

# Reading Material Safety Data Sheets

## Effective Protection You Can Depend On

The Material Safety Data Sheet, or MSDS, is written information that can help you handle HazMat shipments safely. Know where you can find an MSDS to familiarize yourself with the chemicals in a HazMat shipment. Each company may design its own MSDS, and the sections may be in a different order. But they must be readily accessible and include some basic information.

### SECTION 1: HAZMAT CHEMICAL NAME

Lists the identity of the commodity (the name on the label), the date the MSDS was prepared, the name and address of the manufacturer, usually a phone number for emergencies and more information.

### SECTION 2: HAZARDOUS INGREDIENTS/CHEMICAL IDENTITY

Includes the names of substances in the material that might be dangerous, safe exposure limits (such as the Permissible Exposure Limit, or PEL, set by OSHA, or the Threshold Value Limit, or TVL) and common names for the chemical.

### SECTION 3: PHYSICAL CHARACTERISTICS

Describes many physical qualities of the commodity and lets you know what's usual or safe. Lets you know, for example, how it looks and smells, boiling and melting temperatures (important in case it could become a gas you could breathe), evaporation rate (known as percent volatile), how easily it dissolves and how heavy it is (this tells you if it will sink, float or dissolve in water).

### SECTION 4: FIRE AND EXPLOSION DATA

Tells you the lowest temperature at which the commodity could catch fire (the "flash point"). Lets you know if it's flammable (catches fire below 100°F) or combustible (catches fire above 100°F). Includes the best way to put out a fire involving the material.



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

IDENTITY (As Used on Label and LHM)

Section I  
Manufacturer's Name  
Address (Number, Street, City, State, and ZIP Code)  
Emergency Telephone Number  
Telephone Number for Information  
Date Prepared  
Signature of Preparer (optional)

U.S. Department of Labor  
Occupational Safety and Health Administration  
Form Approved  
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Section II — Hazardous Ingredients/Chemical Identity Information  
Hazardous Components (Specific Chemical Identity, Common Name(s))  
OSHA PEL  
ACGIH TLV  
Other Limit Recommendation  
% (approx)

Section III — Physical/Chemical Characteristics  
Boiling Point  
Vapor Pressure (mm Hg)  
Vapor Density (Air = 1)  
Solubility in Water  
Adhesives and Oils  
Specific Gravity (20°C = 1)  
Melting Point  
Evaporation Rate  
(Water = 1)

Section IV — Fire and Explosion Hazard Data  
Flammable Limits  
LEL  
UEL  
Special Fire Fighting Procedures  
Unusual Fire and Explosion Hazards

Notes: Blank spaces are not intended if any item is not applicable. If no information is available, the space must be marked as noted on this form.

### SECTION 5: REACTIVITY

Describes what happens if the material comes in contact with air, water or other chemicals. Describes conditions (such as heat) or materials (such as water) that can cause reactions, such as burning, exploding or releasing dangerous vapors. The material is called "incompatible" or "unstable" with these conditions or substances.

### SECTION 6: HEALTH HAZARDS

Lists ways the material might enter your body, such as splashing on your skin or being breathed in as vapor, as well as possible symptoms of overexposure. Lets you know if overexposure might make existing medical conditions worse and describes emergency first aid procedures.

### SECTION 7: USAGE, HANDLING AND STORAGE

Describes how to clean up an accidental spill, leak or release, including special procedures. Tells you how to handle, store and dispose of hazardous materials safely. (Remember, if there is an accident, notify your supervisor immediately and take care of it yourself only if you are trained to do so and are wearing the proper equipment.)

### SECTION 8: SPECIAL PROTECTION AND PRECAUTIONS

Explains special Personal Protective Equipment (PPE) and other equipment to use when working with the material, special procedures, extra health or safety information, signs that should be posted and other information not covered in other sections.