



HazCom: Safety Data Sheets

Importance of Safety Data Sheets

Have you considered all of the information that is available to you on a Safety Data Sheet (SDS)? SDS pages have a consistent format to help employees find needed information. There are 16 sections that address all of the attributes of the chemical. The purpose of an SDS is to ensure that all workers who handle chemicals have the hazard information they need to safely use, handle and store them.

In the United States (US) OSHA is the regulatory authority for SDSs and prescribes a specific 16-section format that complies with Global Harmonized System of Classification (GHS).

SDS Sections 1 through 8

contain critical information needed during an emergency. Information such as: manufacturer, emergency response contact information, hazard details, chemical composition, safe handling practices, and emergency control measures such as fire-fighting.

SDS Sections 9 through 11 and 16

contain technical information, including physical and chemical properties, stability and reactivity information, and exposure control information.

SDS Sections 12 through 15

contain information on environmental impacts, disposal considerations, transport information, and regulatory information.

In the US, OSHA has no regulatory authority over the **content** within these sections, but the Agency still requires chemical manufacturers to include the section numbers and headings to maintain consistency with the GHS SDS format.

Your employer must maintain an SDS Library of all chemicals that are used at your workplace. This can be in the form of hard copies (paper) or electronically (with the ability to print). This library is accessible to all employees and maintained in a specific place, and always accessible. If the library is electronically kept on a computer, there must be a backup system or process in place. If the primary method is inaccessible due to interruptions, such as power outage, or catastrophic emergencies (hurricanes, earthquakes, floods, or fire etc.) the backup system must be accessible. Employees must be trained for both systems.



Electronic SDS Libraries such as Online Management Systems or on an area of the company website are acceptable. Searching for the item on the internet is not considered compliant.

SDS - 16 SECTIONS

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

- GHS product identifier. (Same as on label.)
- Other means of identification.
- Recommended use of the chemical and restrictions on use.
- Supplier's details (including name, address, phone number, etc.).
- Emergency phone number.

2. HAZARDS IDENTIFICATION

- GHS classification of the substance/mixture and any national or regional information.
- GHS label elements, including precautionary statements. (Hazard symbols (pictograms) may be provided as a graphical reproduction of the symbols in black and white or the name of the symbol, e.g., flame, skull and crossbones.)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

- Chemical identity.
- Common name, synonyms, etc.
- Chemical Abstracts Services (CAS) number, EC number, etc.
- Impurities and stabilizing additives which are themselves classified and which contribute to the classification of the substance.

Mixture

- The chemical identity and concentration or concentration ranges of all ingredients which are hazardous within the meaning of the GHS and are present above their cutoff levels.

4. FIRST AID MEASURES

- Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin and eye contact, and ingestion.
- Most important symptoms/effects, acute and delayed.
- Indication of immediate medical attention and special treatment needed, if necessary.

5. FIREFIGHTING MEASURES

- Suitable (and unsuitable) extinguishing media.
- Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products).
- Special protective equipment and precautions for firefighters.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures.
 - Environmental precautions.
 - Methods and materials for containment and cleaning up.
- ### 7. HANDLING AND STORAGE
- Precautions for safe handling.
 - Conditions for safe storage, including any incompatibilities.
- ### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION.
- Control parameters, e.g., occupational exposure limit values or biological limit values.
 - Appropriate engineering controls.
 - Individual protection measures, such as personal protective equipment.

9 PHYSICAL AND CHEMICAL PROPERTIES

- Appearance (physical state, color, etc.).
- Odor.
- Odor threshold.
- pH.
- melting point/freezing point.
- initial boiling point and boiling range.
- flash point.
- evaporation rate.

- flammability (solid, gas).
- upper/lower flammability or explosive limits.
- vapor pressure.
- vapor density.
- relative density.
- solubility(ies).
- partition coefficient: n-octanol/water.
- autoignition temperature.
- decomposition temperature.
- Viscosity.

10. STABILITY AND REACTIVITY

- Chemical stability.
- Possibility of hazardous reactions.
- Conditions to avoid (e.g., static discharge, shock or vibration).
- Incompatible materials.
- Hazardous decomposition products.

11. TOXICOLOGICAL INFORMATION

Concise but complete and comprehensible description of the various toxicological (health) effects and the available data used to identify those effects, including:

- information on the likely routes of exposure (inhalation, ingestion, skin and eye contact);
- Symptoms related to the physical, chemical and toxicological characteristics;
- Delayed and immediate effects and also chronic effects from short- and long-term exposure;
- Numerical measures of toxicity (such as acute toxicity estimates).

12. ECOLOGICAL INFORMATION

- Ecotoxicity (aquatic and terrestrial, where available).
- Persistence and degradability.
- Bioaccumulative potential.
- Mobility in soil.
- Other adverse effects.

13. DISPOSAL CONSIDERATIONS

- Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging.

14. TRANSPORT INFORMATION

- UN Number.
- UN Proper shipping name.
- Transport Hazard class(es).
- Packing group, if applicable.
- Marine pollutant (Yes/No).
- Special precautions which a user needs to be aware of or needs to comply with in connection with transport or conveyance either within or outside their premises.

15. REGULATORY INFORMATION

- Safety, health and environmental regulations specific for the product in question.

16. OTHER INFORMATION INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS

SAFETY TRAINING SIGN-IN SHEET

Company Name: _____ Date: _____

Subject: Safety Data Sheets The following employees participated in this training.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____