



# Application for a State Waste Discharge Permit to Discharge Industrial Wastewater to a Publicly-Owned Treatment Works (POTW)

This application is for a state waste discharge permit for a discharge of industrial wastewater to a publicly-owned treatment works (POTW) as required by Chapter 90.48 RCW and Chapter 173-216 WAC. It is designed to provide Ecology with information on pollutants in the waste stream, materials that may enter the waste stream, and the flow characteristics of the discharge.

Ecology may request additional information to clarify the conditions of this discharge. The applicant should reference information previously submitted to Ecology that applies to this application in the appropriate section.

## SECTION A. GENERAL INFORMATION

1. Applicant Name: Artisan Finishing Systems, Inc.
2. Facility Name: \_\_\_\_\_  
(if different from Applicant)
3. Applicant Mail Address: 14219 Smokey Point Blvd, Building #6  
Street  
Marysville, WA 98271  
City/State Zip
4. Facility Location Address: \_\_\_\_\_  
(if different from 3 above) Street  
\_\_\_\_\_  
City/State Zip
5. UBI No. 601  
2610926  
Sometimes called a registration, tax, "C," or resale number, the Unified Business Identifier (UBI) number is a nine-digit number used to identify persons engaging in business activities. The number is assigned when a person completes a Master Business Application to register with or obtain a license from state agencies. The Departments of Revenue, Licensing, Employment Security, Labor and Industries, and the Corporations Division of the Secretary of State are among the state agencies participating in the UBI program.
6. Latitude/longitude of the facility as decimal degrees (NAD83/WGS84):  
N 48.1257 / W 122.1779

<b>FOR OFFICE USE ONLY</b>		Check One: New/Renewal <input type="checkbox"/> Modification <input type="checkbox"/>	
Date Application Received _____	Date Fee Paid _____	Application/Permit No. _____	Date Application Accepted _____

RECEIVED

SEP 24 2020

7. Person to contact who is familiar with the information contained in this application:

Wally Thomas  
Name

President  
Title

360.658.0686  
Telephone number

360.658.0954  
Fax number

8. Check One:



**Permit Renewal** (including renewal of temporary permits)

Does this application request a greater amount of wastewater discharge, a greater amount of pollutant discharge, or a discharge of different pollutants than specified in the last permit application for this facility? ☐ YES ☒ NO

For permit renewals, the current permit is an attachment, by reference, to this application.



**Permit Modification**



**Existing Unpermitted Discharge**



**Proposed Discharge**

Anticipated date of discharge: \_\_\_\_\_

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and/or imprisonment for knowing violations.*

W. Thomas  
Signature\*

15 Sept 2020  
Date

President  
Title

Wally Thomas  
Printed Name

\*Applications must be signed as follows: corporations, by a principal executive officer of at least the level of vice-president; partnership, by a general partner; sole proprietorship, by the proprietor. If these titles do not apply to your organization, the person who makes budget decisions for this facility must sign the application.

The application signatory may delegate signature authority for submittals required by the permit, such as monthly reports, to a suitable employee. You can delegate this authority to a qualified individual or to a position, which you expect to fill with a qualified individual. If you wish to delegate signature authority, please complete the following:

\_\_\_\_\_  
Signature of delegated employee

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title or function at the facility

\_\_\_\_\_  
Printed name

## SECTION B. PRODUCT INFORMATION

- Briefly describe all manufacturing processes and products, and/or commercial activities, at this facility. Provide the applicable Standard Industrial Category (SIC) and the North American Industry Classification System (NAICS) Code(s) for each activity (see *North American Industrial Classification System*, 2007 ed.). You can find the 1997 NAICS codes and the corresponding 1987 Standard Industry Category (SIC) codes at (<http://www.census.gov/epcd/naics/frames3.htm>).

Description: SIC Code: 3471 (metal finishing)      NAICS: 332813 (metal finishing)

Artisan Finishing Systems, Inc. engages in the surface preparation of architectural aluminum materials such as door frames, window frames, claddings, and railings.

Specifically this firm does chromium conversion coating of aluminum followed by electrostatic powder coating or painting of solvent-borne thermally-cured organic coatings applied to American Architectural Manufacturers Association (AAMA) specification standards

- List raw materials and products used at his facility:

Type	RAW MATERIALS	Quantity
<i>Grapes (Example)</i>		<i>1,000 tons per year</i>
Paint		+/- 2500 gallons / year
Solvent		+/- 2000 gallons / year
Pre-Treatment Chemicals		+/- 500 gallons / year
Powder Coat		+/- 10000 LBS/ year
Type	PRODUCTS	Quantity
<i>Grape Juice(Example)</i>		<i>300,000 gallons per year</i>
Paint/Powdercoated Metal - Owned by customer		+/-150,000 sq ft / yr

## SECTION C. PLANT OPERATIONAL CHARACTERISTICS

1. For each process listed in B.1. that generates wastewater, list the process, assign the waste stream a name and an ID # and describe whether it is a batch or continuous flow.

Process	Waste Stream Name	Waste Stream ID#	Batch (B) or Continuous (C) Process
Pre-Treatment	Rinse Water Sludge	1	B
Priming	Filter Elements	2	C
Painting	Spent Solvents	3	C

2. On a separate sheet, produce a schematic drawing showing production processes, water flow through the facility, wastewater treatment devices and waste streams as named above. The drawing should indicate the source of intake water and show the operations contributing wastewater to the effluent. The treatment units should be labeled. Construct a water balance by showing average flows between intakes, operations, treatment units, and points of discharge to the POTW. (*See the example on page 16 of this application form.*)

3. What is the maximum daily wastewater discharge flow? 4900 gallons/day

What is the maximum average monthly wastewater discharge flow (daily flows averaged over a month)? 1200 gallons/day

4. Describe any planned wastewater treatment improvements or changes in wastewater disposal methods, and the schedule for these improvements. (*Use additional sheets, if necessary and label as attachment C4.*)

The equipment and system were originally purchased in 1990 and were designed to minimize water usage.

5. If production processes are subject to seasonal variations, provide the following information. The combined value for each month should equal the estimated total monthly flow. Please indicate the proper flow unit by checking one of the following boxes:

☐ gallons per day

☐ gallons per month

☐ million gallons per month

Waste Stream ID#	MONTHS											
	J	F	M	A	M	J	J	A	S	O	N	D
Estimated Total Monthly Flow (GPD)												

6. How many hours a day does this facility typically operate? 20

How many days a week does this facility typically operate? 5

How many weeks per year does this facility typically operate? 52

7. List all incidental materials, such as oil, paint, grease, solvents, and cleaners, that are used or stored on site (*list only those with quantities greater than 10 gallons for liquids and 50 pounds for solids*). For solvents and solvent-based cleaners, include a copy of the material safety data sheet and estimate the quantity used. (*Use additional sheets, if necessary, and label as attachment C.7.*)

Materials/Quantity Stored:

Paint: +/- 600 gallons

Solvents: +/- 250 gallons

Pre-Treatment Chemicals: +/-200 gallons

8. Some types of facilities are required to have spill or waste control plans. Does Yes No

this facility have:

- |    |  |                                     |                          |
|----|--|-------------------------------------|--------------------------|
| a. | A spill prevention, control, and countermeasure plan (40 CFR 112)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. | An Oil Spill Contingency Plan (chapter 173-182 WAC)?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c. | An emergency response plan (per WAC 173-303-350)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d. | A runoff, spillage, or leak control plan (per WAC 173-216-110(f))?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e. | Any spill or pollution prevention plan required by local, state or federal authorities? If yes specify: <u>Dept of Ecology</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f. | A solid waste control plan?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| g. | A Slug Discharge Control Plan (40 CFR 403.8(f)(2)(v))?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

## SECTION D. WATER CONSUMPTION AND WATER LOSS

1. Potable water source(s):

☒ ☐ Public System (Specify) Marysville POTW

☐ ☐ Private Well ☐ Surface Water

a. Water Right Permit Number: \_\_\_\_\_

b. Legal Description of Water Source

\_\_\_\_\_  $\frac{1}{4}$ S, \_\_\_\_\_  $\frac{1}{4}$ E, \_\_\_\_\_, Section, \_\_\_\_\_ TWN, \_\_\_\_\_ R

2. Potable water use

a. Indicate total water use \_\_\_\_\_

Gallons per day (average) 2500

Gallons per day (maximum) 7000

b. Is water metered?

☒ YES ☐ NO

## SECTION E. WASTEWATER INFORMATION

- Intake: Water Meter
- Effluent \_\_\_\_\_

3. Has the effluent been analyzed for any other parameters than those identified in question E.4.? ☐ YES ☒ NO  
If yes, attach results and label as attachment E.4. This data must clearly show the date, method and location of sampling. (*Note: Ecology may require additional testing.*)
4. Provide measurements or range of measurements for treated wastewater prior to discharge to the POTW for the parameters with an "X" in the left column. If you obtain the application from the internet, contact Ecology's regional office to see if testing for a subset of these parameters is permissible. All analyses (except pH) must be conducted by a laboratory registered or accredited by Ecology (WAC 173-216-125). If this is an application for permit renewal, provide data for the last year for those parameters that are routinely measured. For parameters measured only for this application, place the values under "Maximum." Report the values with units as specified in the parameter name or in the detection level.

ECY 040-177 (Rev. 5/2011)



X	Parameter	Measurement Values			Number of Analyses	Analytical Method Std. Methods 19 <sup>th</sup> 20 <sup>th</sup> edition or EPA	Detection Limit/Quantitation Level
		Minimum	Maximum	Average			
	BOD (5 day)					SM 5210 B	/2 mg/l
	COD					SM 5220 D	/10 mg/l
	Total suspended solids					SM 2540 D	/5 mg/l
	Fixed Dissolved Solids					SM 2540 E	
	Total dissolved solids					SM 2540 C	
	Conductivity (micromhos/cm)					SM 2510 B	
	Ammonia-N as N					SM 4500-NH <sub>3</sub> C	/0.3 mg/L
	pH					SM 4500-H	0.1 standard units
	Fecal coliform (organisms/100 mL)					SM 9221 E or 9222 D	
	Total coliform (organisms/100 mL)					SM 9221 B or 9222 B	
	Dissolved oxygen					SM 4500-O C/G	
	Nitrate + nitrite-N as N					SM 4500-NO <sub>3</sub> E	100 µg/L
	Total kjeldahl N as N					SM 4500-N <sub>org</sub> C/E/FG	300 µg/l
	Ortho-phosphate-P as P					SM 4500-P E/F	10 µg/l
	Total-phosphorous-P as P					SM 4500-P E/P/F	10 µg/l
	Total Oil & grease					EPA 1664A	1.4/5 mg/l
	NWTPH - Dx					Ecology NWTPH Dx	250/250 µg/l
	NWTPH - Gx					Ecology NWTPH Gx	250/250 µg/l
	Calcium					EPA 200.7	10 µg/l
	Chloride					SM 4500-Cl C	0.15 µg/l
	Fluoride					SM 4500-F E	.025/0.1 mg/l
	Magnesium					EPA 200.7	10/50 µg/l
	Potassium					EPA 200.7	700/ µg/l
	Sodium					EPA 200.7	29/ µg/l
	Sulfate					SM 4500-SO <sub>4</sub> C/D	/200 µg/l
	Arsenic(total)					EPA 200.8	0.1/0.5 µg/l

X	Parameter	Measurement Values			Number of Analyses	Analytical Method Std. Methods 19 <sup>th</sup> 20 <sup>th</sup> edition or EPA	Detection Limit/Quantitation Level
		Minimum	Maximum	Average			
	Barium (total)					EPA 200.8	0.5/2 µg/l
	Cadmium (total)	.001	.001	.001	7	EPA 200.8	.05/.25 µg/l
	Chromium (total)	0.01	1.30	0.208	37	EPA 200.8	0.2/1 µg/l
	Copper (total)	.003	.190	.060	9	EPA 200.8	0.4/2 µg/l
	Lead (total)	.001	.005	.002	9	EPA 200.8	0.1/.5 µg/l
	Mercury (total) pg/L					EPA 1631E	0.2/0.5 pg/l
	Molybdenum (total)					EPA 200.8	0.1/0.5 µg/l
	Nickel (total)	.002	.087	.033	9	EPA 200.8	0.1/0.5 µg/l
	Selenium (total)					EPA 200.8	1/1 µg/l
	Silver (total)	.001	.005	.002	9	EPA 200.8	.04/.2 µg/l
	Zinc (total)	.015	.48	.165	9	EPA 200.8	0.5/2.5 µg/l

6. Does this facility use any of the following chemicals as raw materials or produce them as part of the manufacturing process, or are they present in the wastewater? ☒ YES ☐ NO

*(The number in the column next to the chemical name is the Chemical Abstract Service (CAS) reference number to aid in identifying the compound.)*

If yes, specify how the chemical is used and the quantity used or produced:

108-88-3 Toluene - A component of the paint - Not present in waste water

131-11-3 Dimethyl Phthalate - A component of the paint - Not present in waste water

METALS, CYANIDE & TOTAL PHENOLS			
Antimony, Total	7440-36-0	Nickel, Total	7440-02-0
Arsenic, Total	7440-38-2	Selenium, Total	7782-49-2
Beryllium, Total	7440-41-7	Silver, Total	7440-22-4
Cadmium, Total	7440-43-9	Thallium, Total	7440-28-0
Chromium (hex) dissolved	18540-29-9	Zinc, Total	7440-66-6
Chromium, Total	7440-47-3		
Copper, Total	7440-50-8	Cyanide, Total	57-12-5
Lead, Total	7439-92-1	Cyanide, Weak Acid Dissociable	
Mercury, Total	7439-97-6	Phenols, Total	

PESTICIDES			
Aldrin	309-00-2	Endrin	72-20-8
alpha-BHC	319-84-6	Endrin Aldehyde	7421-93-4
beta-BHC	319-85-7	Heptachlor	76-44-8
gamma-BHC	58-89-9	Heptachlor Epoxide	1024-57-3
delta-BHC	319-86-8	PCB-1242	53469-21-9
Chlordane	57-74-9	PCB-1254	11097-69-1
4,4'-DDT	50-29-3	PCB-1221	11104-28-2
4,4'-DDE	72-55-9	PCB-1232	11141-16-5
4,4' DDD	72-54-8	PCB-1248	12672-29-6
Dieldrin	60-57-1	PCB-1260	11096-82-5
alpha-Endosulfan	959-98-8	PCB-1016	12674-11-2
beta-Endosulfan	33213-65-9	Toxaphene	8001-35-2
Endosulfan Sulfate	1031-07-8		

VOLATILE COMPOUNDS			
Acrolein	107-02-8		
Acrylonitrile	107-13-1	1,1-Dichloroethylene	75-35-4
Benzene	71-43-2	1,2-Dichloropropane	78-87-5
Bromoform	75-25-2	1,3-dichloropropene (mixed isomers) (1,2-dichloropropylene)	542-75-6
Carbon tetrachloride	56-23-5	Ethylbenzene	100-41-4
Chlorobenzene	108-90-7	Methyl bromide (Bromomethane)	74-83-9
Chloroethane	75-00-3	Methyl chloride (Chloromethane)	74-87-3
2-Chloroethylvinyl Ether	110-75-8	Methylene chloride	75-09-2
Chloroform	67-66-3	1,1,2,2-Tetrachloroethane	79-34-5
Dibromochloromethane	124-48-1	Tetrachloroethylene	127-18-4
1,2-Dichlorobenzene	95-50-1	Toluene (108-88-3)	
1,3-Dichlorobenzene	(541-73-1)	1,2-Trans-Dichloroethylene (Ethylene dichloride)	156-60-5
1,4-Dichlorobenzene	106-46-7	1,1,1-Trichloroethane	71-55-6
Dichlorobromomethane	75-27-4	1,1,2-Trichloroethane	79-00-5
1,1-Dichloroethane	75-34-3	Trichloroethylene	79-01-6
1,2-Dichloroethane	107-06-2	Vinyl chloride	75-01-4

