reportable Quantity

SARA Title III

Section 302 Extremely

Hazardous Substances: Not Listed

Section 311/312

Hazard categories: Not Listed

Section 313

Toxic Chemicals: Not Listed

RCRA Status: Not Listed

H.M.I.S: 1 0 0 A

State Regulatory Information

Component Name

/CAS Number

Concentration

State-Code

N/A

16. OTHER INFORMATION

Reason For Issue: Regulatory Compliance

Prepared By: Steve Karl

Approved By: Sarah Hubert

Title: Director-Quality Administration

Approval Date: March 2014

Supersedes Date: March 2012

MSDS Number: S3

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It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations. It is also the responsibility of the user to maintain a safe workplace. The user should consider the health hazards and safety information provided herein as a guide and should take the necessary steps to instruct employees and to develop work practice procedures to ensure a safe work environment.

This information is not intended as a license to operate under, or a recommendation to practice or infringe upon any patent of this Company or others covering any process, composition of matter or use.



1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Chemical Product Name	Sodium Chloride (Salt)
Chemical Family	Alkali Metal/Halide
Chemical Name	Sodium Chloride
INCI Name	SODIUM CHLORIDE
INN Name	sodium chloride
Formula	NaCl
Molecular Weight	58.44
Commercial Name	Diamond Crystal® Solar Salt - Extra Coarse, Diamond Crystal® Solar Salt - Coarse

Manufacturer	Emergency Telephone Numbers
Cargill Salt P.O. Box 5621 Minneapolis, MN 55440	CHEMTREC (800) 424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Description
White crystalline solid

Ingredient Name	Exposure Limits	Concentration (%)
CAS Number Sodium Chloride 7647-14-5		100

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

None – GRAS Substance (Generally Recognized As Safe)

Potential Health Effects

Route(s) Of Entry: Ingestion, skin/eye contact, inhalation.

Human Effects and Symptoms of Overexposure:

Acute Inhalation: Irritation of the respiratory tract.

Chronic Inhalation: No applicable information found for chronic system effects.

Acute Skin Contact: Large amounts can cause irritation, and, if applied to damaged skin, absorption can occur with effects similar to those via ingestion.

Chronic Skin Contact: No applicable information found for chronic system effects.

Acute Eye Contact: Irritation with burning and tearing (salt concentrations greater than the normal saline present).

Chronic Eye Contact: No applicable information found for chronic systemic effects.

Acute Ingestion: Intake of large amounts has generally occurred for deliberate reasons: suicide, absorption, and to induce vomiting. The following effects were observed; nausea and vomiting, diarrhea, cramps, restlessness, irritability, dehydration, water retention, nose bleed, gastrointestinal tract damage, fever, sweating, sunken eyes, high blood pressure, muscle weakness, dry mouth and nose, shock, cerebral edema (fluid on brain), pulmonary edema (fluid in lungs), blood cell shrinkage, and brain damage (due to dehydration of brain cells). Death is generally due to cardiovascular collapse or CNS damage. Less than a few grams would not be harmful. For larger quantities, drink large amounts of water or milk.

Chronic Ingestion: No applicable information found for chronic systemic effects.

Carcinogenicity

NTP: Not listed as carcinogen or mutagen.

IARC: Not listed as carcinogen or mutagen.

OSHA: Not listed as carcinogen or mutagen.

Medical Conditions Aggravated by Exposure: In some cases of confirmed hypertension, ingestion may result in elevated blood pressure.

4. FIRST AID MEASURES

First Aid for Eyes: For eye contact, flush with water immediately, lifting eyelids occasionally.

First Aid for Skin: Remove clothing from affected area. Wash skin thoroughly. Rinse carefully.

First Aid for Inhalation: If person breathes large quantities, remove to fresh air at once. If breathing stops, apply artificial respiration immediately.

First Aid for Ingestion: Less than a few grams would not be harmful. For larger quantities, drink large amounts of water or milk.

5. FIRE AND MEASURES

Flash Point: N/A

Extinguishing Media: N/A. This product is nonflammable.

Special Fire Fighting Procedures: N/A

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Contain spills to prevent contamination of water supply or sanitary sewer system. Vacuum or sweep into containers for proper disposal.

7. HANDLING AND STORAGE

Storage Temperature (min./max.): Avoid humid or wet conditions as product will cake and become hard.

Special Sensitivity: Avoid contact with strong acids.

Handling and Storage Precautions: Becomes hygroscopic at 75% relative humidity.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection Requirements: Eyeglasses or goggles should be worn in dusty areas.

Skin Protection Requirements: Protective clothing may be worn in dusty areas, but is generally not required.

Respiratory/Ventilation Requirements: NIOSH/MSHA approved respirator for particulates.

Exposure Limits: Not listed.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: White crystalline solid with slight halogen odor.

