

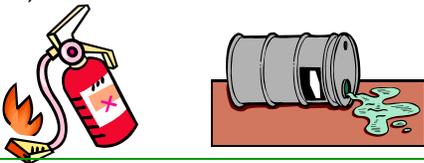
What is an MSDS?

Employees working with hazardous materials (HM) must know the hazards of the material. This is crucial for everybody's health and safety and to prevent accidents. The MSDS answers the essential questions for each hazardous material:

What is it, how can it hurt me, and how can I handle it safely?

MSDSs provide important information on:

- Response measures in the event of an emergency (e.g. first aid and firefighting measures, suitable extinguishing media, accidental release measures)
- Product identity (e.g. ingredients, physical/chemical properties, UN number)
- Hazard identification
- Safe handling (e.g. disposal, transport and storage)
- Prevention measures (e.g. ventilation, personal protective equipment or exposure control)



It is required that for all HM procured, stored or used on the installation, Material Safety Data Sheets (MSDSs) must be maintained (OSHA § 1910.1200 (g); FGS Chapter 5 paragraph C5.3.5). These must be available in both English and the predominant language of the workforce and must be readily available to all employees in the work area.

Format

MSDSs are commonly divided into up to 16 sections:

1. Product/Company Identification
- 2.* Hazard Identification
- 3.* Composition/Ingredients
4. First Aid Measures
5. Fire Fighting Measures
6. Accidental Release Measures (Spill Procedures)
7. Handling and Storage
8. Exposure Control/Personal Protection
9. Physical/Chemical Properties
10. Stability/Reactivity Data
- 11.** Toxicological Information
- 12.** Ecological Information
13. Disposal Considerations
- 14.** Transport Information (e.g. UN Number)
- 15.** Regulatory Information
16. Other Information (e.g. Revision Date)

*Order varies between US and European companies

**Not always included in the MSDS

What are HM?

HM are dangerous substances or mixtures with one or more of the following characteristics:

	Explosive
	Flammable
	Oxidizing
	Compressed Gases
	Corrosive
	Toxic
	Irritant/ Sensitizing
	Harmful to health
	Dangerous to the environment

UN Numbers

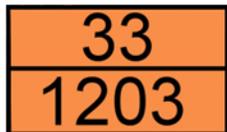
- Unique a four-digit number for every hazardous substance
- Identifies hazardous substances in the framework of international transport.
- Provided in the material's MSDS (section 14).
- Indicated at the bottom half of the orange shipment panel ,
- Attached to all containers and vehicles used to transport hazardous goods.
- Number in the top half of the orange panel is called the Hazard Identification Number (HIN, also Kemler Code) and indicates the hazards of the materials contained in the transport.

In the event of an accident, the UN number and Kemler Code should always be communicated to the police/fire department.

Example:

Kemler Code 33 = highly flammable liquid

UN Number 1203 = gasoline



Sources of MSDSs

The MSDS should be included with the product when it is purchased or received.

Always ask for a copy of the respective MSDS when purchasing and picking up an ordered product.

If the MSDS is not included with the product or if no MSDS is available for products already stored at your location, you can usually obtain them from the following internet sites:

- <http://hmirmsds.dlis.dla.mil>
- <http://hazard.com/msds>
- <http://ull.chemistry.uakron.edu/erd>
- <http://msds.chem.ox.ac.uk/msds-searcher.html>
- <http://www.ericards.net/>
- <http://www.kodak.com/US/en/corp/hse/prodSearchMSDS.shtml>

UN-Numbers and Hazard Identification Numbers are listed at, e.g. under:

- <http://www.unnumber.net/>
- <http://www.ehso.com/EmergencyResponsePlacardTable.htm>



USAG SCHWEINFURT

DPW - ENVIRONMENTAL DIVISION

Material Safety Data Sheets (MSDSs)



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