ACID COMPOUNDS			
2-Chlorophenol	95-57-8	4-nitrophenol	100-02-7
2,4-Dichlorophenol	120-83-2	Parachlorometa cresol (4-chloro-3-methylphenol)	59-50-7
2,4-Dimethylphenol	105-67-9	Pentachlorophenol	87-86-5
4,6-dinitro-o-cresol (2-methyl-4,6,-dinitrophenol)	534-52-1	Phenol	108-95-2
2,4 dinitrophenol	51-28-5	2,4,6-Trichlorophenol	88-06-2
2-Nitrophenol	88-75-5		

BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)			
Acenaphthene	83-32-9	3,3-Dichlorobenzidine	91-94-1
Acenaphthylene	208-96-8	Diethyl phthalate	84-66-2
Anthracene	120-12-7	Dimethyl phthalate	131-11-3
Benidine	92-87-5	Di-n-butyl phthalate)	84-74-2
Benzyl butyl phthalate	85-68-7	2,4-dinitrotoluene	121-14-2
Benzo(a)anthracene	56-55-3	2,6-dinitrotoluene	606-20-2
Benzo(b)fluoranthene (3,4-benzofluoranthene)	205-99-2	Di-n-octyl phthalate	117-84-0
<b>Benzo(j)fluoranthene</b>	<b>205-82-3</b>	1,2-Diphenylhydrazine (as <i>Azobenzene</i> )	122-66-7
Benzo(k)fluoranthene (11,12-benzofluoranthene)	207-08-9	Fluoranthene	206-44-0
<b>Benzo(r,s,t)pentaphene</b>	<b>189-55-9</b>	Fluorene	86-73-7
Benzo(a)pyrene	50-32-8	Hexachlorobenzene	118-74-1
Benzo(ghi)Perylene	191-24-2	Hexachlorobutadiene	87-68-3
Bis(2-chloroethoxy)methane	111-91-1	Hexachlorocyclopentadiene	77-47-4
Bis(2-chloroethyl)ether	111-44-4	Hexachloroethane	67-72-1
Bis(2-chloroisopropyl)ether	39638-32-9	Indeno(1,2,3-cd)Pyrene	193-39-5
Bis(2-ethylhexyl)phthalate	117-81-7	Isophorone	78-59-1
4-Bromophenyl phenyl ether	101-55-3	<b>3-Methyl cholanthrene</b>	<b>56-49-5</b>
2-Chloronaphthalene	91-58-7	Naphthalene	91-20-3
4-Chlorophenyl phenyl ether	7005-72-3	Nitrobenzene	98-95-3
Chrysene	218-01-9	N-Nitrosodimethylamine	62-75-9
<b>Dibenzo (a,j)acridine</b>	<b>224-42-0</b>	N-Nitrosodi-n-propylamine	621-64-7
<b>Dibenzo (a,h)acridine</b>	<b>226-36-8</b>	N-Nitrosodiphenylamine	86-30-6
Dibenzo(a-h)anthracene (1,2,5,6-dibenzanthracene)	53-70-3	<b>Perylene</b>	<b>198-55-0</b>
Dibenzo(a,e)pyrene	192-65-4	Phenanthrene	85-01-8
Dibenzo(a,h)pyrene	189-64-0	Pyrene	129-00-0
		1,2,4-Trichlorobenzene	120-82-1

7. Are any other pesticides, herbicides or fungicides used at this facility? ☐ YES ☒ NO

If yes, specify the material and quantity used:

8. Are there other pollutants that you know of or believe to be present? ☐ YES ☒ NO

If yes, specify the pollutants and their concentration if known  
(attach laboratory analyses if available as Attachment E8):

9. Is the wastewater being discharged, or proposed for discharge, to the POTW designated as a dangerous waste according to the procedures in Chapter 173-303 WAC?

☐ YES ☒ NO ☐ DON'T KNOW

10. If the answer to question 9 above is yes, how did the waste designate as a dangerous waste (check appropriate box)?

For Listed and TCLP Characteristic Wastes only, also provide the Dangerous Waste Number(s).

**Listed Waste** ☐ Dangerous Waste Number(s) \_\_\_\_\_

**Characteristic Wastes** Dangerous Waste Number(s) \_\_\_\_\_

Ignitable ☐

Reactive ☐

Corrosive ☐

TCLP ☐

**State Only Dangerous Wastes** Dangerous Waste Number(s) \_\_\_\_\_

Toxicity ☐

Persistent ☐

For questions about waste designation under the *Dangerous Waste Regulations*, Chapter 173-303 WAC, contact Ecology's Hazardous Waste and Toxics Program at:

Northwest Regional Office - Bellevue	(425) 649-7000
Southwest Regional Office - Lacey	(360) 407-6300
Central Regional Office - Yakima	(509) 575-2490
Eastern Regional Office - Spokane	(509) 329-3400

## SECTION F. SEWER INFORMATION

1. Is an inspection and sampling manhole or similar structure available on-site? ☒ YES ☐ NO  
*If yes, attach a map or hand drawing of the facility that shows the location of these structures  
(Label as attachment F1 or this may be combined with map in H8, if H8 is applicable to your  
facility.)*

## **SECTION G. OTHER PERMITS**

1. List all environmental control permits or approvals needed for this facility; for example, air emission permits.

Puget Sound Clean Air Agency

## SECTION H. STORMWATER

1. Do you have coverage under the Washington State Industrial Stormwater NPDES General Permit? ☐ YES ☒ NO

If yes, please list the permit number here. \_\_\_\_\_

- If no, have you applied for a Washington State Stormwater Industrial Stormwater General Permit? ☐ YES ☒ NO

If you answered no to both questions above, complete the following questions 2 through 5.

2. Does your facility discharge stormwater: *(Check all that apply)*

☐ To storm sewer system *(provide name of storm sewer system operator: \_\_\_\_\_)*

☐ Directly to any surface waters of Washington State *(e.g., river, lake, creek, estuary, ocean).*

Specify waterbody name(s) \_\_\_\_\_

☐ Indirectly to surface waters of Washington State *(i.e., flows over adjacent properties first).*

☐ To a Sanitary Sewer

☐ Directly to ground waters of Washington State via:

☐ Dry well

☐ Drainfield

☐ Other

3. Areas with industrial activities at facility: *(check all that apply)*

☒ Manufacturing Building

☒ Material Handling

☐ Material Storage

☐ Hazardous Waste Treatment, Storage, or Disposal *(Refers to RCRA, Subtitle C Facilities Only)*

☒ Waste Treatment, Storage, or Disposal

☐ Application or Disposal of Wastewaters

☐ Storage and Maintenance of Material Handling Equipment

☐ Vehicle Maintenance

☐ Areas Where Significant Materials Remain

☒ Access Roads and Rail Lines for Shipping and Receiving

☐

Other (please specify): \_\_\_\_\_



4. Material handling/management practices

a. Types of materials handled and/or stored outdoors: *(check all that apply)*

- |   |  |
|---|--|
| <input type="checkbox"/> <input type="checkbox"/> Solvents                            | <input type="checkbox"/> <input type="checkbox"/> Hazardous Wastes                   |
| <input type="checkbox"/> <input type="checkbox"/> Scrap Metal                         | <input type="checkbox"/> <input type="checkbox"/> Acids or Alkalies                  |
| <input type="checkbox"/> <input type="checkbox"/> Petroleum or Petrochemical Products | <input type="checkbox"/> <input type="checkbox"/> Paints/Coatings                    |
| <input type="checkbox"/> <input type="checkbox"/> Plating Products                    | <input type="checkbox"/> <input type="checkbox"/> Woodtreating Products              |
| <input type="checkbox"/> <input type="checkbox"/> Pesticides                          | <input type="checkbox"/> <input type="checkbox"/> Other <i>(please list)</i> : _____ |

b. Identify existing management practices employed to reduce pollutants in industrial stormwater discharges: *(check all that apply)*

- |  |  |
|--|--|
| <input type="checkbox"/> <input type="checkbox"/> Oil/Water Separator          | <input type="checkbox"/> <input type="checkbox"/> Detention Facilities               |
| <input checked="" type="checkbox"/> <input type="checkbox"/> Containment       | <input type="checkbox"/> <input type="checkbox"/> Infiltration Basins                |
| <input checked="" type="checkbox"/> <input type="checkbox"/> Spill Prevention  | <input type="checkbox"/> <input type="checkbox"/> Operational BMPs                   |
| <input type="checkbox"/> <input type="checkbox"/> Surface Leachate Collection  | <input type="checkbox"/> <input type="checkbox"/> Vegetation Management              |
| <input checked="" type="checkbox"/> <input type="checkbox"/> Overhead Coverage | <input type="checkbox"/> <input type="checkbox"/> Other <i>(please list)</i> : _____ |

5. Attach a facility site map showing stormwater drainage/collection areas, disposal areas and discharge points. This may be a hand-drawn map if no other site map is available *(See example on page 16 of this application)*. Label this as attachment H.5.

## SECTION I. OTHER INFORMATION

1. Describe liquid wastes or sludges being generated by your facility that are not disposed of in the waste stream(s) and how they are being disposed of. For each type of waste, provide type of waste and the name, address, and phone number of the hauler.

Rinse Water Sludge - Solidification, Landfill

Spent Solvents - Incineration / Alternate fuel

Filter elements - Incineration

2. Describe storage areas for raw materials, products, and wastes.

See page 13A DOE permit 7316 for storage practices.

3. Have you designated the wastes described above according to the applicable ☒ YES ☐ NO procedures of Dangerous Waste Regulations, Chapter 173-303 WAC?

## SECTION J. CERTIFICATIONS

### 1. Approval by Publicly-Owned Treatment Works [required by WAC 173-216-070(4)(b)]

*I approve of the discharge as described in this application. The applicant is:*

(Please check the appropriate box below.)

☒ ☐ ☐ A Significant Industrial User (see Definitions at the end of this Section)

☐ ☐ ☐ A Categorical Industrial User

☐ ☐ ☐ Neither of the above

Name and location of sewer system to which this project will be tributary:

Treatment Works Owner: \_\_\_\_\_

Street: \_\_\_\_\_

City/State: \_\_\_\_\_

Zip: \_\_\_\_\_

\_\_\_\_\_  
Signature of Treatment Works Authority

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title

\_\_\_\_\_  
Printed Name

### 2. Application review by Intermediate Sewer Owner at point of discharge (if applicable)

*I hereby acknowledge that I have reviewed the application for discharge to this sewer system.*

Name and location of sewer system to which this project will be tributary:

Sewer System Owner: \_\_\_\_\_

Street: \_\_\_\_\_

City/State: \_\_\_\_\_

Zip: \_\_\_\_\_

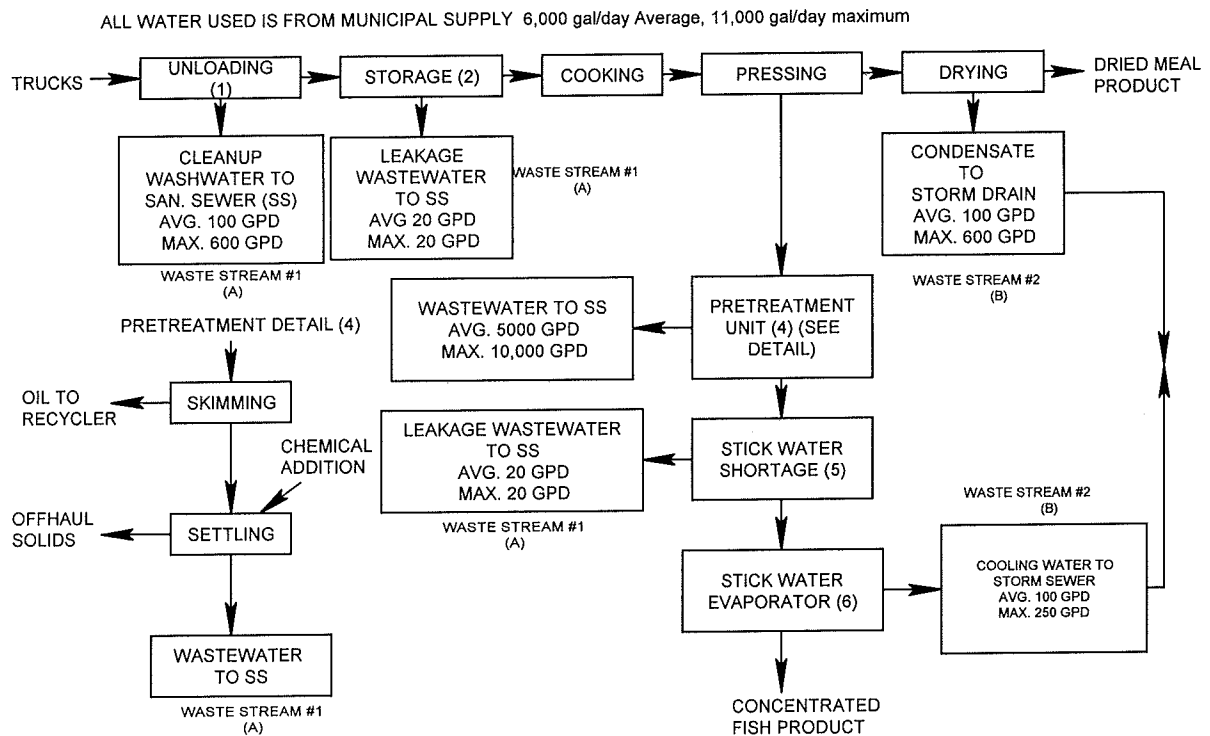
\_\_\_\_\_  
Signature of Sewer System Authority

\_\_\_\_\_  
Date

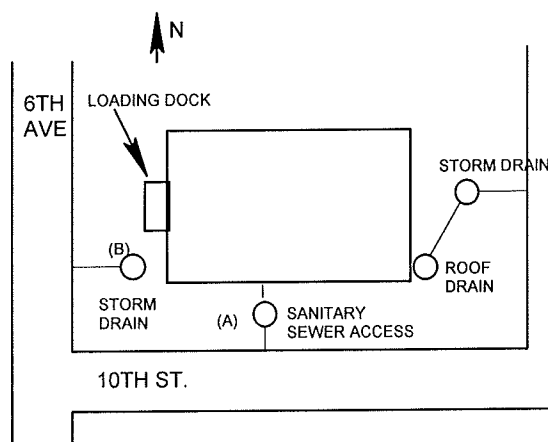
\_\_\_\_\_  
Title

\_\_\_\_\_  
Printed Name

## Example 1 for application section C.2. (SCHEMATIC DIAGRAM)



## Example 2 for application section F1 or H8 (FACILITY SITE MAP)



## DEFINITIONS

### Significant Industrial User (SIU)--

- 1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; and
- 2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

**Control Authority** - means the Washington State Department of Ecology in the case of non-delegated POTWs or means the POTW in the case of delegated POTWs.

**Categoric Industrial User (CIU):** An industrial user subject to national categorical pretreatment standards promulgated by EPA (40 CFR 403.6 and 40 CFR parts 405-471).

