

# Reading a Material Safety Data Sheet

The Material Safety Data Sheet, or MSDS, is written information that can help protect you from overexposure to chemicals you find on the job. The MSDS is part of the campus' Hazard Communications Program. Each chemical supplier or manufacturer can design its own MSDS form, and the sections may be in different order. But, the basic information on any MSDS will be the same.

- Chemical Name

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

- Hazardous Ingredients/Chemical Identity

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

- Physical Characteristics

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

- Fire and Explosion Data

Tells you at what temperature a liquid gives off enough flammable vapor to ignite (flash point). Lets you know if the chemical is flammable (catches fire below 100 degrees F) or combustible (catches fire above 100 degrees F). Also lists extinguishing media-what will put out the fire safely, such as water, dry chemical, carbon dioxide and halon.

- Reactivity

Describes what happens if this chemical comes in contact with air, water, or other chemicals. Describes conditions (like heat) or materials (like water) that can cause the chemical to react violently due to the instability or incompatibility to common substances or circumstances.

"Incompatibility" refers to materials that may cause the chemical to burn,

explode, or release dangerous gases when mixed. "Instability" refers to the environmental conditions such as heat or direct sunlight that may cause a dangerous reaction.

- Health Hazards

Lists ways the chemical might enter your body, like splashing on your skin or being inhaled as vapor as well as possible symptoms of overexposure such as a skin rash, burn, headache, or dizziness. Lets you know if overexposure might make existing medical conditions worse, and describes first aid and emergency procedures.

- 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 chemicals 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 personal protection equipment. Notify campus police by dialing 911, or the safety office at extension 7233 to report large spills or leaks.

- Special Protection And Precautions

Explains the kind of hand, body, eye, and respiratory protection (Personal Protective Equipment) to use when working with the chemical. Special procedures, extra health or safety information, signs that should be posted, and other information not covered in other sections of the MSDS.

## Required Information on a MSDS:

- (A) The Chemical Name
- (B) Any Common Names
- (C) The CAS Number of the "Hazardous Substance"
- (D) The Potential for Explosion
- (F) The Potential for Reactivity
- (G) Acute and Chronic Health Effects
- (H) Potential Routes of Exposure
- (I) Symptoms of Overexposure
- (J) Proper Precautions
- (K) Handling Practices
- (L) Necessary Personal Protective Equipment
- (M) Other Safety Precautions in the Use of or Exposure to the "Hazardous Substance"
- (N) Emergency Procedures for Spills
- (O) Emergency Procedures for Fire
- (P) Disposal Procedures

- (Q) First Aid Procedures Risks Posed by the "Hazardous Substance"
- (R) A Description in Lay Terms of the Specific Potential Health Hazard
- (S) The Month and Year the Information was Compiled
- (T) Name and Address of the Manufactures Responsible for Preparing the Information