

OSHA Standard: 1910.1200 Hazard Communication

## Material Safety Data Sheets

A MSDS is a short technical report that explains how to use, handle and store chemicals safely. There is no standard form used for a MSDS, but they all give the same basic kinds of information. Each MSDS contains the following sections:

### Section I: Identity

The first section of the MSDS contains the chemical name or trade names and the manufacture of the materials. The chemical identification of the material or CAS number (an identifier designated by Chemical Abstract Services) is also given. An emergency telephone number is provided to aid in emergency treatment or clean up of a spill.

### Section II: Hazardous Ingredients

The Hazardous Ingredients section lists the Threshold Limit Value (TLV), which measures the toxicity of the material. Some categories will have no information in which case an "NA" will appear for not applicable.

### Section III: Physical/Chemical Characteristics

Detailed information on the material's physical and chemical characteristics is provided here, including appearance and odor.

### Section IV: Fire and Explosion

This section tells you how to extinguish fires and includes any special fire fighting procedures and the flash point. The flash point is the temperature at which the material gives off enough vapor to burn.

### Section V: Reactivity

This section identifies reactive materials. It details what conditions to avoid and what other materials must be kept away from this material to assure safety.

### Section VI: Safe Handling and Use

This section covers the precautions to take when using the hazardous material, how to store it safely, and methods for cleaning up spills. Special instructions on waste disposal are also given.

### Section VII: Health Hazards

Health concerns are covered here, including the effects of overexposure, and what part of the body is likely to be effected. Some of the effects listed will only apply when exposure is in very high doses. Emergency and first aid information will provide methods for treating overexposure.

### Section VIII: Control Measures

This section is provided to protect you from the physical and health effects of the hazardous material. Read this section to know what types of personal protective equipment you need to use such as gloves, clothing, eye protection, respirator or other special protective equipment.

## Routes of Entry

Each MSDS will provide information on how a chemical enters the body. This is called the Route of Entry. The terms and their definitions are defined below.

**Inhalation:** Most chemicals get into the body by being inhaled. As we breathe in the material, which is probably a vapor, gas or fume mixed with the air, it enters our lungs.

**Ingestion:** Some chemicals can hurt you if you accidentally eat or swallow them.

**Skin Absorption:** some hazardous chemicals have the ability to pass through unprotected skin into the bloodstream.

**Injection:** Although this is not a very common route of entry, some chemicals can enter the body through injection with a needle or other mechanism.

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