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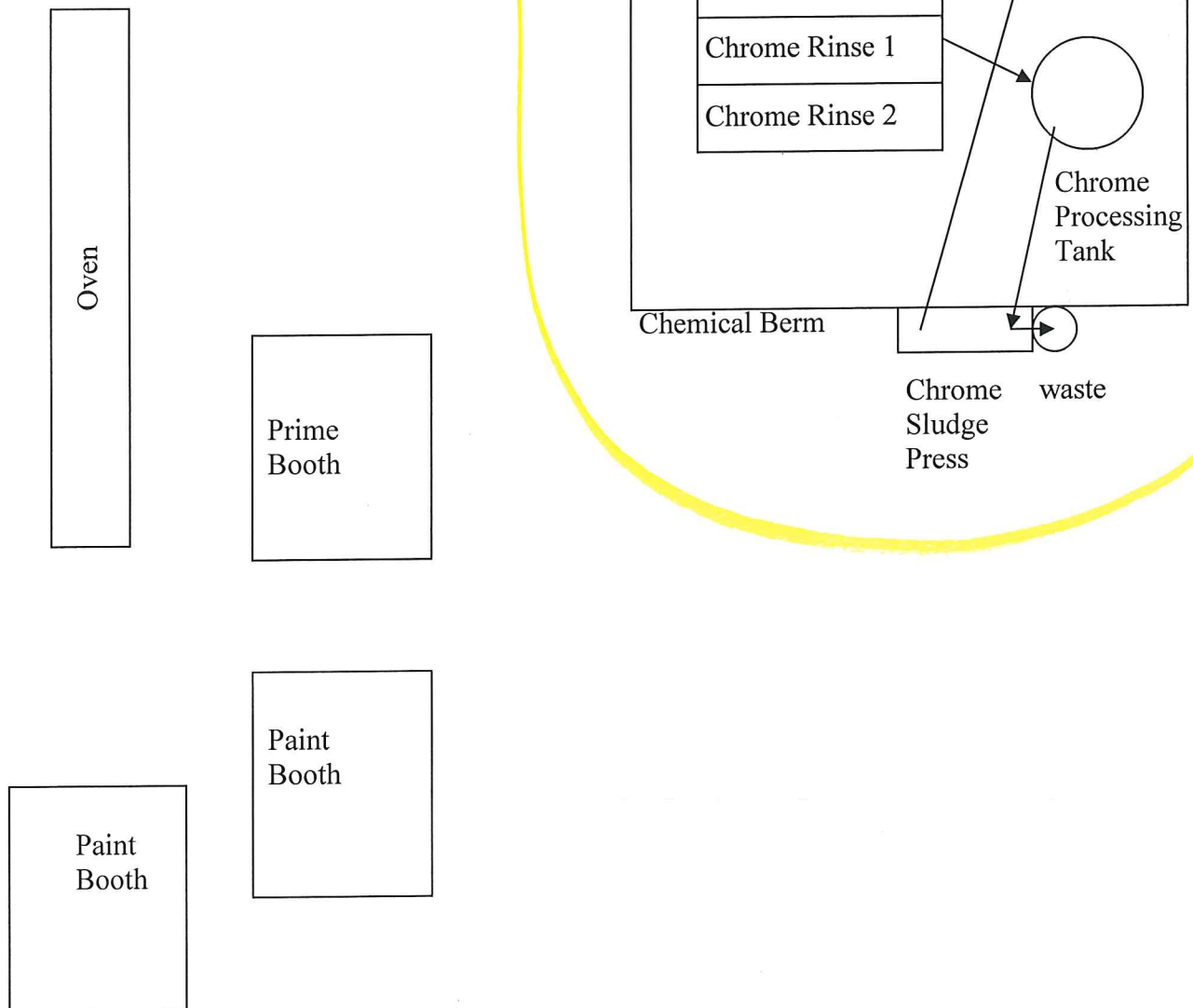
### Summary of Attachments That May be Required for This Application:

*(Please check those attachments that are included)*

- |                                     |                          |      |   |
|-------------------------------------|--------------------------|------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | C.2. | Production schematic flow diagram and water balance |
| <input type="checkbox"/>            | <input type="checkbox"/> | C.4. | Wastewater treatment improvements                   |
| <input type="checkbox"/>            | <input type="checkbox"/> | C.7. | Additional incidental materials                     |
| <input type="checkbox"/>            | <input type="checkbox"/> | E.8. | Additional results of effluent testing              |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | F.1. | Facility site map                                   |
| <input type="checkbox"/>            | <input type="checkbox"/> | H.5. | Stormwater drainage map                             |

*If you need this document in a format for the visually impaired, call the Water Quality Program at 360-407-6600. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.*

C.2





CASCADE  
COLUMBIA  
DISTRIBUTION  
COMPANY

COMPANY IDENTITY: Cascade Columbia Distribution Company  
PRODUCT IDENTITY: CASCADE XMB-50

SDS DATE: 08/13/2015  
ORIGINAL: 08/13/2015

## SAFETY DATA SHEET

This Safety Data Sheet conforms to ANSI Z400.5, and to the format requirements of the Global Harmonizing System.  
THIS SDS COMPLIES WITH 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD)  
IMPORTANT: Read this SDS before handling & disposing of this product.  
Pass this information on to employees, customers, & users of this product.

### SECTION 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

PRODUCT IDENTITY: CASCADE XMB-50  
SYNONYMS: None  
PRODUCT USES: Solvent

COMPANY IDENTITY: Cascade Columbia Distribution Company  
COMPANY ADDRESS: 6900 Fox Avenue S.  
COMPANY CITY: Seattle, WA 98108  
COMPANY PHONE: 1-206-763-2351  
EMERGENCY PHONES: CHEMTREC: 1-800-424-9300 (USA)  
CANUTEC: 1-613-996-6666 (CANADA)

### SECTION 2. HAZARDS IDENTIFICATION

**DANGER!!**

#### 2.1 HAZARD STATEMENTS: (CAT = Hazard Category)

- (H200s) PHYSICAL: Flammable Liquids(CAT:3)
- H226 FLAMMABLE LIQUID & VAPOR.
- (H300s) HEALTH: Aspiration Hazard(CAT:1)
- H304 MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS.
- (H300s) HEALTH: Acute Toxicity, Dermal(CAT:4)
- H312 HARMFUL IN CONTACT WITH SKIN.
- (H300s) HEALTH: Skin Corrosion/Irritation(CAT:2)
- H315 CAUSES SKIN IRRITATION.
- (H300s) HEALTH: Serious Eye Damage/Eye Irritation(CAT:2A)
- H319 CAUSES SERIOUS EYE IRRITATION.
- (H300s) HEALTH: Acute Toxicity, Inhalation(CAT:4)
- H332 HARMFUL IF INHALED.
- (H300s) HEALTH: Target Organ Toxicity, Single Exposure; Respiratory Tract Irritation(CAT:3)
- H335 MAY CAUSE RESPIRATORY IRRITATION.
- (H300s) HEALTH: Target Organ Toxicity, Single Exposure; Narcotic Effects(CAT:3)
- H336 MAY CAUSE DROWSINESS OR DIZZINESS.
- (H300s) HEALTH: Carcinogenicity(CAT:2)
- H351 SUSPECTED OF CAUSING CANCER.
- (H300s) HEALTH: Target Organ Toxicity, Repeated Exposure(CAT:2)
- H373 MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.
- (H400s) ENVIRONMENT: Hazardous to Aquatic Environment, Long-Term(CAT:2)
- H411 TOXIC TO AQUATIC LIFE WITH LONG-LASTING EFFECTS.



## SECTION 2. HAZARDS IDENTIFICATION

### 2.2 PRECAUTIONARY STATEMENTS:

P100s = General, P200s = Prevention, P300s = Response, P400s = Storage, P500s = Disposal

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ventilating/lighting equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P260 DO not breathe dust/fume/gas/mist/vapors/spray.  
P264 Wash with soap & water thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P302+352 IF ON SKIN: Wash with plenty of water.  
P303+361+353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304+340+312 IF INHALED: Remove victim to fresh air & keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.  
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present & easy to do - Continue rinsing.  
P308+313 IF exposed or concerned: Get medical advice/attention.  
P314 Get medical attention/advice if you feel unwell.  
P331 Do NOT induce vomiting.  
P332+313 If skin irritation occurs: Get medical advice/attention.  
P337+313 If eye irritation persists, get medical advice/attention.  
P362 Take off contaminated clothing and wash before reuse.  
P370+338 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.  
P391 Collect spillage.  
P403+235+233 Store in a well-ventilated place. Keep cool. Keep container tightly closed.  
P405 Store locked up.  
P501 Dispose of contents/container according to local regulations.

### 2.3 HAZARDS NOT OTHERWISE CLASSIFIED: none

SEE SECTIONS 8, 11 & 12 FOR TOXICOLOGICAL INFORMATION.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL	CAS#	EINECS#	WT %
Methyl Ethyl Ketone	78-93-3	201-159-0	45-55
Xylenes	1330-20-7	215-535-7	35-45
Ethylbenzene	100-41-4	202-849-4	5-15

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets. This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1).

TRACE COMPONENTS: Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, reproductive toxins, respiratory tract mutagens, and sensitizers). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents, and Canadian Hazardous Materials Identification System Standard (CPR 4).



#### SECTION 4. FIRST AID MEASURES

##### 4.1 MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE & CHRONIC:

See Section 11 for symptoms/effects, acute & chronic.

##### 4.2 GENERAL ADVICE:

Move out of dangerous area. Symptoms of poisoning may appear several hours later. Do not leave the victim unattended. Show this safety data sheet to the doctor in attendance.

##### 4.3 EYE CONTACT:

If this product enters the eyes, check for and remove any contact lenses. Open eyes while under gently running water. Use sufficient force to open eyelids. "Roll" eyes to expose more surface. Minimum flushing is for 15 minutes. If eye irritation persists, seek medical attention.

##### 4.4 SKIN CONTACT:

If the product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove contaminated clothing, taking care not to contaminate eyes. If skin becomes irritated and irritation persists, medical attention may be necessary. Wash contaminated clothing before reuse, discard contaminated shoes.

##### 4.5 INHALATION:

After high vapor exposure, remove to fresh air. Keep respiratory tract clear. If breathing is difficult, give oxygen. If breathing has stopped, trained personnel should immediately begin artificial respiration. If symptoms persist, seek medical attention.

##### 4.6 SWALLOWING:

Aspiration hazard. If swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, give two glasses of water to drink. DO NOT INDUCE VOMITING. Never induce vomiting or give liquids to someone who is unconscious, having convulsions, or unable to swallow. If vomiting occurs, keep victim's head below the waist to prevent aspiration. Seek immediate medical attention.

##### 4.7 NOTES TO PHYSICIAN:

Aspiration hazard. Xylene is rapidly absorbed through the intestines following overexposure; consider gastric lavage for ingestion exceeding 1-2 mL. Watch for signs of respiratory distress; give oxygen. Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitor 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 stabilization of breathing and circulation to document aspiration and detect the presence of pneumothorax. Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitization to catecholamines. Inhaled cardioselective bronchodilators (Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.

#### SECTION 5. FIRE FIGHTING MEASURES

##### 5.1 FIRE & EXPLOSION PREVENTIVE MEASURES:

NO open flames, NO sparks, & NO smoking. Use a closed system, ventilation, explosion-proof electrical equipment and lighting. Do NOT use compressed air for filling, discharging, or handling.

##### 5.2 SUITABLE (& UNSUITABLE) EXTINGUISHING MEDIA:

Use dry powder, alcohol-resistant foam, carbon dioxide. No high-powered water jet.

##### 5.3 SPECIAL PROTECTIVE EQUIPMENT & PRECAUTIONS FOR FIRE FIGHTERS:

Severe fire hazard. Cool closed containers. Use fog nozzles if water is used. Do not enter confined fire-space without full bunker gear and self-contained breathing apparatus.

##### 5.4 SPECIFIC HAZARDS OF CHEMICAL & HAZARDOUS COMBUSTION PRODUCTS:

FLAMMABLE!! VAPORS CAN CAUSE FLASH FIRE

Vapors are heavier than air and will collect in low areas. Vapors may travel a significant distance to source of ignition and flash back. Closed containers may explode if exposed to heat. Collect contaminated fire extinguishing water separately. This must not be discarded into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### 6.1 SPILL AND LEAK RESPONSE AND ENVIRONMENTAL PRECAUTIONS:

Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. No action shall be taken involving personal risk without suitable training. Keep unnecessary and unprotected personnel from entering spill area. Do not touch or walk through material. Avoid breathing vapor or mist. Provide adequate ventilation. Proper protective equipment should be used (see Section 8). ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

### 6.2 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, EMERGENCY PROCEDURES:

Wear personal protective gear (section 8). Use approved respirators or self-contained breathing apparatus as required. Use non-sparking equipment to handle product.

### 6.3 ENVIRONMENTAL PRECAUTIONS:

Keep product from entering storm sewers and ditches which lead to waterways, and if necessary, call the local fire or police department for immediate emergency assistance. If product enters waterways, notify authorities.

### 6.4 METHODS AND MATERIAL FOR CONTAINMENT & CLEAN-UP:

Stop spill at source. Construct temporary dikes of dirt, sand, or any non-combustible readily available material to prevent spreading of the material. Close or cap valves and/or block or plug hole in leaking container and transfer to another container. Absorb spilled liquid with non-combustible absorbent (such as: sand, soil, and so on). Shovel up and place all spill residue in suitable containers. Dispose of at an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal (see Section 13 - Disposal Considerations).

### 6.5 NOTIFICATION PROCEDURES:

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting release 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.

## SECTION 7. HANDLING AND STORAGE

### 7.1 PRECAUTIONS FOR SAFE HANDLING:

Avoid formation of aerosol Do not breathe vapors. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Use personal protection (see section 8). No not smoke, eat or drink in application area. Take precautionary measures against static discharges. Open drum carefully as contents may be under pressure. Dispose of rinse water in accordance with local and national regulations.

### 7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

Keep in fireproof surroundings. Keep container tightly closed in a dry, cool, well-ventilated place. Avoid freezing. Carefully re-seal opened containers and keep upright to prevent leakage. Keep separated from strong oxidants, strong acids. Electrical installations/working materials must comply with the technological safety standards.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 EXPOSURE LIMITS:

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methyl Ethyl Ketone 78-93-3	TWA: 200 ppm	TWA: 200 ppm STEL: 300 ppm	IDLH: 3000 ppm
Xylenes, mixed* 1330-20-7	TWA:100 ppm STEL: 150 ppm	TWA: 100 ppm STEL: 150 ppm	No data
Ethylbenzene* 100-41-4	TWA: 20 ppm	TWA: 100 ppm STEL: 125 ppm	TWA: 100 ppm ST: 125 ppm

\*Listed as HAP under US Clean Air Act, Section 12 (40 CFR 61).

COMPANY IDENTITY: Cascade Columbia Distribution Company  
PRODUCT IDENTITY: CASCADE XMB-50

SDS DATE: 08/13/2015  
ORIGINAL: 08/13/2015

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

### 8.2 APPROPRIATE ENGINEERING CONTROLS:

#### RESPIRATORY EXPOSURE CONTROLS

Airborne concentrations should be kept to lowest levels possible. If vapor, dust or mist is generated and the occupational exposure limit of the product, or any component of the product, is exceeded, use appropriate NIOSH or MSHA approved air purifying or air-supplied respirator authorized in 29 CFR 1910.134, European Standard EN 149, or applicable State regulations, after determining the airborne concentration of the contaminant.

#### VENTILATION

LOCAL EXHAUST: Necessary                      MECHANICAL (GENERAL): Necessary  
SPECIAL: None                                      OTHER: None  
Please refer to ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

### 8.3 INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT:

#### EYE PROTECTION:

Wear tightly-fitting goggles. Wear face shield when the operation can generate splashes, sprays or mists.

#### HAND PROTECTION:

Use gloves chemically resistant to this material. Consult with chemical safety equipment supplier.

#### BODY PROTECTION:

Wear impervious clothing appropriate to the task.

#### RESPIRATORY PROTECTION:

Respirators are required if exposures exceed limits listed in Section 8.2. Air purifying respirators may be used up to IDLH level, after which supplied air is required

#### WORK & HYGIENIC PRACTICES:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using toilet facilities and at the end of the working period. Provide readily accessible eye wash stations & safety showers. Remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.

## SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE:	Liquid, Water-White
ODOR:	Sharp, penetrating aromatic
ODOR THRESHOLD:	Not Available
pH (Neutrality):	Not Applicable
MELTING POINT/FREEZING POINT:	Not Applicable
BOILING RANGE (IBP, 50%, Dry Point):	> 175 F (MEK)
FLASH POINT (TEST METHOD):	-9 C / 16 F (MEK), anticipated flash for blended material is approximately 0 C / 32 F
EVAPORATION RATE (n-Butyl Acetate=1):	Not available
FLAMMABILITY CLASSIFICATION:	Flammable Liquid Class IB
LOWER FLAMMABLE LIMIT IN AIR (% by vol):	1%
UPPER FLAMMABLE LIMIT IN AIR (% by vol):	11.4%
VAPOR PRESSURE (mm of Hg)@25 C	Moderate
VAPOR DENSITY (air=1):	> 2.4 @ 20 C / 68 F
GRAVITY @ 68 F / 20 C:	
DENSITY:	0.8
SPECIFIC GRAVITY (Water=1):	0.8
POUNDS/GALLON:	7
WATER SOLUBILITY:	Minimal
PARTITION COEFFICIENT (n-Octane/Water):	~ 1.3 - 3.2
AUTO IGNITION TEMPERATURE:	Not Available
DECOMPOSITION TEMPERATURE:	Not Available
TOTAL VOC'S (TVOC)*:	100%
NONEXEMPT VOC'S (CVOC)*:	0.0%
HAZARDOUS AIR POLLUTANTS (HAPS):	See Section 8.1
NONEXEMPT VOC PARTIAL PRESSURE (mm of Hg @ 20 C)	Not Available
VISCOSITY @ 20 C (ASTM D445):	Not Available

\* Using CARB (California Air Resources Board Rules).