Color: White to opaque.

Odor: Halogen odor when heated.

Boiling Point (760mm Hg)(°C): 1465

Melting Point/Freezing Point (°C): 801

pH: 6.7 – 10.0

Solubility in Water (g/cc)(%): 26.4

Specific Gravity (H₂O = 1): 2.16

Bulk Density (lbs./ft³): 35-83

% Volatile by Weight: N/A

Vapor Pressure (mm Hg/747°C): 2.4

Vapor Density (Air=1): N/A

10. REACTIVITY

Stability: Stable

Incompatibilities: Avoid contact with strong acids. Becomes corrosive to metals when wet.

Decomposition Products: May evolve chlorine gas when in contact with strong acids.

11. TOXICOLOGICAL INFORMATION

Description: Not listed.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Not listed.

Environmental Degradation: Not listed.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Follow applicable Federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

D.O.T. Shipping Name: Not listed.

Technical Shipping Name: Not listed.

D.O.T. Hazard Class: Not listed.

U.N./N.A. Number: Not listed.

Product Rq (lbs.): N/A

D.O.T. Label: Not listed.

D.O.T. Placard: N/A

Freight Class Bulk: N/A

Freight Class Package: N/A

Product Label: N/A

15. REGULATORY INFORMATION

OSHA Status: Not listed.

TSCA Status: Listed as non-hazardous.

CERCLA Reportable Quantity SARA Title III

Section 302 Extremely Hazardous Substances: Not listed.

Section 311/312 Hazard Categories: Not listed.

Section 313 Toxic Chemicals: Not listed.

RCRA Status: Not listed.

EINECS Number: 231-598-3

ENCS Number: 1-236

ECL Serial Number: KE-31387

SWISS Number: G-2580

HMIS Rating: 1 0 0 A

State Regulatory Information

Company Name/Cas Number	Concentration	State Code
N/A		

16. OTHER INFORMATION

Reason for Issue: Regulatory compliance.
Prepared By: Steve Karl
Approved By: Dave Merriweather
Title: Technical Director
Approval Date: February 2005
Supersedes Date: September 2002
MSDS Number: ND7

Disclaimer: All statements, technical information and recommendations contained herein are, to the best of our knowledge, reliable and accurate; however, no warranty, either expressed or implied is made with respect thereto, nor will any liability be assumed for damages resultant from the use of the material described.

It is the responsibility of the user to comply with all applicable Federal, state and local laws and regulations. It is also the responsibility of the user to maintain a safe workplace. The user should consider the health hazards and safety information provided herein as a guide and should take the necessary steps to instruct employees, and to develop work practice procedures to ensure a safe work environment.

This information is not intended as a license to operate under, or a recommendation to practice or infringe upon any patent of this Company or others covering any process, composition of matter or use.

BUILDINGS 59* (TRIDENT SEAFOODS)

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

Date 3/7/14 Time: 11:30 am

Address: 401 Alexander Ave E, Building 596, Tacoma WA 98421

Building Owner: Port of Tacoma

Occupant Name: Trident Seafoods

Contact Name: Steve Besaw Telephone (work): 253-502-5318

Cell:

How long has owner/tenant/occupant occupied building? 1911

Occupation: Boat Repair and Maintenance

Number of Occupants Adults: 75-300 Ages: 25-55 Children: Ages:

BUILDING CONSTRUCTION CHARACTERISTICS:

Building Use: Commercial/Industrial

Building Type: One story Two storey X Other

General Description of Building Construction Materials: Metal, Other

Year Constructed: NA

GARAGE: Do you have an attached garage? Yes No

Has the building been weatherized with any of the following? Insulation, Storm Windows, Energy-Efficient Windows, Other (specify) No

What type of basement does the building have?

Table with 5 columns: None, Finished, Unfinished, Depth below reference point (meters), and checkboxes for Partial, Full, Crawl space.

Number of floors at or above grade:

Depth of basement below grade: ft. Basement Size: ft²

Foundation construction: Poured concrete X Cinder block Stone

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

Any visual evidence of leakage through basement walls or floor

Floor Construction: Poured concrete Wood Earth Brick Other: _____

Floor condition (cracks, drains): _____

Condition at floor/wall joint (if visible): _____

Any exterior openings from the basement:

- Vents
- Fans
- Windows
- Wall openings
- Utility pipe penetrations
- Other: _____

Type of ground cover outside of building: grass / **concrete** / asphalt / other (specify): _____

Sub-slab vapor/moisture barrier in place? Yes / No / **Don't know**

Type of barrier: _____

Do you have a sump?: Yes No

Where: _____

If yes, sealed open NA

If yes, is there water in the sump?: Yes No

Is building serviced with municipal water? Yes No

Do you have a water well?: Yes No Don't know

Well location: _____

Do you drink the water obtained from the well? _____

What do you use the well for?: _____

Do you have a cistern?: Yes No

If yes, describe its location: _____

Do you have a septic system?: Yes No If Yes is it still active Yes No

If yes, describe its location: _____

If yes, describe how septic system is cleaned: _____

Have there ever been a fire in the building?: Yes No

If yes, describe its location and extent: _____

Is there a laundry room located inside the house?: Yes No

If yes, describe its location: _____

Is there a Radon System in the building: Yes No

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

HEATING AND VENTILATION SYSTEM(S) PRESENT:

What type of heating system(s) is/are used in the building?

