WASHINGTON STATE DEPARTMENT OF ECOLOGY

Do Your Process Materials Contain Regulated Chemicals?

How to Read a Material Safety Data Sheet to Find Out

Ecology Fact Sheet *Publication #97-213b*

If you own or operate equipment that uses products that contain chemicals, it is your responsibility to determine if your company is required to comply with environmental regulations.

Material Safety Data Sheets (MSDSs) typically are used by businesses to determine the health hazards and precautions for safe handling and use of process materials. You also can use a MSDS to determine if a product contains chemicals regulated by the EPA.

The 1990 Clean Air Act (CAA) directs the U.S. Environmental Protection Agency (EPA) to regulate emissions into the air of 189 toxic chemicals. These chemicals, called Hazardous Air Pollutants (HAPs), are known or suspected carcinogens, and have high usage and emissions in a wide variety of industries, including printing, metal fabrication, autobody repair, automotive repair, wood finishing, dry cleaning and others. Consequently, the EPA has determined that emissions of these chemicals present a threat to human health or the environment.

As an owner or operator of equipment that uses products that contain chemicals, it is your responsibility to determine if your company uses any of the 189 regulated chemicals and whether you are required to adhere to strict controls. To determine if your company uses any of these chemicals (and, if so, in what annual quantities), do the following:

Step 1: Find the MSDS for Each Product

Find the Material Safety Data Sheet (MSDS) for each product you buy (solvents, paints, cleaners, thinners, inks, varnishes, primers, etc.). If you do not have a MSDS for each product, ask your vendor(s) to provide them to you. Vendors and suppliers of chemicals and other process materials are required by law to provide you with a MSDS for each product you purchase.

Step 2: Determine Hazardous Ingredients

Look at Section II of the MSDS, usually titled "Hazardous Ingredients" (see example below), to determine if any of the 189 HAPs are used in that product. Compare the chemicals listed in Section II with the complete list of 189 HAPs on the back of the attached Emissions Estimating Worksheet. Some commonly used chemicals include: **ethyl benzene, ethylene glycol, methyl ethyl ketone, methyl isobutyl ketone, toluene** and **xylene.**

Example of Section II of a MSDS

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	CAS NUMBER	OCCUPATIONAL EXPOSURE LIMITS OSHA PEL	ACGIH TLV	WEIGHT PERCENT
XYLENES	1330-20-7	435 MG/M3	435 MG/M3	40
ETHYLBENZENE	100-41-4	100 PPM	100 PPM	8
LIGHT AROMATIC NAPTHA	64742-95-6	N/A	N/A	<5.0%
ALIPHATIC HYDROCARBON	N/A	N/A	N/A	<5.0%

Step 3: Set Aside the MSDSs for Each Product Containing Toxic Chemicals

Set aside the MSDSs for all products that contain any of the 189 HAPs. You are now ready to calculate your total annual usage of these chemicals. However, you may be able to avoid this task by reducing or eliminating these chemicals from your process materials. To learn how, turn to the back of this page. To calculate your annual chemical usage, take your set-aside MSDSs and follow the steps on the attached Emissions Estimating Worksheet.

The Clean *Air Act* & Small Business

Achieving Compliance through Pollution Prevention

An Alternative: Pollution Prevention

If calculating and tracking your use of regulated chemicals seems burdensome or confusing, or you don't want to worry about your compliance status, there may be steps you can take — for example, **stop** using the toxic materials that are regulated. Eliminating or minimizing the use of toxic substances is called "pollution prevention." The following pollution prevention opportunity can help your company:

- meet federal regulations and cut your paperwork burden;
- reduce costs by using fewer raw materials;
- cut waste transportation and disposal costs; and
- reduce long-term liability and insurance costs.

Eliminate Using Regulated Chemicals

There are several approaches to eliminating the use of products that contain regulated chemicals. Following are some suggestions:

• **Talk to your suppliers.** Explain to them your interest in finding a way to eliminate the use of regulated chemicals. Ask if they supply other products that can get the job done but do not contain regulated chemicals or have harmful health effects. If your suppliers don't have any suggestions, get recommendations from your peers or potential new suppliers.

• **Inquire about changing customer specifications.** If external specifications require that you use a product containing regulated chemicals, ask the customer if a change would be acceptable. Propose a viable alternative that will reduce both your and their liability while improving the safety of the workplace.

• **Ask for help from government technical assistance programs.** You can get recommendations for alternative, non-regulated products, as well as help estimating air pollution emissions or other assistance, from government technical assistance programs.

Case Study: Small Metal Fabricator Works with Paint Supplier to Replace Process Materials

Capital Industries, Inc. is a metal fabricator in Seattle, Washington. The company, which was founded in 1952, employs approximately 100 shop employees and produces a wide variety of fabricated metal products.

Part of Capital Industries' daily production involves coating metal products with liquid paint. Owners Ronald and David Taylor were concerned about the environmental liability and permitting expenses associated with using paint products containing heavily regulated air pollutants. To address this concern they directed paintshop personnel to investigate less-toxic alternatives to the paints and primers the company was using.

The first step Paintshop Lead Ken Grimm took was to look at the MSDSs for each paint product purchased in the past year to determine which products contained regulated chemicals. He discovered that the paints and primers Capital Industries was using contained high percentages (40-60%) of xylene, toluene and isopropyl alcohol.

The second step Grimm took was to contact the company's primary supplier of paints and primers — Daniel Boone, Inc. of Tukwila, Washington — to find some viable alternatives. After several conversations and a few paint tests, Capital Industries began replacing the high-solvent-based paints and primers with high-solids/low-solvent paints and primers.

Through product replacement, Capital Industries went from using an annual 50 tons (100,000 lbs.) of xylene, toluene and isopropyl alcohol combined to an annual 15 tons (30,000 lbs.) of these chemicals combined — with no additional cost to production. In fact, the per unit paint cost went down because of better product transfer efficiency and less wasted material. The reduction of air pollutants also alleviated some reporting and permitting requirements, as well as improved the quality of the work environment.

Who to Call for Help

Through the Washington Department of Ecology's Air Quality Business Assistance Program, non-regulatory assistance is available for small businesses with air quality questions. The purpose of the program is to:

- explain the air quality rules and recommend ways to comply;
- provide free, on-site technical assistance visits;
- help businesses estimate their air pollution emissions;
- refer businesses to needed resources; and
- provide information on potential sources of financing for compliance requirements.

For more information, contact:

Small Business Assistance Program
Bernard Brady, 360-407-6803
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Small Business Ombudsman
Leighton Pratt, 360-407-7018
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http://www.wa.gov/ecology

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