## SECTION 10. STABILITY & REACTIVITY

### 10.1 REACTIVITY & CHEMICAL STABILITY:

Stable under normal conditions.

### 10.2 POSSIBILITY OF HAZARDOUS REACTIONS & CONDITIONS TO AVOID:

Isolate from oxidizers, heat, sparks, electric equipment, static charge, & open flame.

### 10.3 INCOMPATIBLE MATERIALS:

Reacts violently with strong oxidizing agents.

### 10.4 HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon Monoxide, Carbon Dioxide from burning.

### 10.5 HAZARDOUS POLYMERIZATION:

Will not occur.

## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 ACUTE HAZARDS

#### 11.1.1 SKIN CONTACT:

Mild to moderate irritation to skin, defatting, dermatitis. Absorption through skin increases exposure.

#### 11.1.2 EYE CONTACT:

Mild to moderate irritation to eyes, redness, tearing, blurred vision. Can cause corneal injury if not treated promptly.

#### 11.1.3 INHALATION:

Anesthetic. Breathing of vapors causes irritation of the respiratory tract, headache, dizziness, possible vomiting. Acute overexposure can cause serious nervous system depression. Vapor harmful. Acute overexposure can cause harm to affected organs (liver, blood) by routes of entry.

#### 11.1.4 SWALLOWING:

**ASPIRATION HAZARD!** Harmful or fatal if swallowed. Swallowing can cause abdominal irritation, nausea, vomiting & diarrhea. The symptoms of chemical pneumonitis may not show up for a few days.

### 11.2 SUBCHRONIC HAZARDS/CONDITIONS AGGRAVATED

#### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Pre-existing disorders of any target organs mentioned in this Document can be aggravated by over-exposure by routes of entry to components of this product.

### 11.3 CHRONIC HAZARDS:

#### 11.3.1 CARCINOGENICITY:

IARC: Group 2B: Possibly carcinogenic to humans. Ethylbenzene 100-41-4

ACGIH: Confirmed animal carcinogen with unknown relevance to humans. Ethylbenzene 100-41-4

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.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.

#### 11.3.2 TARGET ORGANS: May cause damage to target organs (liver, blood nervous system) based on animal data.

#### 11.3.3 IRRITANCY: Irritating to contaminated tissue.

#### 11.3.4 SENSITIZATION: No component is known as a sensitizer.

#### 11.3.5 MUTAGENICITY: No known reports of mutagenic effects in humans.

#### 11.3.6 EMBRYOTOXICITY: No known reports of embryotoxic effects in humans.

#### 11.3.7 TERATOGENICITY: No known reports of teratogenic effects in humans.

#### 11.3.8 REPRODUCTIVE TOXICITY: No known reports of reproductive effects in humans.

COMPANY IDENTITY: Cascade Columbia Distribution Company  
PRODUCT IDENTITY: CASCADE XMB-50

SDS DATE: 08/13/2015  
ORIGINAL: 08/13/2015

## SECTION 11. TOXICOLOGICAL INFORMATION (CONT.)

### 11.4 MAMMALIAN TOXICITY INFORMATION

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Methyl Ethyl Ketone 78-93-3	= 3400 mg/kg (Rat)	= 12600 mg/kg (Rabbit)	= 2000 ppm (Rat)
Xylene 1330-20-7	= 3523 mg/kg (Rat)	= 1100 mg/kg (Rabbit)	= 6700 ppm (Rat, 4 h)
Ethylbenzene 100-41-4	= 3500 mg/kg	= 15354 mg/kg	= 17.2 mg/l (4 h)

## SECTION 12. ECOLOGICAL INFORMATION

### 12.1 ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

### 12.2 EFFECT OF MATERIAL ON PLANTS AND ANIMALS:

This product may be harmful or fatal to plant and animal life if released into the environment. Refer to Section 11 (Toxicological Information) for further data on the effects of this product's components on test animals.

### 12.3 EFFECT OF MATERIAL ON AQUATIC LIFE:

The most sensitive known aquatic group to any component of this product is: Fish are adversely affected by components of this product. The substance is toxic to aquatic organisms with long lasting effects.

Chemical Name	Fish, LC50	Invertebrates, EC50	Algae, EC50
Methyl Ethyl Ketone 78-93-3	= 2993 mg/l (96 h, Pimephales promelus)	308 mg/l (48 h, Daphnia Magna)	No data
Xylene 1330-20-7	= 2.6 mg/l (96 h, rainbow trout)	= 1 mg/l (24 h, Daphnia magna)	= 4.36 mg/l (72 h, pseudokirchneriella subcapitata)

### 12.4 MOBILITY IN SOIL

No data available.

### 12.5 DEGRADABILITY

No data available.

### 12.6 BIOACCUMULATION

Xylene (133-20-7): Partition coefficient: n-octanol/water: log Pow: 2.77 - 3.15

Ethylbenzene (108-88-3): Partition coefficient: n-octanol/water: log Pow: 2.73

## SECTION 13. DISPOSAL CONSIDERATIONS

Processing, use or contamination may change the waste disposal requirements. Do not dispose of on land, in surface waters, or in storm drains. Waste should be recycled or disposed of in accordance with regulations. Large amounts should be collected for reuse or consigned to licensed hazardous waste haulers for disposal. Contaminated packaging should be emptied of remaining contents and disposed of as unused product. Do not re-use empty containers. Do not urn or use a cutting torch on, the empty container.  
**ALL DISPOSAL MUST BE IN ACCORDANCE WITH ALL FEDERAL, STATE, PROVINCIAL, AND LOCAL REGULATIONS. IF IN DOUBT, CONTACT PROPER AGENCIES.**

## SECTION 14. TRANSPORT INFORMATION

DOT/TDG SHIP NAME: UN1993, FLAMMABLE LIQUIDS, N.O.S. (METHYL ETHYL KETONE, XYLENE), 3, PG-II  
DRUM LABEL: (FLAMMABLE LIQUID)  
IATA / ICAO: UN1993, FLAMMABLE LIQUIDS, N.O.S. (METHYL ETHYL KETONE, XYLENE), 3, PG-II,  
Flash Point: 0.0 C (32 F).  
IMO / IMDG: UN1993, FLAMMABLE LIQUIDS, N.O.S. (METHYL ETHYL KETONE, XYLENE), 3, PG-II  
EMERGENCY RESPONSE GUIDEBOOK NUMBER: 128

COMPANY IDENTITY: Cascade Columbia Distribution Company  
PRODUCT IDENTITY: CASCADE XMB-50

SDS DATE: 08/13/2015  
ORIGINAL: 08/13/2015

## SECTION 15. REGULATORY INFORMATION

### 15.1 EPA REGULATION:

SARA SECTION 311/312 HAZARDS: Acute Health, Chronic Health, Fire Hazard

All components of this product are on the TSCA Inventory.  
SARA Title III Section 313 Supplier Notification  
This product contains the indicated <\*> toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning & Community Right-To-Know Act of 1986 & of 40 CFR 372. This information must be included in all MSDSs that are copied and distributed for this material.

SARA TITLE III INGREDIENTS	CAS#	EINECS#	WT%	(REG.SECTION)	RQ(LBS)
Methyl Ethyl Ketone	78-93-3	201-159-0	45-55	(311, 312)	5000
Mixed Xylenes*	1330-20-7	215-535-7	35-45	(311,312,313)	100

Any release equal to or exceeding the RQ must be reported to the National Response Center (800-424-8802) and appropriate state and local regulatory agencies as described in 40 CFR 302.6 and 40 CFR 355.40 respectively.  
Failure to report may result in substantial civil and criminal penalties.  
State & local regulations may be more restrictive than federal regulations.

### 15.2 STATE REGULATIONS:

CALIFORNIA SAFE DRINKING WATER & TOXIC ENFORCEMENT ACT (PROPOSITION 65):  
WARNING! This product contains the following chemical known to the State of California to cause cancer: Ethylbenzene

### 15.3 INTERNATIONAL REGULATIONS

The identified components of this product are listed on the chemical inventories of the following countries:  
Australia (AICS), Canada (DSL or NDSL), China (IECSC), Europe (EINECS, ELINCS), Japan (METI/CSCL, MHLW/ISHL), South Korea (KECI), New Zealand (NZIoC), Philippines (PICCS), Switzerland (SWISS), Taiwan (NECSI), USA (TSCA).

### 15.4 CANADA: WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

B2: Flammable Liquid.  
D2A: Contains a substance known to cause serious chronic toxicity or death: Ethylbenzene  
D2B: Irritating to eyes/skin.

This product was classified using the hazard criteria of the Controlled Products Regulations (CPR). This Document contains all information required by the CPR.

## SECTION 16. OTHER INFORMATION

### 16.1 HAZARD RATINGS:

HEALTH (NFPA): 2, HEALTH (HMIS): 2, FLAMMABILITY: 3, PHYSICAL HAZARD: 0  
(Personal Protection Rating to be supplied by user based on use conditions.)  
This information is intended solely for the use of individuals trained in the NFPA & HMIS hazard rating systems.

### 16.2 EMPLOYEE TRAINING

See Section 2 (Hazards Identification). Employees should be made aware of all hazards of this material (as stated in this SDS) before handling it.

16.3 SDS DATE: 08/13/2015

### NOTICE

The supplier disclaims all expressed or implied warranties of merchantability or fitness for a specific use, with respect to the product or the information provided herein, except for conformation to contracted specifications. All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency.

Conditions of use are beyond our control, and therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their handling, and disposal of the product. Users also assume all risks in regards to the publication or use of, or reliance upon information contained herein.  
This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.



CASCADE  
COLUMBIA  
DISTRIBUTION  
COMPANY

COMPANY IDENTITY: Cascade Columbia Distribution Company  
PRODUCT IDENTITY: Methyl Ethyl Ketone  
SDS NUMBER: MEK

SDS DATE: 08/10/2015  
ORIGINAL: 08/10/2015

## SAFETY DATA SHEET

This Safety Data Sheet conforms to ANSI Z400.5, and to the format requirements of the Global Harmonizing System.  
THIS SDS COMPLIES WITH 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD)  
IMPORTANT: Read this SDS before handling & disposing of this product.  
Pass this information on to employees, customers, & users of this product.

### SECTION 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

PRODUCT IDENTITY: Methyl Ethyl Ketone  
SYNONYMS: 2-Butanone, MEK  
PRODUCT USES: Solvent

COMPANY IDENTITY: Cascade Columbia Distribution Company  
COMPANY ADDRESS: 6900 Fox Avenue S.  
COMPANY CITY: Seattle, WA 98108  
COMPANY PHONE: 1-206-763-2351  
EMERGENCY PHONES: CHEMTREC: 1-800-424-9300 (USA)  
CANUTEC: 1-613-996-6666 (CANADA)

### SECTION 2. HAZARDS IDENTIFICATION

**DANGER!!**

2.1 HAZARD STATEMENTS: (CAT = Hazard Category)  
(H200s) PHYSICAL: Flammable Liquids (CAT:2)  
H225 HIGHLY FLAMMABLE LIQUID AND VAPOR.  
(H300s) HEALTH: Serious Eye Damage/Eye Irritation:(CAT:2A)  
H319 CAUSES SERIOUS EYE IRRITATION.  
(H300s) HEALTH: Target Organ Toxicity, Single Exposure:(CAT:3)  
H336 MAY CAUSE DROWSINESS OR DIZZINESS.



#### 2.2 PRECAUTIONARY STATEMENTS:

P100s = General, P200s = Prevention, P300s = Response, P400s = Storage, P500s = Disposal  
P210 Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ventilating/lighting equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264 Wash with soap & water thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P303+361+353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304+340 IF INHALED: Remove victim to fresh air & keep at rest in a position comfortable for breathing.  
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present & easy to do - Continue rinsing.  
P312 Call a POISON CENTER or doctor/physician if you feel unwell.  
P337+313 If eye irritation persists, get medical advice/attention.  
P370+338 In case of fire, use alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.  
P403+235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.  
P500 Dispose of contents in accordance with local/regional/federal regulations.

SEE SECTIONS 8, 11 & 12 FOR TOXICOLOGICAL INFORMATION.

COMPANY IDENTITY: Cascade Columbia Distribution Company  
PRODUCT IDENTITY: Methyl Ethyl Ketone  
SDS NUMBER: MEK

SDS DATE: 08/10/2015  
ORIGINAL: 08/10/2015

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL	CAS#	EINECS#	WT %
Methyl Ethyl Ketone	78-93-3	201-159-0	95-100

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets. This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1).

TRACE COMPONENTS: Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, reproductive toxins, respiratory tract mutagens, and sensitizers). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents, and Canadian Hazardous Materials Identification System Standard (CPR 4).

### SECTION 4. FIRST AID MEASURES

#### 4.1 MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE & CHRONIC:

Irritating to respiratory system; eye irritation; vapors may cause drowsiness and dizziness. Repeated contact with skin may cause dryness or cracking. See Section 11 for symptoms/effects, acute & chronic.

#### 4.2 GENERAL ADVICE:

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.

#### 4.3 EYE CONTACT:

If this product enters the eyes, check for and remove any contact lenses. Open eyes while under gently running water. Use sufficient force to open eyelids. "Roll" eyes to expose more surface. Minimum flushing is for 15 minutes. Seek immediate medical attention.

#### 4.4 SKIN CONTACT:

If the product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove contaminated clothing, taking care not to contaminate eyes. If skin becomes irritated and irritation persists, medical attention may be necessary. Wash contaminated clothing before reuse, discard contaminated shoes.

#### 4.5 INHALATION:

After high vapor exposure, remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, trained personnel should immediately begin artificial respiration. If the heart has stopped, trained personnel should immediately begin cardiopulmonary resuscitation (CPR). Seek immediate medical attention.

#### 4.6 SWALLOWING:

If swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, give two glasses of water to drink. DO NOT INDUCE VOMITING. Never induce vomiting or give liquids to someone who is unconscious, having convulsions, or unable to swallow. Seek immediate medical attention.

#### 4.7 NOTES TO PHYSICIAN:

There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Any material aspirated during vomiting may cause lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. If it is considered necessary to evacuate the stomach contents, this should be done by means least likely to cause aspiration (such as: Gastric lavage after endotracheal intubation).

### SECTION 5. FIRE FIGHTING MEASURES

#### 5.1 FIRE & EXPLOSION PREVENTIVE MEASURES:

NO open flames, NO sparks, & NO smoking. Use a closed system, ventilation, explosion-proof electrical equipment, lighting.

#### 5.2 SUITABLE (& UNSUITABLE) EXTINGUISHING MEDIA:

Use dry powder, AFFF, foam, carbon dioxide. Do not use solid water stream.



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## SECTION 5. FIRE FIGHTING MEASURES (CONTINUED)

### 5.3 SPECIAL PROTECTIVE EQUIPMENT & PRECAUTIONS FOR FIRE FIGHTERS:

Cool closed containers. Use fog nozzles if water is used.  
Do not enter confined fire-space without full chemical resistant suit and self-contained breathing apparatus. Vapors is denser than air and may travel long distances to ignition sources. Vapor may accumulate in low areas.