Hot Air Circulation Heat Pump Steam Radiation Wood Stove
Hot Air Radiation Unvented Kerosene heater **Electric Baseboard** Other (specific)

Where are they located? _____ office _____

Is there outside air vent for heating system? _____ No _____

What type(s) of fuel(s) are used in this building?

Natural Gas **Electric** Coal Other (specific)
Fuel Oil Wood Solar

What type of mechanical ventilation systems are present and/or currently operating in the building?

Central Air Conditioning **Mechanical Fans** Bathroom Ventilation
Fan Kitchen Range Hood Open Windows
Individual Air Conditioning Units Air-to-Air Heat Exchanger Other (specify)

Where are they located? _____

SOURCES OF CHEMICAL CONTAMINANTS

1. When was the last time dry-cleaned clothes were brought into the building?
 0 to 5 days ago 6 to 10 days ago More than 10 days ago Don't dry-clean

2. How recently were the carpets installed?
 In the last six months More than six months ago No Carpet

3. When was the last time the carpet was cleaned?
 In the last six months More than six months ago Never

4. Was there any recent remodeling or painting done in the building?
 Yes No Details: _____

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

5. Are there any pressed wood products in the building (e.g., hardwood plywood wall paneling, particleboard, fiberboard)? No

6. Are there any new upholstery, drapes, or textiles in the building? No

7. Do you have any spot removers in the building?

Yes No Details: None

8. Do you perform automotive or other vehicle maintenance or repair within the building (e.g., attached garage)?

Yes No Details: None

9. Which of these items are present in the building? (Check all that apply)

<i>Potential VOC Source</i>	<i>Location of Source</i>	<i>Removed 48 hours prior to sampling? (Yes/No/NA)</i>
-----------------------------	---------------------------	--

- Paints or paint thinners**
- Gas-powered equipment
- Gasoline storage cans
- Cleaning solvents**
- Air fresheners**
- Oven cleaners
- Carpet/upholstery cleaners**
- Hairspray
- Nail polish/polish remover
- Bathroom cleaner**
- Appliance cleaner
- Furniture/floor polish
- Moth balls
- Fuel tank
- Wood stove
- Fireplace
- Perfume/colognes
- Hobby supplies (e.g., solvents, paints, lacquers, glues, photographic darkroom chemicals)
- Scented trees, wreaths, potpourri, etc.
- Other
- Other
- Other
- Other

10. Do you have MSDS for the above referenced chemicals?

Yes No Unsure

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

11. Do you have pesticides in the building?

- Yes No Unsure

12. Do you have any spray insecticides in the building?

- Yes No Unsure

13. Have you painted any area of the interior of the building in the last 12 months?

- Yes No

If yes, please indicate what paint you used

- Enamel Vinyl Latex Other

14. Have you painted the exterior of the building in the last 12 months? Yes No

If yes, please indicate what paint you used

- Enamel Vinyl Latex Other

15. Where are paint, thinner, pesticides, insecticides stored?

	<i>Paint</i>	<i>Thinner</i>	<i>Pesticides</i>	<i>Insecticides</i>
Garage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Basement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storage shed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- I don't store these items in the building

16. Have you purchased one of the following items in the last 12 months?

- Rubberized door mat Computer Wiring
 Plastic shower curtain Printer Linoleum
 Wood stains or paint

17. Do you have a computer printer in the building?

- Yes No

FORM 1: BUILDING PHYSICAL SURVEY QUESTIONNAIRE

18. Are there any pets in the building?

Yes No

If yes, what type? _____

If yes, number _____

19. Questions asked by Occupant that require follow-up.



Patrick Domres

Signature and Printed Name of Conducting the Survey

Red: 596

Product Name	1, 1, 1-Trichloroethane	1, 1-Dichloroethene	1, 2, 4-Trimethylbenzene	1, 4-Dichlorobenzene	Benzene	Carbon Tetrachloride	chloroform (Trichloromethane)	cis-1, 2-Dichloroethane	Ethylbenzene	m&p-Xylene	Methylene chloride	Naphthalene	o-Xylene	Styrene	Tetrachloroethene	Toluene	Trichloroethene
Brakleen® Brake Parts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						