

## Understanding Safety Data Sheets (SDS)



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Safety Data Sheets should be produced for all substances and mixtures which meet the harmonized criteria for physical, health or environmental hazards under the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

The information in the SDS should be presented using the following 16 sections in the given order:

1. Identification: GHS Product identifiers, recommended use and restrictions, supplier's contact information and emergency phone number
2. Hazard Identification: GHS classification of the substance/mixture as well as GHS label elements such as: signal words, precautionary hazard statements, pictograms and any other hazards that may exist.
3. Composition/Information on Ingredients: Information on the substance/mixture including chemical identity, impurities and stabilizing additives, and, in the case of mixtures, concentration of ingredients.
4. First-aid Measures: Description of necessary first-aid according to routes of exposure, most important symptoms/effects and indication of immediate medical attention and special treatment
5. Fire-Fighting Measures: Details about suitable extinguishing media, hazards arising from the chemical (e.g. combustion), protective equipment and precautions for firefighters
6. Accidental Release Measures: Includes personal precautions, protective equipment, emergency procedures, environmental precautions as well as methods and materials for containment and cleaning up.
7. Handling and Storage: Description of precautions for safe handling and conditions for safe storage, including any incompatibilities.
8. Exposure/Controls/Personal Protection: Control parameters including appropriate engineering controls, OSHA permissible exposure limit (PEL) and individual protection measures.
9. Physical and Chemical Properties: Description of chemical appearance (physical state, color etc), odor and physical features (e.g. PH, Melting point/freezing point, Initial boiling point/range, Flash point)
10. Stability and Chemical Properties: Information regarding chemical stability, possible hazardous reactions, incompatible materials, hazardous decomposition products and conditions to avoid (e.g. static discharge, shock or vibration).
11. Toxicological Information: Concise, complete and comprehensible description of the various health effects and the available data used to identify those effects (e.g. likely routes of exposure, symptoms, delayed and immediate effects from exposure and numerical measures of toxicity).
12. Ecological Information: Information about the ecotoxicity, persistence and degradability, bioaccumulative potential, mobility in soil and 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 containment packaging.
14. Transport Information: Includes information such as UN number, proper shipping name, transport hazard class(es), packing group, whether chemical is a marine pollutant, and any territory specific special precautions
15. Regulatory Information: Safety, health and environmental regulations specific for the product in question.
16. Other Information: For every chemical found to be hazardous, the chemical manufacturer or importer must develop a container label and an SDS and provide both documents to downstream users of the chemical. All employers with employees exposed to hazardous chemicals must develop a hazard communication program, and ensure that exposed employees are provided with labels, access to SDS, and training on the hazardous chemicals in their workplace.

*\* Note: Sections 12-15 are not required by OSHA, but are imperative to comply with EPA and DOT standards.*

For more information about SDS requirements, visit  
[www.BradyID.com/GHS](http://www.BradyID.com/GHS)