### 5.4 SPECIFIC HAZARDS OF CHEMICAL & HAZARDOUS COMBUSTION PRODUCTS:

HIGHLY FLAMMABLE!! VAPORS CAN CAUSE FLASH FIRE  
Isolate from oxidizers, heat, sparks, electric equipment & open flame.  
Closed containers may explode if exposed to extreme heat.  
Combustion products include carbon dioxide and carbon monoxide.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with regulations.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### 6.1 SPILL AND LEAK RESPONSE AND ENVIRONMENTAL PRECAUTIONS:

Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. No action should be taken involving personal risk without suitable training. Keep unnecessary and unprotected personnel from entering spill area. Do not touch or walk through material. Avoid breathing vapor or mist. Provide adequate ventilation. Proper protective equipment should be used (see Section 8). ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Vapors are heavier than air, may travel long distances and ignite.

### 6.2 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, EMERGENCY PROCEDURES:

Wear chemical resistant gloves, suit and boots, and Self-Contained Breathing Apparatus specific for the material handled. See section 8. Stop spill at source. Construct temporary dikes of dirt, sand, or any inert readily available material to prevent spreading of the product. Close or cap valves and/or block or plug hole in leaking container and transfer to another container.

### 6.3 ENVIRONMENTAL PRECAUTIONS:

Do not release into the environment. Keep from entering storm sewers and ditches which lead to waterways, and if necessary, call the local fire or police department for immediate emergency assistance. Product floats on water and may pose a fire hazard.

### 6.4 METHODS AND MATERIAL FOR CONTAINMENT & CLEAN-UP:

Remove all sources of ignition and use non-sparking tools. Absorb spilled liquid with suitable inert materials (such as sand or soil). Shovel up and place all spill residue in suitable containers. Dispose of at an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal (see Section 13 - Disposal Considerations).

## SECTION 7. HANDLING AND STORAGE

### 7.1 PRECAUTIONS FOR SAFE HANDLING:

Avoid formation of aerosol. Avoid contact with skin and eyes (see section 8). Drum content may be under pressure. Handle only with adequate ventilation. Electrostatic charge may accumulate and create a hazardous condition when pumping and handling this material. 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 CR 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". Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge ( $\leq 1$  m/sec until fill pipe submerged to twice its diameter, then  $\leq 7$  m/sec). Do NOT use compressed air for filling, discharging or handling operations. Avoid free fall of liquid. Ground containers when transferring. Empty container very hazardous. Do not flame cut, saw, drill, braze, or weld.

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## SECTION 7. HANDLING AND STORAGE (CONTINUED)

### 7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

Keep in fireproof surroundings. For safety reasons in case of fire, cans should be stored separately in closed containments. Keep separated from strong oxidants and acids. Store in a cool, dry, well-ventilated place. Protect from moisture. Take measures to prevent the build up of electrostatic charge. Provide electrical grounding of equipment and electrical equipment useable in explosive atmospheres. Keep container tightly closed & upright when not in use to prevent leakage.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 EXPOSURE LIMITS:

MATERIAL	CAS#	EINECS#	TWA (OSHA)	TLV (ACGIH)
Methyl Ethyl Ketone	78-93-3	201-159-0	200 ppm	200 ppm

MATERIAL	CAS#	EINECS#	CEILING	STEL (OSHA/ACGIH)	HAP
Methyl Ethyl Ketone	78-93-3	201-159-0	None Known	300 ppm	No

This product contains no EPA Hazardous Air Pollutants (HAP) in amounts > 0.1%.

### 8.2 APPROPRIATE ENGINEERING CONTROLS:

#### RESPIRATORY EXPOSURE CONTROLS

Maintain airborne contaminant concentrations below exposure limits given above. If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134, European Standard EN 149, or applicable State regulations. If adequate ventilation is not available or there is potential for airborne exposure above the exposure limits, a respirator may be worn up to the respirator exposure limitations, check with respirator equipment manufacturer's recommendations/limitations. For a higher level of protection, use positive pressure supplied air respiration protection or Self-Contained Breathing Apparatus or if oxygen levels are below 19.5% or are unknown.

#### VENTILATION

LOCAL EXHAUST:	Necessary	MECHANICAL (GENERAL):	Necessary
SPECIAL:	None	OTHER:	None

Please refer to ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

### 8.3 INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT:

#### EYE PROTECTION:

Wear chemical splash goggles complying with an approved standard. In addition, face-shields are recommended when the operation can generate splashes, sprays or mists.

#### HAND PROTECTION:

Use gloves chemically resistant to this material. Consult with Chemical Safety Equipment Supplier.

#### BODY PROTECTION:

Use body protection appropriate for task, such as cover-all, rubber aprons, or chemical protective clothing made from impervious materials.

#### RESPIRATORY PROTECTION:

Respiratory protection should not be needed under normal use. See section 8.2.

#### WORK & HYGIENIC PRACTICES:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using toilet facilities and at the end of the working period. Provide readily accessible eye wash stations & safety showers. Remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.

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## SECTION 9. PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE: Liquid, Water-White  
ODOR: Ketone  
ODOR THRESHOLD: Not Available  
pH (Neutrality): Not Available  
MELTING POINT/FREEZING POINT: -87 C / -125 F  
BOILING RANGE: 80 C / 175 F  
FLASH POINT (TEST METHOD): -7 C / 19 F (TCC)  
EVAPORATION RATE (n-Butyl Acetate=1): 3.6  
FLAMMABILITY CLASSIFICATION: Flammable Liquid Class I B  
LOWER FLAMMABLE LIMIT IN AIR (% by vol): 1.4 (V)  
UPPER FLAMMABLE LIMIT IN AIR (% by vol): 11.5 (V)  
VAPOR PRESSURE (mm of Hg)@20 C: 70.0  
VAPOR DENSITY (air=1): 2.5  
GRAVITY @ 68/68 F / 20/20 C: 0.804  
DENSITY: 0.805  
SPECIFIC GRAVITY (Water=1): 0.806  
POUNDS/GALLON: 6.706  
WATER SOLUBILITY: Partially miscible  
PARTITION COEFFICIENT (n-Octane/Water): log Pow: 0.29  
AUTO IGNITION TEMPERATURE: 404 C / 759 F  
DECOMPOSITION TEMPERATURE: Not Available  
VOCs (>0.044 Lbs/Sq In): 100.0 Vol% / 805.0 g/L / 6.7 Lbs/Gal  
TOTAL VOC'S (TVOC)\*: 100.0 Vol% / 805.0 g/L / 6.7 Lbs/Gal  
NONEXEMPT VOC'S (CVOC)\*: 100.0 Vol% / 805.0 g/L / 6.7 Lbs/Gal  
HAZARDOUS AIR POLLUTANTS (HAPS): 0.0 Wt% / 0.0 g/L / 0.000 Lbs/Gal  
NONEXEMPT VOC PARTIAL PRESSURE (mm of Hg @ 20 C): 0.0  
VISCOSITY @ 20 C (ASTM D445): 0.41 mPa.s  
\* Using CARB (California Air Resources Board Rules).

## SECTION 10. STABILITY & REACTIVITY

### 10.1 REACTIVITY & CHEMICAL STABILITY:

Stable under normal conditions.

### 10.2 POSSIBILITY OF HAZARDOUS REACTIONS & CONDITIONS TO AVOID:

Isolate from oxidizers, heat, sparks, electric equipment & open flame. Vapors may form explosive mixture with air.

### 10.3 INCOMPATIBLE MATERIALS:

Avoid contact with amines, ammonia, chloroform, copper, copper alloys, halogenated compounds, nitric acid, strong oxidizing agents, hydrogen peroxide, isocyanates, strong alkalis, strong bases, strong mineral acids.

### 10.4 HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon monoxide, carbon dioxide from burning.

### 10.5 HAZARDOUS POLYMERIZATION:

Will not occur.

## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 ACUTE HAZARDS

#### 11.1.1 SKIN CONTACT:

May degrease skin.

#### 11.1.2 EYE CONTACT

Primary irritation to eyes, redness, tearing, blurred vision.  
Liquid can cause eye irritation. Wash thoroughly after handling.

#### 11.1.3 INHALATION:

Symptoms of overexposure may be headache, dizziness, fatigue, nausea and vomiting.  
Concentrations substantially above the TLV may cause narcotic effects.

#### 11.1.4 SWALLOWING:

Swallowing can cause abdominal irritation, nausea, vomiting & diarrhea.

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## SECTION 11. TOXICOLOGICAL INFORMATION (CONT.)

### 11.2 SUBCHRONIC HAZARDS/CONDITIONS AGGRAVATED

#### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Pre-existing disorders of any target organs mentioned in this SDS can be aggravated by over-exposure by routes of entry to components of this product.

### 11.3 CHRONIC HAZARDS

#### 11.31 CANCER, REPRODUCTIVE & OTHER CHRONIC HAZARDS:

This product has no carcinogens listed by IARC, NTP, NIOSH, OSHA or ACGIH, as of this date, greater or equal to 0.1%.

11.32 TARGET ORGANS: May cause damage to target organs, based on animal data.

11.33 IRRITANCY: Irritating to contaminated tissue.

11.34 SENSITIZATION: No component is known as a sensitizer.

11.35 MUTAGENICITY: No known reports of mutagenic effects in humans.

11.36 EMBRYOTOXICITY: No known reports of embryotoxic effects in humans.

11.37 TERATOGENICITY: No known reports of teratogenic effects in humans.

11.38 REPRODUCTIVE TOXICITY: No known reports of reproductive effects in humans.

A MUTAGEN is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate across generational lines. An EMBRYOTOXIN is a chemical which causes damage to a developing embryo (such as: within the first 8 weeks of pregnancy in humans), but the damage does not propagate across generational lines. A TERATOGEN is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A REPRODUCTIVE TOXIN is any substance which interferes in any way with the reproductive process.

### 11.4 MAMMALIAN TOXICITY INFORMATION

MATERIAL	CAS#	EINECS#	LOWEST KNOWN LETHAL DOSE DATA
Methyl Ethyl Ketone	78-93-3	201-159-0	LOWEST KNOWN LD50 (ORAL) 3400.0 mg/kg(Rats)
Methyl Ethyl Ketone	78-93-3	201-159-0	LOWEST KNOWN LC50 (VAPORS) 2000 ppm (Rats)
Methyl Ethyl Ketone	78-93-3	201-159-0	LOWEST KNOWN LD50 (SKIN) 12600.0 mg/kg (Rabbits)

## SECTION 12. ECOLOGICAL INFORMATION

### 12.1 ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

#### 12.2 EFFECT OF MATERIAL ON PLANTS AND ANIMALS:

This product may be harmful or fatal to plant and animal life if released into the environment. Refer to Section 11 (Toxicological Information) for further data on the effects of this product's components on test animals.

#### 12.3 EFFECT OF MATERIAL ON AQUATIC LIFE:

Fish: LC50: 2993 mg/l (Pimephales promelus)(96 hr)

Invertebrates: EC50: 308 mg/l (Daphnia Magna) (48 hr)

Keep out of sewers and natural water supplies.

#### 12.4 MOBILITY IN SOIL

This material is a mobile liquid.

#### 12.5 DEGRADABILITY

This product is completely biodegradable.

#### 12.6 BIOACCUMULATION

This product does not accumulate or biomagnify in the environment.

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### SECTION 13. DISPOSAL CONSIDERATIONS

Processing, use or contamination may change the waste disposal requirements. Do not dispose of on land, in surface waters, or in storm drains. Waste should be recycled or disposed of in accordance with regulations. Large amounts should be collected for reuse or consigned to licensed hazardous waste haulers for disposal. Product and containers can be destroyed by incineration.

**ALL DISPOSAL MUST BE IN ACCORDANCE WITH ALL FEDERAL, STATE, PROVINCIAL, AND LOCAL REGULATIONS. IF IN DOUBT, CONTACT PROPER AGENCIES.**

### SECTION 14. TRANSPORT INFORMATION

MARINE POLLUTANT: No  
DOT/TDG SHIP NAME: UN1193, Methyl ethyl ketone, 3, PG-II  
DRUM LABEL: (FLAMMABLE LIQUID)  
IATA / ICAO: UN1193, Methyl ethyl ketone, 3, PG-II  
IMO / IMDG: UN1193, Methyl ethyl ketone, 3, PG-II  
EMERGENCY RESPONSE GUIDEBOOK NUMBER: 127

### SECTION 15. REGULATORY INFORMATION

#### 15.1 EPA REGULATION:

SARA SECTION 311/312 HAZARDS: Acute Health, Fire

All components of this product are on the TSCA Inventory.  
This material contains no known products restricted under SARA Title III, Section 313 in amounts greater or equal to 1%.

SARA TITLE III INGREDIENTS	CAS#	EINECS#	WT%	(REG.SECTION)	RQ(LBS)
Methyl Ethyl Ketone	78-93-3	201-159-0	95-100	(311,312)	5000

Any release equal to or exceeding the RQ must be reported to the National Response Center (800-424-8802) and appropriate state and local regulatory agencies as described in 40 CFR 302.6 and 40 CFR 355.40 respectively. Failure to report may result in substantial civil and criminal penalties. State & local regulations may be more restrictive than federal regulations.

#### 15.2 STATE REGULATIONS:

THIS PRODUCT MEETS REQUIREMENTS OF SOUTHERN CALIFORNIA AQMD RULE 443.1 & SIMILAR REGULATIONS

CALIFORNIA SAFE DRINKING WATER & TOXIC ENFORCEMENT ACT (PROPOSITION 65):  
This product contains no chemicals known to the State of California to cause cancer or reproductive toxicity.

#### 15.3 INTERNATIONAL REGULATIONS

The identified components of this product are listed on the chemical inventories of the following countries:

Australia (AICS), Canada (DSL or NDSL), China (IECSC), Europe (EINECS, ELINCS), Japan (METI/CSCL, MHLW/ISHL), South Korea (KECI), New Zealand (NZIOc), Philippines (PICCS), Switzerland (SWISS), Taiwan (NECSI), USA (TSCA).

#### 15.4 CANADA: WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

B2: Flammable Liquid.  
D2B: Irritating to skin / eyes.

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all information required by the CPR.

### SECTION 16. OTHER INFORMATION

#### 16.1 HAZARD RATINGS:

HEALTH (NFPA): 2, HEALTH (HMIS): 2, FLAMMABILITY: 3, PHYSICAL HAZARD: 0  
(Personal Protection Rating to be supplied by user based on use conditions.)  
This information is intended solely for the use of individuals trained in the NFPA & HMIS hazard rating systems.

#### 16.2 EMPLOYEE TRAINING

See Section 2 for Risk & Safety Statements. Employees should be made aware of all hazards of this material (as stated in this SDS) before handling it.

#### 16.3 SDS DATE: 08/10/2015

COMPANY IDENTITY: Cascade Columbia Distribution Company  
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ORIGINAL: 08/10/2015

#### NOTICE

The supplier disclaims all expressed or implied warranties of merchantability or fitness for a specific use, with respect to the product or the information provided herein, except for conformation to contracted specifications. All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency.

Conditions of use are beyond our control, and therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their handling, and disposal of the product. Users also assume all risks in regards to the publication or use of, or reliance upon information contained herein.

This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.

# Safety Data Sheet

Xylene

## SECTION I - IDENTIFICATION



Transchem, Inc.  
2141 Palomar Airport Rd. Suite 125  
Carlsbad, CA 92011  
(800) 783-2436  
Chemtel Emergency Response :: (800) 255-3924

PRODUCT NUMBER: ..... XYL  
PRODUCT NAME: ..... Xylene  
CHEMICAL FAMILY: ..... Solvent Raw Material  
CAS NUMBER: ..... 1330-20-7  
DATE PREPARED: ..... 2/23/1998  
REVISION NUMBER: ..... 5/28/2014

## SECTION II - HAZARDOUS IDENTIFICATION

### GHS CLASSIFICATION:

#### Classification

Flammable Liquids	Category 3
Acute Toxicity, Dermal	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Acute Toxicity, Inhalation	Category 4
Hazardous to the aquatic environment, acute hazard	Category 2
Hazardous to the aquatic environment, long-term hazard	Category 2

### WARNING!

#### GHS LABEL:



#### Hazard Statements

H226	Flammable liquid and vapor
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H401	Toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects

## Safety Data Sheet

### Xylene

#### Precautionary Statements

P210	Keep away from heat/sparks/open flames/hot surface - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/light/equipment, etc.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+352	IF ON SKIN: Wash with soap and water.
P303+361+353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
p304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so - continue rinsing.
P312	Call a POISON CENTER or a doctor/physician if you feel unwell.
P322	Specific measures (see ... on this label).
P332+313	If skin irritation occurs: get medical advice/attention.
P337+313	If eye irritation persists get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P363	Wash contaminated clothing before reuse.
P370+378	In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam for extinction.
P391	Collect spillage.
P403+235	Store in a well ventilated place. Keep cool.
P501	Dispose of contents/container to an approved waste disposal plant.

