

## HOW TO FILL OUT AN EHRHS SAFETY DATA SHEET (SDS)

The Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (HCS), 1910.1200, requires that all chemical manufacturers, importers, and distributors provide a 16-part safety data sheet (SDS) to inform users of hazards associated with their product. This document describes the information necessary for each section of the SDS. If a chemical will be shipped outside of the University, contact the EHRHS Chemical Waste group for assistance. The SDS must be reviewed by EHRHS before shipment.

### Section 1- Chemical Product Information

The Product Identifier is the name of the substance or mixture. Share how the product is used and any restrictions for use. Fill in all contact information.

### Section 2- Hazard Identification

The OSHA HCS was aligned with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) in 2012. The HCS requires information for the labeling of chemicals in Section 2 of the SDS for any ingredient >1% or carcinogen >0.1 %. Classify the physical and chemical hazards of the substance/mixture using the Occupational Safety and Health Administration (OSHA) guidance ([OSHA Chemical Classification](#)). Chemical mixtures should be classified with available test data. If test data is not available, bridging principles found in the OSHA guidance should be used. If bridging principles cannot be applied, hazards of the ingredients must be evaluated. The criteria for health hazards, such as toxicity, sensitization, and carcinogenicity are found in Appendix A ([OSHA Hazard Communication Appendix A](#)). The criteria for physical hazards such as flammability, corrosiveness, and reactivity are found in Appendix B ([OSHA Hazard Communication Appendix B](#)).

Once the hazards have been identified, the proper labeling information must be added to Section 2. GHS compliant labels must contain a signal word (Warning or Danger), hazard statement(s), precautionary statements and pictograms. Use Appendix C of the HCS ([OSHA Hazard Communication Appendix C](#)) to provide labeling information for the hazard classes identified for the substance/mixture. Definitions of pictograms are found here: [OSHA QuickCard Pictograms](#).

### Section 3- Composition

Identify the ingredients in the product, including impurities and stabilizers. For mixtures, the concentration of the ingredients above specified cut-off concentration limits should be listed. Ingredients below cut-off limits should still be listed if known health effects occur at levels below the cut-off. Concentration ranges can be used if a trade secret claim is made, there is batch-to-batch variation, or the SDS is used for a group of substantially similar mixtures. Check the box in Section 3 if withholding concentration due to trade secret.

#### Cut-off Values for Health Hazards

Hazard Class	SDS Cut-Off Value
Acute toxicity	≥1.0%
Skin Corrosion/Irritation	≥1.0%

Hazard Class	SDS Cut-Off Value
Serious Eye Damage/Irritation	≥1.0%
Respiratory/Skin sensitization	≥0.1%
Germ cell mutagenicity (Category 1)	≥0.1%
Germ cell mutagenicity (Category 2)	≥1.0%
Carcinogenicity	≥0.1%
Reproductive toxicity	≥0.1%
Specific target organ toxicity (single exposure)	≥1.0%
Specific target organ toxicity (repeated exposure)	≥1.0%
Specific target organ toxicity Category 3	≥20%

#### **Section 4-First Aid Measures**

Describe care that should be given by untrained responders to an individual exposed to the substance/mixture. List any symptoms of exposure.

#### **Section 5- Fire Fighting Measures**

Recommend fire extinguishing equipment and known hazardous combustion products.

#### **Section 6- Accidental Release Measures**

Provide recommendations for handling spills, leaks and releases.

#### **Section 7- Handling and Storage**

Identify safe practices for handling the product and safe storage requirements.

#### **Section 8- Exposure Control / Personal Protection**

List the OSHA Permissible Exposure Limits (PELs) and American Conference of Governmental Industrial Hygienist (ACGIH) Threshold Limit Values (TLVs), or other applicable exposure limits for the substance or ingredients. Recommend exposure control methods (ventilation) and specific personal protective equipment.

#### **Section 9- Physical and Chemical Properties**

Fill in physical and chemical properties listed on SDS. If information is not available or is not relevant, a notation must be made on the SDS.

#### **Section 10- Stability and Reactivity**

Indicate the stability of the product and any known incompatibility and reactivity. Specify handling procedures and decomposition products.

#### **Section 11- Toxicological Information**

List the routes of exposure and delayed, acute or chronic health effects and symptoms of exposure. Measures of toxicity (such as LD<sub>50</sub> or LC<sub>50</sub>) should be included, as well as information on carcinogenicity, mutagenicity, and target organ effects. Indicate if information is not available to assess toxicology.

**Section 12-Ecological Information, Section 13- Disposal Information** These sections are optional. Please add information if available.

**Section 14-Transport Information** Identify shipping class and precautions.

**Section 15- Regulatory Information** This section is optional. Please add information if available.

#### **Section 16- Other Information**

Additional information can be added in this section. If the SDS is revised, the revision date should be noted in Section 16.