

□ MATERIAL SAFETY DATA SHEETS

[Find MSDS on website](#)

The Material Safety Data Sheet (MSDS) has become a major source of chemical information. It is the key document used to provide hazard information to employees and can become an invaluable tool for emergency response personnel when used in a chemical emergency.

The Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard (29 CFR 1910.1200) requires all manufacturers of pure chemicals and/or mixtures to evaluate their products and relate, via MSDSs, any hazards that may be encountered while handling these materials.

This standard is intended for all workplaces, manufacturing and nonmanufacturing alike. The Environmental Protection Agency's (EPA) Emergency Response and Community Right-to-Know Act of 1986 ensures the availability of MSDSs to emergency response personnel, such as fire departments, first aid crews, and hospital emergency room staff.

The MSDS contains a wealth of information that may be understood with a minimum of training. Below is a brief explanation of the format and information found in a properly prepared MSDS.

Section 1

This section identifies the material by product or trade name and chemical name. It is the product or trade name that is usually found on the container labels, although the chemical name is also required by some states. Section I also contains the manufacturer's name, address, and telephone number.

Section 2

Section 2 provides physical data about the product that can be utilized for proper identification. Included are specifics such as color, odor, specific gravity (weight), vapor pressure, and boiling point.

Section 3

This section lists the chemical ingredients of the material, if they are known or suspected to be hazardous. Hazardous materials that are not carcinogens must be reported if they represent 1 percent or more of the product. Carcinogens must be reported and identified as such if their levels are 0.1 percent or higher. Also included in Section 3 are Threshold Limit Values (TLVs) and the OSHA Permissible Exposure Limit (PEL).

Section 4

Section 4 includes fire and explosion hazard data. This information is especially useful when devising both in-house and community contingency plans. Plant first responders, local fire departments, and hazmat teams need unlimited access to this information.

Section 5

Section 5 contains health hazard data. It describes any acute (short-term exposure) and/or chronic (long-term exposure) effects on the body. These include routes of exposure (inhalation, dermal contact, ingestion) and the bodily organs affected, as well as the signs and symptoms of overexposure. First aid procedures are also found in this section. (NOTE: First aid measures recommended in MSDSs are not always correct and should be confirmed.)

Section 6

This section contains information on the reactivity of the product. It lists other chemicals that, when mixed with the product, will result in a chemical reaction. If a product is water reactive, it will be noted. Also included in Section 6 is information on hazardous decomposition products, such as carbon monoxide and other hazardous gases that are formed and emitted during chemical reactions or fires. It is imperative that this section be carefully noted by both in-house and local firefighters.

Section 7

Section 7 lists the procedures that should be used if the product spills or leaks, including waste disposal methods.

Section 8

Section 8 contains information regarding the proper personal protective equipment (PPE) necessary to handle the product in a manner that will minimize exposure. Ventilation practices are also listed in this section.

Summary

A Material Safety Data Sheet can aid in making the right decisions on health and safety issues in a plant or in a community. It must be noted, however, that it is but one of many references that should be used to make final determinations. MSDSs are offered by manufacturers for identification and verification and are not the last word on safety and health

To locate an MSDS on website, visit <http://www.ilpi.com/msds/index.html>

Vendor List

Notes

[Sigma Aldrich](#)

[Fisher Scientific](#)

[VWR Scientific](#)

[Alpha](#)

[EMD Chemicals](#)

[Roche Applied Science](#)

[J.T. Baker](#)

[Mallinckrodt Chemicals](#)

[Air Products](#)

[Eastman Kodak](#)

[DuPont](#)

[USB](#)

[Bristol-Myers Squibb](#)

[BD Diagnostics](#)

[BOC Gases](#)

[Matheson Tri-Gas](#)

[Scott Specialty Gases](#)