#### SECTION III - COMPOSITION/INFORMATION ON INGREDIENTS

The precise composition of this product is proprietary information. In the event of a medical emergency, a complete disclosure will be provided to medical personnel.

Component Name	CAS #	Component%	OSHA PEL	ACGIH TLV
Dimethylbenzene	1330-20-7	< 100%	100 ppm	100 ppm



## Safety Data Sheet

### Xylene

Ethylbenzene	100-41-4	< 20%	100 ppm	100 ppm
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#### SECTION IV - FIRST AID MEASURES

**Contact with eyes:** Flush with water for 15 minutes. Seek immediate medical attention.

**Skin contact:** Wash exposed areas with water and mild soap. Remove contaminated clothing immediately and launder before reuse. If irritations persist, seek immediate medical attention.

**Inhalation:** Remove victim to fresh air. Administer oxygen or artificial respiration if breathing is affected or stopped. Seek immediate medical attention.

**Ingestion:** If swallowed. Do not induce vomiting. Seek immediate medical attention.  
Aspiration hazard.  
Give large quantities of water. Never give anything by mouth to an unconscious person.  
If vomiting occurs, keep head below hips to prevent aspiration into lungs.  
Induce vomiting.

#### SECTION V - FIREFIGHTING MEASURES

**Suitable Extinguishing Media:** Water fog, foam, CO<sub>2</sub>, dry chemical.

**Special Fire Fighting Procedures** Use self-contained breathing apparatus and full bunker gear in fire areas.  
Evacuate all unprotected personnel from area. Keep containers cool with water fog to minimize swelling taking care not to spread flames with water used for cooling.

**Unusual Fire Fighting Hazards:** Product is flammable and may be ignited by heat, sparks, flames or other sources of ignition (e.g., static electricity, pilot lights or mechanical/electrical equipment). Vapors are heavier than air and may accumulate in low areas.  
Vapors may travel considerable distances to a source of ignition where they can ignite, flashback or explode. May create vapor/air explosion hazard indoors, outdoors or in sewers. If container is not properly cooled, it can explode in the heat of a fire.

#### SECTION VI - ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Keep all sources of ignition and hot metal surfaces away from spill or release.  
Evacuate all unprotected personnel from the area.

**Environmental Precautions:** Prevent liquid from entering drains, sewers, waterways, ground and surface water or soil.  
Notify proper authorities. Reportable Quantity is 100 pounds or 13 gallons.

## Safety Data Sheet

### Xylene

**Methods for Cleaning Up:** Use foam on spills to minimize vapors.  
Using only non-sparking tools and explosion proof equipment, collect spill on absorbent material and put into approved container.

#### SECTION VII - HANDLING AND STORAGE

**Handling and Storage:**

- NFPA Class I storage.
- Vent container carefully before opening.
- Bond and ground all equipment when transferring from one vessel to another. The use of explosion-proof equipment is recommended.
- "Empty" containers retain residue and/or vapor and may be dangerous. Do not cut, weld, braze solder, drill, grind or expose such containers to heat, flames, sparks, or other ignition sources.
- Keep containers tightly closed when not in use.
- Avoid prolonged breathing of mist or vapor. Wash thoroughly after handling.

#### SECTION VIII - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

##### EXPOSURE LIMITS:

Component Name	CAS #	OSHA PEL	ACGIH TLV
Dimethylbenzene	1330-20-7	100 ppm	100 ppm
Ethylbenzene	100-41-4	100 ppm	100 ppm

**Engineering Controls:** Adequate local or mechanical ventilation to reduce vapor or mist to below the PEL or TLV.

**Monitoring:** Follow accepted work practices for handling a flammable material.  
Do not eat, drink or smoke in areas where this chemical is used or stored.  
Wash hands prior to eating, drinking or using the restroom.  
Have eye wash stations and safety showers readily available.

##### Personal Protective Equipment (PPE)

**Eye Protection:** Goggles or approved OSHA device with side shields; do not wear contact lenses when handling this product.

**Skin Protection:** Impervious solvent resistant gloves.  
Impervious apron and work boots recommend where splashing may occur.

**Respiratory Protection:** Use the proper respirator in areas where the chemical exposure is unknown or above the OSHA PEL or ACGIH TLV.

#### SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

**Safety Data Sheet**  
**Xylene**

Appearance	Clear Liquid
Odor	Distillate Odor
pH@25°C	N/A
Melting/Freezing Point	N/A
Flashpoint	80°F: TCC
Specific Gravity	0.864
Solubility	Negligible
Auto-Ignition Temperature	-
Decomposition Temperature	-
VOC Content	100% (7.1% by wt.)
Odor Threshold	-
Boiling Range	282 - 288° F
Evaporation Point	0.8
Flammable Limits - Upper	7.0%
Flammable Limits - Lower	1.0%
Vapor Pressure	6.7 mmHg @ 20° C
Vapor Density (Air=1)	3.7 (Air=1)
Viscosity	-

**SECTION X - STABILITY AND REACTIVITY**

**Stability:** Stable

**Conditions to Avoid:** Sparks, fire, and extreme temperatures.

**Hazardous Decomposition/Byproducts:** Thermal decomposition may yield oxides of carbon.

**Hazardous Polymerization:** Will not occur.

**Polymerization Conditions to Avoid:** None

## Safety Data Sheet

### Xylene

#### SECTION XI - TOXICOLOGICAL INFORMATION

**Likely Route of Exposure:** Contact and inhalation; ingestion possible.

**Inhalation:** May cause respiratory tract irritation. Inhalation of vapors may cause drowsiness and dizziness.

**Eye Contact:** Causes eye irritation including stinging, watering and redness which may result in corneal injury.  
High vapor concentrations are irritating to the eyes.

**Skin Contact:** Contact may cause mild skin irritation including redness, burning and drying/cracking of the skin.  
Can be painful if skin is confined in gloves, clothing, etc.

**Ingestion:** Aspiration hazard. Can enter the lungs during swallowing or vomiting and cause chemical pneumonia and edema.  
May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

**Toxicity:**

Component Name	LD50	LC50
Dimethylbenzene	Oral - rat - 2,840 mg/kg; Dermal - rabbit - 4,500 mg/kg	Inhalation - rat - 4H/6,350 mg/l
Ethylbenzene	Oral - rat - 3500 mg/kg - Dermal - rabbit - 15,500 mg/kg	Inhalation -rat - 4H/18 mg/l

Reproductive Effects	Teratogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

#### SECTION XII - ECOLOGICAL INFORMATION

**Ecotoxicity:** Information not available.

**Mobility:** Information not available.

**Degradability:** Information not available.

**BioAccumulation:** Information not available.

#### SECTION XIII - WASTE DISPOSAL CONSIDERATIONS

Follow Federal, state, and local regulations.

**Safety Data Sheet**  
Xylene

**SECTION XIV - TRANSPORT INFORMATION**

**DOT SHIPPING INFORMATION**

**Proper Shipping Name:** Xylenes

**Contains:**

**Hazard Class and Label:** 3

**Identification Number:** UN 1307

**Packaging Group:** II

**SECTION XV - REGULATORY INFORMATION**

**TSCA STATUS:**..... The components of this product are listed on the TSCA Inventory

**SARA TITLE III SECTION 302/304 EXTREMELY HAZARDOUS SUBSTANCE:**

No chemicals in this material are subject to the reporting requirements.

**SARA TITLE III SECTION 311/312 HAZARD CATEGORIZATION:**

Acute	Chronic	Fire	Pressure	Reactive
X	X	X		

**SARA TITLE III SECTION 313 SUPPLIER INFORMATION:**

Component Name	CAS #	% by wt.
Dimethylbenzene	1330-20-7	< 100%
Ethylbenzene	100-41-4	< 20%

**CERCLA SECTION 102(a) HAZARDOUS SUBSTANCE:**

Component Name	CAS #	% by wt.	RQ (lbs.)
Dimethylbenzene	1330-20-7	< 100%	100
Ethylbenzene	100-41-4	< 20%	1,000

**California Prop. 65 Components**

WARNING! This product contains a chemical known to the State of California to cause cancer.

Ethylbenzene CAS-No. 100-41-4

**SECTION XVI - OTHER INFORMATION**

**HMIS Health:** ..... 2

**HMIS Flammability:** ..... 3

**HMIS Reactivity:** ..... 0

**Additional:**

## **Safety Data Sheet**

Xylene

### **Specification Information**

**Department issuing data sheet:** Compliance

**Training necessary:** Follow all Federal, State and local regulations.

### **Disclaimer:**

Seller and manufacturer disclaim any implied or expressed warranties, including warranties of merchantability or fitness of this product for any particular purpose. In no event shall seller be liable for any claim for incidental or consequential damages arising out of or in connection with the sale, delivery, transportation or use of this product. Seller's and manufacturer's liability in all events is limited to, and shall not exceed the purchase price paid for this product.

**1. PRODUCT AND COMPANY IDENTIFICATION**

Product Name: GLYCOL ETHER DB

Description: Diethylene Glycol Monobutyl Ether  
Product Code: 1533  
Suggested Use: Solvent  
Restrictions on Use: N/A

Supplier: Norman, Fox & Co.  
14970 Don Julian  
City of Industry, CA 91746

Emergency Phone: CHEMTREC 1-800-424-9300  
International 1-703-527-3887

**2. HAZARDS IDENTIFICATION****Classification**

GHS Classification: Serious Eye Irritation (Category 2A)

**GHS Label Elements**

Pictogram:



Signal Word: Warning

Hazard Statements: H319: Causes serious eye irritation

Precautionary Statements: P264: Wash hands thoroughly after handling.  
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313: If eye irritation persists: Get medical advice/attention.  
P501: Dispose of contents/container in accordance with local, regional, and national regulations.

HMIS Classification: Health Hazard: 2  
Flammability: 1  
Physical Hazards: 0

NFPA Rating: Health Hazard: 2  
Fire: 1  
Reactivity Hazard: 0

### Potential Health Effects

Inhalation:	Inhalation can cause irritation to the respiratory tract.
Skin:	Contact can cause irritation.
Eyes:	Contact can cause irritation.
Ingestion:	Ingestion can cause gastrointestinal irritation and other injury. Possible aspiration hazard if swallowed. Do not ingest.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS Number</u>	<u>Concentration</u>
2-(2-butoxyethoxy)-ethanol	112-34-5	100%
Synonyms:	Diethylene Glycol Monobutyl Ether; Glycol Ether DB; DB Solvent	

### 4. FIRST AID MEASURES

If Inhaled:	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician if symptoms are experienced.
Skin Contact:	Flush skin with plenty of water. Remove contaminated clothing and shoes. If irritation persists, consult a physician.
Eye Contact:	Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses if able to do so. Immediately call a doctor or physician.
If Ingested:	Do not induce vomiting unless instructed to do so by a physician. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 5. FIREFIGHTING MEASURES

Flammability Overview:	Will combust in fire conditions.
Flash Point:	114°C (237°F)
Extinguishing Media:	Use water-spray, alcohol-resistant foam, dry chemical, or carbon dioxide. Tailor extinguishing media to surrounding fire.
Special Protective Equipment for Firefighters:	Wear a self-contained breathing apparatus (SCBA) for fighting large fires.
Special Hazards:	Container holding this material may explode in the heat of a fire.
Hazardous Combustion Products:	Under fire conditions: Carbon oxides.

### 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Use personal protective equipment. Remove all possible sources of ignition in the surrounding area. Avoid breathing vapors, mist, or gas. Always ensure adequate ventilation. No action should be taken involving any personal risk or without suitable training. Evacuate unnecessary and unprotected personnel to safe areas away from the spill.
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### SAFETY DATA SHEET

Version 1.0  
Effective Date: 05/31/15

**Environmental Precautions:** If safe to do so, avoid the dispersal of spilled material and contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution. Collect spillage.

**Containment and Clean Up:** If safe to do so, stop the leak or spill. Move containers away from the spill area. Prevent entry into sewers, water courses, basements, and confined areas. Contain and collect spilled material with non-combustible, absorbent material and place in a container for disposal according to local regulations. Dispose via a licensed waste disposal contractor. Contaminated absorbent material may pose the same physical hazards as the spilled product. If assistance is needed call CHEMTREC or emergency services.

#### 7. HANDLING AND STORAGE

**Safe Handling:** Use personal protective equipment. Avoid static electricity discharge. Keep away from heat/sparks/open flame/hot surfaces. Avoid breathing vapors, mist, or gas. Always ensure adequate ventilation. No smoking, eating, or drinking when using this product. Handle in a manner consistent with good industrial hygiene practices.

**Safe Storage:** Keep containers tightly closed in a cool, dry, well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store away from incompatible materials.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Exposure Limits

Component	CAS Number	Exposure Limit	Basis
2-(2-butoxyethoxy)-ethanol	112-34-5	10 ppm	ACGIH Threshold Value (TLV) TWA

##### Personal Protective Equipment

**Eye Protection:** Tightly fitting safety goggles or safety glasses should be sufficient. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH. Have eye-wash stations available where eye contact can occur.

**Hand Protection:** Handle with chemical-resistant gloves. Gloves must be inspected prior to use. Dispose of contaminated gloves. Wash and dry hands after use.

**Skin Protection:** Wear long sleeves, a chemical apron, or other protective clothing to prevent skin contact. Safety showers should be located in the areas where skin contact can occur.

**Respiratory Protection:** Always ensure adequate ventilation. Where risk assessment shows air-purifying respirators are appropriate, use a NIOSH-approved full-face respirator with appropriate cartridges. Respiratory protection must be provided in accordance with OSHA 29 CFR 1910.134.

**General Controls:** Always ensure adequate ventilation and that working areas contain safety showers and eye wash stations. Handle material in accordance with good industrial hygiene and safety practices.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Colorless
Odor:	Characteristic
Odor Threshold:	N/A
pH:	N/A
Melting/Freezing Point:	-68°C (-90°F)
Boiling Point:	230°C (446°F)
Flash Point:	114°C (237°F)
Evaporation Rate:	0.01 (Butyl acetate = 1)
Flammability (solid, gas):	N/A
Flammability/Explosion Limits:	N/A
Vapor Pressure @ 25°C:	2.9 Pa
Vapor Density:	5 (air = 1)
Specific Gravity:	0.955
Density:	7.96 lbs/gal
Solubility in Water:	Insoluble
Partition Coefficient:	1.0 log Pow
Autoignition Temperature:	N/A
Decomposition Temperature:	N/A
Viscosity:	<20 cPs

### 10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under recommended storage conditions.
Conditions and Materials to Avoid:	Sparks, open flame, other ignition sources, and elevated temperatures. Strong oxidizing agents.
Hazardous Decomposition Products:	Under fire conditions: Carbon Oxides.

### 11. TOXICOLOGICAL INFORMATION

#### Acute Toxicity

Component	CAS Number	Test	Toxicity
2-(2-butoxyethoxy)-ethanol	112-34-5	Oral LD50 (Rat)	>4000 mg/kg
		Dermal LD50 (Rabbit)	>2000 mg/kg
		Inhalation LC50 (Rat)	>29 ppm (2 hr)

#### Potential Health Effects

Inhalation:	Inhalation can cause irritation to the respiratory tract.
Skin:	Contact can cause irritation.
Eyes:	Contact can cause irritation.
Ingestion:	Ingestion can cause gastrointestinal irritation and other injury. Possible aspiration hazard if swallowed. Do not ingest.

Signs and Symptoms of Exposure: Irritation. Coughing. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause serious chemical pneumonia.

Chronic Effects of Long-term Exposure: Some glycol ethers cause adverse effects in animals that include the reproductive system, offspring, blood, kidney, and liver.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

### 12. ECOLOGICAL INFORMATION

#### Acute Ecotoxicity

Component	CAS Number	Organism	Ecotoxicity
2-(2-butoxyethoxy)-ethanol	112-34-5	Algae	96 hr EC50 >100 mg/l
		Daphnia magna	48 hr EC50 >100 mg/l
		Fish	96 hr LC50 = 1300 mg/l

#### Ecological Effects

Persistence and Degradability: Readily biodegradable.

Bioaccumulation Potential: Not expected to bioaccumulate.

Mobility in Soil: No specific data available.

Other Adverse Effects: No specific data available.

### 13. DISPOSAL CONSIDERATIONS

Disposal: The generation of waste should be avoided or minimized wherever possible. Material should be disposed of in accordance with all local, state, and federal regulations. Regulations vary by region. Avoid release into the soil, sewers, drains, and other waterways.

Contaminated Packaging: Waste packaging should be recycled or reused whenever possible. If recycling is not feasible, contaminated packaging should be disposed of in accordance with all local, state, and federal regulations. Regulations vary by region.

### 14. TRANSPORT INFORMATION

#### DOT Information

Proper Shipping Name: N/A  
UN Number: N/A  
Hazard Class: N/A  
Packing Group: N/A

Reportable Quantity (RQ): N/A

Marine Pollutant: No

Note: Not regulated for ground transport.

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**15. REGULATORY INFORMATION****US Federal**

SARA 302 Components: None Listed  
SARA 311/312 Hazards: Acute Health Hazard  
SARA 313 Components: Glycol Ether Category

TSCA Inventory: All components listed or exempted.

**European Union**

EC Inventory: EINECS 203-961-6

**State Regulations**

CA Prop 65: Contains no known hazardous materials above the safe harbor limits.

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**16. OTHER INFORMATION**

SDS Version: 1.0  
Revision Date: 05/31/2015  
Supersedes: New to GHS

The information contained in this document was carefully compiled and is believed to be accurate. The information represents the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. However, it does not represent any guarantee of the properties of the product. Norman, Fox & Co. shall not be held liable for any damages resulting from handling or from contact with the above product. It is the responsibility of the purchaser to determine the suitability of the product for their particular purposes. Nothing contained herein shall be construed to be a recommendation to use, or as a license to operate under, or to infringe any existing patents.

**Safety Data Sheet**  
*acc. to OSHA HCS*

Printing date 06/19/2015

Reviewed on 06/19/2015

## 1 Identification

- **Product identifier**
  - **Trade name:** Alumi Kote 1
  - **Article number:** AK1-B1407
  - **Application of the substance / the mixture** Metal surface treatment
  - **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**  
Bulk Chemicals Inc.  
1074 Stinson Drive  
READING, PA 19605  
USA
  - **Information department:**  
Product safety department  
[info@bulkchemicals.us](mailto:info@bulkchemicals.us)
  - **Emergency telephone number:** CHEMTREC 1-800-424-9300, outside the US +1-703-527-3887
- Distributed By:  
Chemco Products Company  
6401 E. Alondra Blvd.  
Paramount, CA 90723  
(866) 243-6261

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Muta. 1B H340 May cause genetic defects.  
Carc. 1A H350 May cause cancer.  
Repr. 2 H361 Suspected of damaging fertility or the unborn child.  
STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.  
Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.  
Acute Tox. 4 H312 Harmful in contact with the skin.  
Acute Tox. 4 H332 Harmful if inhaled.  
Skin Sens. 1 H317 May cause an allergic skin reaction.

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# Safety Data Sheet

## acc. to OSHA HCS

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Trade name: *Alumi Kote 1*

(Contd. from page 1)

· **Label elements**· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**

GHS05

GHS07

GHS08

· **Signal word** *Danger*· **Hazard-determining components of labeling:**

Chromic acid

Phosphoric acid

· **Hazard statements**

Harmful if swallowed, in contact with the skin, or if inhaled.

Causes severe skin burns and eye damage.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause genetic defects.

May cause cancer.

Suspected of damaging fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Do not breathe dusts or mists.

If on the skin (or in hair): Immediately remove/take off all contaminated clothing. Rinse the skin with water/shower.

If in the eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

Immediately call a poison center/doctor.

Store locked up.

Dispose of contents/containers in accordance with local/regional/national/international regulations.

· **Classification system:**· **NFPA ratings (scale 0–4)**

Health = 3

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0–4)**

Health = \*4

Fire = 0

Reactivity = 0

· **Other hazards**· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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# Safety Data Sheet

acc. to OSHA HCS

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Reviewed on 06/19/2015

Trade name: *Alumi Kote 1*

(Contd. from page 2)

## 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

7664-38-2	Phosphoric acid	25–50%
7738-94-5	Chromic acid	10–<25%

## 4 First aid measures

- **Description of first aid measures**
- **General information:**
  - Discard any shoes or clothing items that cannot be decontaminated.
  - Immediately remove any clothing soiled by the product.
  - Symptoms of poisoning may even occur after several hours; therefore, medical observation is necessary for at least 48 hours after the accident.
  - Remove the breathing apparatus only after contaminated clothing have been completely removed.
  - In the case of irregular breathing or respiratory arrest, provide artificial respiration.
- **After inhalation:**
  - Supply fresh air or oxygen; call for a doctor.
  - In the case of unconsciousness, place the patient stably on their side for transportation.
- **After skin contact:**
  - If skin irritation continues, consult a doctor.
  - Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
  - Seek immediate medical advice.
  - Check for and remove any contact lenses.
  - Rinse the opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
  - Immediately call a doctor.
  - Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for the doctor:**
- **Most important symptoms and effects, both acute and delayed**
  - Eye irritation.
  - Burns to the skin or eyes.
  - Blurred vision.
  - Skin irritation.
  - Nasal and respiratory tract irritation.
  - Medical conditions may be aggravated by exposure.
  - Mists may cause irritation and burns of the nasal septum and respiratory tract.
  - Ulceration of skin and mucous membranes.
  - Gastric or intestinal disorders.
  - Systemic poisoning.
- **Indication of any immediate medical attention and special treatment needed**
  - No further relevant information available.

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(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/19/2015

Reviewed on 06/19/2015

Trade name: *Alumi Kote 1*

(Contd. from page 3)

## 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder, or water spray. Fight larger fires with water spray or alcohol-resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Full firefighting gear and an SCBA.

## 6 Accidental release measures

- **Personal precautions, protective equipment, and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Do not allow the product to reach a sewage system or any water course.  
Inform respective authorities in the case of seepage into a water course or sewage system.  
Do not allow it to enter sewers/ surface or groundwater.
- **Methods and material for containment and cleanup:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use a neutralizing agent.  
Dispose of contaminated material as waste according to item 13.  
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**  
Do not reuse empty containers.  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacles with care.  
Prevent the formation of aerosols.
- **Information about protection against explosions and fires:**  
Keep a respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:**  
Store away from oxidizing agents and organic solvents.  
Store away from foodstuffs.
- **Further information about storage conditions:**  
Protect from frost.  
Store under lock and key and out of the reach of children.  
Keep from freezing.

(Contd. on page 5)

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# Safety Data Sheet

## acc. to OSHA HCS

Printing date 06/19/2015

Reviewed on 06/19/2015

**Trade name: Alumi Kote 1**

(Contd. from page 4)

*Keep receptacles tightly sealed.**· Specific end use(s) No further relevant information available.*

### 8 Exposure controls/personal protection

*· Additional information about the design of technical systems: No further data; see item 7.**· Control parameters**· Components with limit values that require monitoring at the workplace:***7664-38-2 phosphoric acid**PEL Long-term value: 1 mg/m<sup>3</sup>REL Short-term value: 3 mg/m<sup>3</sup>Long-term value: 1 mg/m<sup>3</sup>TLV Short-term value: 3 mg/m<sup>3</sup>Long-term value: 1 mg/m<sup>3</sup>**7738-94-5 Chromic acid**PEL Long-term value: 0.005\* mg/m<sup>3</sup>Ceiling limit value: 0.1\*\* mg/m<sup>3</sup>\*as Cr(VI) \*\*as CrO<sub>3</sub>; see 29 CFR 1910.1026REL Long-term value: 0.0002 mg/m<sup>3</sup>

as Cr; See Pocket Guide Apps. A and C

TLV Long-term value: 0.05 mg/m<sup>3</sup>

as Cr; BEI

*· Additional information: The lists that were valid during the creation were used as the basis.**· Exposure controls**· 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.**Store protective clothing separately.**Avoid contact with the eyes and skin.**· Breathing equipment:**In the case of brief exposure or low pollution, use a respiratory filter device. In case of intensive or**longer exposure, use a respiratory protective device that is independent of circulating air.**· Protection for the 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 for the glove material can be given for the product/ the preparation/ the chemical mixture.**The selection of the glove material depends on the penetration times, rates of diffusion, and the degradation.**· Material of the gloves**The selection of suitable gloves not only depends on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several*

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substances, the resistance of the glove material cannot be calculated in advance and therefore has to be checked prior to the application.

· **Penetration time for the glove material**

The exact breakthrough time has to be determined by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

Faceshield

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Liquid
Color:	Dark red
Odor:	Acidic
Odor threshold:	Not determined

· **pH-value at 15.6 °C (60 °F):** 1

· **Change in condition**

Melting point/Melting range:	Undetermined
Boiling point/Boiling range:	102 °C (216 °F)

· **Flash point:** Not applicable

· **Flammability (solid, gaseous):** Not applicable

· **Ignition temperature:**

Decomposition temperature: Not determined

· **Auto-igniting:** Product is not self-igniting

· **Danger of explosion:** Product does not present an explosion hazard

· **Explosion limits:**

Lower:	Not determined
Upper:	Not determined

· **Vapor pressure at 20 °C (68 °F):** 23 hPa (17 mm Hg)

· **Density at 20 °C (68 °F):** 1.47 g/cm<sup>3</sup> (12.267 lbs/gal)

· **Relative density** Not determined

· **Vapor density** Not determined

· **Evaporation rate** Not determined

· **Solubility in / Miscibility with**

Water: Fully miscible

· **Partition coefficient (n-octanol/water):** Not determined

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· <b>Viscosity:</b>	
<b>Dynamic:</b>	<i>Not determined</i>
<b>Kinematic:</b>	<i>Not determined</i>
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	<i>0.0 %</i>
<b>Water:</b>	<i>37.7 %</i>
· <b>Other information</b>	<i>No further relevant information available</i>

### 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
*No decomposition if used according to specifications.*
- **Possibility of hazardous reactions** *No dangerous reactions known.*
- **Conditions to avoid** *No further relevant information available.*
- **Incompatible materials:**  
*Oxidizing agents*  
*Oils*  
*Greases*  
*Organic materials*
- **Hazardous decomposition products:** *No dangerous decomposition products known.*

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **On the skin:** *Strong caustic effect on the skin and mucous membranes.*
- **On the eyes:** *Strong caustic effect.*
- **Sensitization:**  
*Sensitization possible through inhalation.*  
*Sensitization possible through skin contact.*
- **Additional toxicological information:**  
*The product shows the following dangers according to internally approved calculation methods for preparations:*  
*Harmful*  
*Corrosive*  
*Irritant*  
*Very toxic*  
*Swallowing will lead to a strong caustic effect on the mouth and throat and to the danger of perforation of the esophagus and stomach.*  
*Carcinogenic.*  
*The product can cause inheritable damage.*

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· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer)**

7738-94-5 Chromic acid

I

· **NTP (National Toxicology Program)**

7738-94-5 Chromic acid

K

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

· **Toxicity**· **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.· **Mobility in soil:** No further relevant information available.· **Ecotoxicological effects:**· **Remark:** Toxic for fish.· **Additional ecological information:**· **General notes:***Water hazard class 3 (Self-assessment): extremely hazardous for water.**Do not allow product to reach groundwater, water courses, or sewage systems, even in small quantities.**Must not reach bodies of water or drainage ditches undiluted or unneutralized.**Danger to drinking water if even extremely small quantities leak into the ground.**Also poisonous for fish and plankton in water bodies.**Toxic for aquatic organisms.**Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH values. A**low pH value harms aquatic organisms. In the dilution of the use level, the pH value is considerably**increased, so that after the use of the product, the aqueous waste, emptied into drains, is only mildly water-**dangerous.*· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.· **Other adverse effects:** No further relevant information available.

## 13 Disposal considerations

· **Waste treatment methods**· **Recommendation:***Must not be disposed of together with household garbage. Do not allow product to reach sewage systems.**Dispose of waste in accordance with national, state, and local regulations. It is the waste generator's responsibility to determine if a particular waste is hazardous under RCRA.**Dispose of containers in a licensed facility. Recommend crushing, puncturing, or other means to prevent the unauthorized use of used containers.*

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- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

- **UN number**
- **DOT, ADR, IMDG, IATA** UN2922

- **UN proper shipping name**
- **DOT** Corrosive liquids, toxic, n.o.s. (Phosphoric acid solution, Chromic acid)
- **ADR** 2922 Corrosive liquids, toxic, n.o.s. (Phosphoric acid solution, Chromic acid), ENVIRONMENTALLY HAZARDOUS
- **IMDG, IATA** Corrosive liquid, toxic, n.o.s. (Phosphoric acid solution Chromic acid)

- **Transport hazard class(es)**
- **DOT**



- **Class** 8 Corrosive substances
- **Label** 8, 6.1

- **ADR**



- **Class** 8 Corrosive substances
- **Label** 8+6.1

- **IMDG**



- **Class** 8 Corrosive substances
- **Label** 8/6.1

- **IATA**



- **Class** 8 Corrosive substances

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US

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· <b>Label</b>	8 (6.1)
· <b>Packing group</b> · <b>DOT, ADR, IMDG, IATA</b>	II
· <b>Environmental hazards:</b> · <b>Marine pollutant:</b> · <b>Special marking (ADR):</b>	Product contains environmentally hazardous substances: Chromic acid No Symbol (fish and tree)
· <b>Special precautions for user</b> · <b>Danger code (Kemler):</b> · <b>EMS Number:</b> · <b>Segregation groups</b>	Warning: Corrosive substances 886 F-A,S-B Acids
· <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable
· <b>Transport/Additional information:</b> · <b>DOT</b> · <b>Quantity limitations</b> · <b>Remarks:</b>	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L Reportable Quantity "RQ" required > 5 gallons Reportable Quantity "RQ" required > 5 gallons
· <b>ADR</b> · <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>IMDG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN2922, Corrosive liquids, toxic, n.o.s. (Phosphoric acid solution, Chromic acid), 8 (6.1), II

## 15 Regulatory information

- **Safety, health, and environmental regulations/legislation specific for the substance or mixture**  
· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

7664-38-2 Phosphoric acid

7738-94-5 Chromic acid

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

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· **New Jersey Right to Know**

7664-38-2 Phosphoric acid

7738-94-5 Chromic acid

· **Pennsylvania Right to Know**

7664-38-2 Phosphoric acid

7738-94-5 Chromic acid

· **Proposition 65**· **Chemicals known to cause cancer:**

7738-94-5 Chromic acid

· **Chemicals known to cause reproductive toxicity for females:**

7738-94-5 Chromic acid

· **Chemicals known to cause reproductive toxicity for males:**

7738-94-5 Chromic acid

· **Chemicals known to cause developmental toxicity:**

7738-94-5 Chromic acid

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

7738-94-5 Chromic acid

A(inh), D(oral), K/L(inh), CBD(oral)

· **TLV (Threshold Limit Value established by ACGIH)**

7738-94-5 Chromic acid

AI

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

7738-94-5 Chromic acid

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**

GHS05



GHS07



GHS08

· **Signal word** *Danger*· **Hazard-determining components of labeling:**

Chromic acid

Phosphoric acid

· **Hazard statements**

Harmful if swallowed, in contact with the skin, or inhaled.

Causes severe skin burns and eye damage.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause genetic defects.

May cause cancer.

Suspected of damaging fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure.

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- **Precautionary statements**

*Do not breathe dusts or mists.*

*If on the skin (or in hair): Immediately remove/take off all contaminated clothing. Rinse the skin with water/shower.*

*If in the eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.*

*Immediately call a poison center/doctor.*

*Store locked up.*

*Dispose of contents/containers in accordance with local/regional/national/international regulations.*

- **National regulations:**

- **Information about the limitations of use:**

*Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.*

- **Chemical safety assessment:** *A chemical safety assessment has not been carried out.*

## 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 SDS:**

*Environmental,  
Safety, and Health*

- **Contact:** *SDS Coordinator*

- **Date of preparation / last revision** *06/19/2015*

- **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)*

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*ACGIH: American Conference of Governmental Industrial Hygienists*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*Acute Tox. 4: Acute toxicity, Hazard Category 4*

*Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A*

*Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1*

*Resp. Sens. 1: Sensitization - Respirat., Hazard Category 1*

*Skin Sens. 1: Sensitization - Skin, Hazard Category 1*

*Muta. 1B: Germ cell mutagenicity, Hazard Category 1B*

*Carc. 1A: Carcinogenicity, Hazard Category 1A*

*Repr. 2: Reproductive toxicity, Hazard Category 2*

*STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1*





# Alumi Kote 2

## Safety Data Sheet

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
Product name : **Alumi Kote 2**  
Product code : 3874

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Fluoride Accelerator

#### 1.3. Details of the supplier of the safety data sheet

Chemco Products  
6401 E. Alondra Blvd.  
Paramount, CA 90723 - USA  
T 866-243-6261 - F 562-602-2811  
<http://www.chemcoprod.com>

#### 1.4. Emergency telephone number

Emergency number : CHEMTEL: 800-255-3924

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

Acute Tox. 2 (Oral) H300  
Acute Tox. 1 (Dermal) H310  
Acute Tox. 2 (Inhalation:dust,mist) H330  
Skin Corr. 1A H314  
Eye Dam. 1 H318

Full text of H-phrases: see section 16

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms :



GHS05



GHS06

Signal word :

Danger

Hazard statements :

Fatal if swallowed, in contact with skin or if inhaled.  
Causes severe skin burns and eye damage.  
Causes serious eye damage.

Precautionary statements :

Do not breathe fume, mist, vapors.  
Do not get in eyes, on skin, or on clothing.  
Wash hands and forearms thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Wear eye protection, face protection, protective clothing, protective gloves.  
[In case of inadequate ventilation] wear respiratory protection.  
If swallowed: rinse mouth. Do NOT induce vomiting.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
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.  
Specific treatment is urgent (see the emergency and first aid section on the Safety Data Sheet for additional information).  
Rinse mouth.  
Take off immediately all contaminated clothing.  
Wash contaminated clothing before reuse.

# Alumi Kote 2

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Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with Local, State, and Federal regulations.

### 2.3. Hazard not otherwise classified (HNOC)

No additional information available

### 2.4. Unknown acute toxicity (GHS-US)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

(NOTE: If component displays the \* (asterisk) symbol, the following statement applies.)

\*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of H-phrases: see section 16

### 3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
hydrofluoric acid	(CAS No) 7664-39-3	15 - 20	Acute Tox. 2 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1A, H314

(NOTE: If component displays the \* (asterisk) symbol, the following statement applies.)

\*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general

: Hydrofluoric (HF) acid burns require immediate and specialized first aid and medical treatment. Symptoms may be delayed up to 24 hours depending on the concentration of HF. After decontamination with water, further damage can occur due to penetration/absorption of the fluoride ion. Treatment should be directed toward binding the fluoride ion as well as the effects of exposure. Skin exposures can be treated with a 2.5% calcium gluconate gel repeated until burning ceases. More serious skin exposures may require subcutaneous calcium gluconate except for digital areas unless the physician is experienced in this technique, due to the potential for tissue injury from increased pressure. Absorption can readily occur through the subungual areas and should be considered when undergoing decontamination. Prevention of absorption of the fluoride ion in cases of ingestion can be obtained by giving milk, chewable calcium carbonate tablets or Milk of Magnesia to conscious victims. Conditions such as hypocalcemia, hypomagnesaemia and cardiac arrhythmias should be monitored for, since they can occur after exposure. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

First-aid measures after inhalation

: Immediately move victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately. If breathing has stopped, start artificial respiration at once. Only an authorized person can administer oxygen to a victim who is having difficulty breathing. Calcium gluconate, 2.5% in normal saline may be given by nebulizer with oxygen. Do not give stimulants unless instructed to do so by a doctor/physician. Victim should be examined by a doctor/physician and held under observation for at least 24 hours.

First-aid measures after skin contact

: Immediately move victim to a safety shower or other water source and flush affected area thoroughly with large amounts of running water (begin flushing even before removing clothing). Speed and thoroughness in washing off the acid is of primary importance. Remove all contaminated clothing while continuing to flush with water (While rinsing, immediately contact or alert medical personnel and arrange for subsequent treatment). If 0.13% benzalkonium chloride solution or 2.5% calcium gluconate gel are available, the rinsing may be limited to 5 minutes, with the soaks or gel applied as soon as the rinsing is stopped. Begin soaking the affected areas in iced 0.13% benzalkonium chloride solution (use ice cubes, not shaved ice, in order to prevent frostbite). If immersion is not practical, towels should be soaked with iced 0.13% benzalkonium chloride solution and used as compresses for burned area. Compresses should be changed every two to four minutes. Or start massaging 2.5% calcium gluconate gel into burn site (Note: wear protective gloves to prevent secondary HF burns). Apply frequently and massage continuously until pain and/or redness disappear or until more definitive medical care is given. If benzalkonium chloride or calcium gluconate gel is not available, rinsing must continue until medical treatment is rendered. The victim should be monitored and/or evaluated by a medical doctor/physician.

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First-aid measures after eye contact	: Immediately flush the eyes for at least 15 minutes with large amounts of gently flowing water (avoid rubbing of the eyes). Hold the eyelids open and away from the eye during irrigation to allow thorough flushing of the eyes. Do NOT use the benzalkonium chloride solutions described for skin treatment. Remove contact lenses, if present and easy to do so. If sterile 1% calcium gluconate solution is available, washing may be limited to 5 minutes, after which the 1% calcium gluconate solution should be used repeatedly to irrigate the eye using a syringe. Take the victim to a doctor, preferably an eye specialist, as soon as possible. Ice water compresses may be applied to the eyes while transporting the victim to a doctor/physician. If a physician is not immediately available, apply one or two drops of 0.5% tetracaine hydrochloride, 0.5% proparacaine, or other aqueous, topical ophthalmic anesthetic and continue irrigation. Use no other medications unless instructed to do so by a doctor/physician.
First-aid measures after ingestion	: Immediately have the victim drink large amounts of water as quickly as possible to dilute the acid. Do NOT induce vomiting. Do not give emetics or baking soda. Never give anything by mouth to an unconscious person. Several glasses of milk or several ounces of milk of magnesia may be given for their soothing effect. Get immediate medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	: Mild exposure: Can irritate nose, throat and respiratory system. Onset of symptoms may be delayed for several hours. Severe exposure: Causes burns to the respiratory tract and may be fatal if inhaled. Also results in other toxic effects including hypocalcemia (depletion of calcium in the body) which if not properly treated can result in death.
Symptoms/injuries after skin contact	: Causes burns/corrosion of the skin. Large or multiple burns totaling over 25 square inches of body surface area may also cause hypocalcemia (depletion of calcium in the body) and other toxic effects which may be fatal.
Symptoms/injuries after eye contact	: Causes serious eye damage. Permanent eye damage. Blindness.
Symptoms/injuries after ingestion	: Can cause severe mouth, throat and stomach burns and may be fatal if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Extinguishing media for surrounding fires. Adapt extinguishing media to the environment.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD. Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	: INDIRECT EXPLOSION HAZARD: Heat may cause pressure rise in tanks/drums: explosion risk. Reactions with explosion hazards: see "Reactivity Hazard".
Reactivity	: Reacts violently with (strong) bases. Reacts with (strong) oxidizers. Reacts with (some) halogen compounds. Reacts with (some) metals and their compounds: release of highly flammable gases/vapors (hydrogen). Contact with moisture or water may generate heat. On exposure to temperature rise: pressure rise and possible bursting of container.

### 5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	: No additional information available.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Isolate from fire, if possible, without unnecessary risk.
------------------	--

#### 6.1.1. For non-emergency personnel

Protective equipment	: Protective goggles. Protective gloves. Protective clothing. Respiratory protection.
Emergency procedures	: Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
----------------------	--

# Alumi Kote 2

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Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

For containment : Dam up the liquid spill. Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. If reacting: dilute toxic gas/vapor with water spray.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Neutralize small quantities of the liquid spill with lime, sodium bicarbonate, soda (sodium carbonate) or soda ash. Wash down leftovers with plenty of water. Wash clothing and equipment after handling.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : May be corrosive to metals.

Precautions for safe handling : Restricted to professional users. Use personal protective equipment as required. Do not get in eyes, on skin, or on clothing. Do not breathe fume, mist, vapors. Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Handle and open the container with care. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Never add water to this product. Observe very strict hygiene - avoid contact. Obtain special instructions before use. Protect from moisture. Provide good ventilation in process area to prevent formation of vapor. Use only outdoors or in a well-ventilated area.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Wash hands and forearms thoroughly after handling. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide local exhaust or general room ventilation. Comply with applicable regulations.

Incompatible products : Strong bases. Oxidizing agent. Halogens. Reducing agents.

Heat-ignition : KEEP SUBSTANCE AWAY FROM: Heat sources.

Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: Oxidizing agents. Strong bases. Metals. Organic materials. Alcohols. Water/Moisture.

Storage area : Store in a cool, dry well-ventilated area. Keep container tightly closed when not in use.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

hydrofluoric acid (7664-39-3)		
ACGIH	ACGIH TWA (ppm)	0.5 ppm
ACGIH	ACGIH STEL (ppm)	0.5 ppm
ACGIH	ACGIH Ceiling (ppm)	2 ppm
OSHA	OSHA PEL (TWA) (mg/m³)	0.33 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	0.4 ppm
OSHA	OSHA PEL (STEL) (mg/m³)	0.83 mg/m³
OSHA	OSHA PEL (STEL) (ppm)	1 ppm

### 8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or face shield.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Wear respiratory protection.

Other information : When using, do not eat, drink or smoke.

Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

# Alumi Kote 2

## Safety Data Sheet

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Clear yellow
Odor	: Pungent
Odor threshold	: No data available
pH	: < 1
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Vapor pressure	: No data available
Vapor density	: No data available
Specific Gravity @ 77° F	: 1.055 - 1.075
Solubility	: Soluble in water.
Partition Coefficient n-Octanol-Water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available

#### 9.2. Other information

VOC content	: 0 g/l
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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Reacts violently with (strong) bases. Reacts with (strong) oxidizers. Reacts with (some) halogen compounds. Reacts with (some) metals and their compounds: release of highly flammable gases/vapors (hydrogen). Contact with moisture or water may generate heat. On exposure to temperature rise: pressure rise and possible bursting of container.

#### 10.2. Chemical stability

Stable under recommended conditions.

#### 10.3. Possibility of hazardous reactions

Reacts vigorously with strong oxidizers and bases. Contact with halogenated compounds may liberate toxic gas.

#### 10.4. Conditions to avoid

Extremely high or low temperatures. Heat. Moisture.

#### 10.5. Incompatible materials

Strong bases. Reducing agents. Oxidizers. Metals. Organic materials. Halogens. Cyanide salts. Sulfide salts. Sulfites.

#### 10.6. Hazardous decomposition products

Hydrogen. Thermal decomposition generates : Toxic vapors. Corrosive vapors.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Oral: Fatal if swallowed. Dermal: Fatal in contact with skin. Inhalation:dust/mist: Fatal if inhaled.

Alumi Kote 2	
ATE US (oral)	25.276 mg/kg body weight
ATE US (dermal)	25.276 mg/kg body weight
ATE US (dust, mist)	0.253 mg/l/4h
hydrofluoric acid (7664-39-3)	
ATE US (oral)	5.000 mg/kg body weight
ATE US (dermal)	5.000 mg/kg body weight
ATE US (gases)	100.000 ppmV/4h

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hydrofluoric acid (7664-39-3)	
ATE US (vapors)	0.500 mg/l/4h
ATE US (dust, mist)	0.050 mg/l/4h
Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: < 1
Serious eye damage/irritation	: Causes serious eye damage. pH: < 1
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Fatal if swallowed. Fatal in contact with skin. Fatal if inhaled.
Symptoms/injuries after inhalation	: Mild exposure: Can irritate nose, throat and respiratory system. Onset of symptoms may be delayed for several hours. Severe exposure: Causes burns to the respiratory tract and may be fatal if inhaled. Also results in other toxic effects including hypocalcemia (depletion of calcium in the body) which if not properly treated can result in death.
Symptoms/injuries after skin contact	: Causes burns/corrosion of the skin. Large or multiple burns totaling over 25 square inches of body surface area may also cause hypocalcemia (depletion of calcium in the body) and other toxic effects which may be fatal.
Symptoms/injuries after eye contact	: Causes serious eye damage. Permanent eye damage. Blindness.
Symptoms/injuries after ingestion	: Can cause severe mouth, throat and stomach burns and may be fatal if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

## SECTION 12: Ecological information

### 12.1. Toxicity

hydrofluoric acid (7664-39-3)	
LC50 fish 1	107.5 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Fluorine ion)
EC50 Daphnia 1	270 mg/l (48 h; Daphnia magna; Na-salt)
LC50 fish 2	925 mg/l (Gambusia affinis; Fluorine ion)
Threshold limit algae 1	95 mg/l (96 h; Scenedesmus subspicatus; Fluorine ion)
Threshold limit algae 2	249 mg/l (96 h; Scenedesmus quadricauda; Fluorine ion)

### 12.2. Persistence and degradability

hydrofluoric acid (7664-39-3)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

### 12.3. Bioaccumulative potential

hydrofluoric acid (7664-39-3)	
Log Pow	-1.4 (Experimental value)
Bioaccumulative potential	Bioaccumulation: not applicable.

### 12.4. Other adverse effects

Other information : Avoid release to the environment.

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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with Local, State, and Federal regulations.  
Ecology - waste materials : Avoid release to the environment. Hazardous waste due to toxicity.

### SECTION 14: Transport information

#### 14.1. UN Number

UN-No.(DOT) : 2922  
Other information : Under 49 CFR 173.154(c) and (b)(1): This product may be shipped as ORM-D or Limited Quantity if the inner packagings do not exceed 1 L (0.3 gallons) or 1.0 kg (2.2 lbs). This provision does not apply to transportation by vessel or aircraft, except where other means of transportation is impracticable.

#### 14.2. UN proper shipping name

DOT Proper Shipping Name : UN2922, Corrosive Liquids, Toxic, N.O.S. (Hydrofluoric Acid), 8 (6.1), PGII  
Hazard labels (DOT) : 8 - Corrosive  
6.1 - Poison inhalation hazard



### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

All components of this product are listed on the Toxic Substances Control Act (TSCA) inventory

##### hydrofluoric acid (7664-39-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Listed on SARA Section 313 (Specific toxic chemical listings)

RQ (Reportable quantity, section 101(14) of CERCLA as published on EPA's List of Lists) :	100 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

#### 15.2. International regulations

##### CANADA

##### EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

#### 15.2.2. National regulations

#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

### SECTION 16: Other information

Abbreviations Legend:

Acute Tox. 1 (Dermal)	Acute toxicity (dermal) Category 1
Acute Tox. 2 (Inhalation)	Acute toxicity (inhalation) Category 2
Acute Tox. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2
Acute Tox. 2 (Oral)	Acute toxicity (oral) Category 2
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A

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## Safety Data Sheet

H300	Fatal if swallowed
H310	Fatal in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H330	Fatal if inhaled

### Disclaimer

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Revision date: 05/28/2015

Supersedes: 07/10/2012

Version: 1.0



F.1

# Facility Evacuation Map

