



Reference Guide: Global Harmonization Standard

Training: Employer is required to train employees so they can recognize and understand the new **safety data sheets, labels, pictograms, hazard and precautionary statements.**

Pictograms: OSHA's required pictograms must be in the shape of a square set at a point and include a black hazard symbol on a white background with a red frame sufficiently wide enough to be clearly visible.



Acutely Toxic



Gases Under Pressure



Oxidizer

Flammables
Pyrophoric
Self-Heating
Emits Flammable Gas
Organic Peroxides

Corrosive

Carcinogen
Reproductive Toxicity
Target Organ Toxicity
Mutagenicity
Aspiration ToxicityEnvironmental
ToxicityExplosives
Self-Reactive
Organic PeroxidesIrritant
Dermal Sensitizer
Acute Toxicity (harmful)
Narcotic Effects
Respiratory Tract Irritation

Material Safety Data Sheets now Safety Data Sheets (SDS):

They include 16 specific sections that will be consistent across all manufacturers. Each section is outlined below.

Section 1: Identification of the substance or mixture and of the supplier: Consist of a product identifier (the same one used on the GHS label), supplier or manufacture details, recommendations and restrictions of use, and an emergency telephone number.

Section 2: Hazards identification: Consists of the GHS classification of the substance and/or mixture, as well as any national or local information. GHS label elements, such as symbols (can be provided with the written name of the symbol or pictogram), precautionary statements and other hazards not covered by the GHS can also be provided in this section.

Section 3: Composition/Information on ingredients: Contains the chemical identity, common name and synonyms of the given substance and/or mixture. The chemical identity and concentration of all hazardous ingredients will be provided for all hazardous mixtures. CAS numbers, EC numbers, impurities and stabilizing additives should also be provided in this section.

Section 4: First aid measures: Consists of descriptions for necessary measures that are subdivided according to the most important symptoms/effects from different routes of exposure, such as, inhalation, skin and eye contact and ingestion.

Section 5: Firefighting measures: Consists of suitable extinguishing media and special protective equipment and precautions for firefighters, as well as any specific hazards arising from the chemical.

Section 6: Accidental release measures: Includes personal precautions, protective equipment and emergency procedures. Environmental precautions, methods and materials for containment and cleaning up are available in this section.



Section 7: Handling and storage: Contains precautions for safe handling and conditions for safe storage, including any incompatibilities with other chemicals.

Section 8: Exposure controls/personal protection. Includes control parameters, such as, occupational exposure limits or biological limits. Appropriate engineering controls and individual protection measures, such as protective equipment is provided in this section as well.

Section 9: Physical and chemical properties: This section contains the physical and chemical properties, such as, appearance, odor, pH. level, melting point/freezing point and flash point

Section 10: Stability and reactivity: Contains information on the chemical stability and possible hazardous reactions.

Section 11: Toxicological information: Consist of a full and clear description of various health effects and the information one needs to know in order to identify the side effects.

Section 12: Ecological information: Includes any adverse effects on the environment such as ecotoxicity and degradability.

Section 13: Disposal considerations: Include a description of waste remains and information on safe disposal.

Section 14: Transport information: Contains information such as the UN number, shipping name and the transport hazard class or classes.

Section 15: Regulatory information: Consists of any specific regulations for the identified product.

Section 16: Other information: Contains any other information, such as preparation and revision of the SDS.

<u>Signal Words:</u>	<u>Hazard Statements</u>	<u>Precautionary Statements</u>
Alerts the user to a potential hazard and indicates the severity of the hazard. DANGER and WARNING are only two signal words. ----- Danger: Used to indicate a more severe hazard class Warning: Used to indicate a less severe hazard class	Describes the nature and degree of the hazard EXAMPLE: " <i>Causes damage to the kidney's through prolonged or repeated exposure when absorbed through the skin.</i> " EXAMPLE: " <i>Keep/store away from clothing/combustible materials</i> "	Describes recommended measures that should be taken to minimize or prevent adverse effects resulting from the exposure to a hazardous chemical.

EXAMPLE: Chemical Labeling using GHS

<p>PRODUCT IDENTIFIER Universal Product Code SIGNAL WORD 1 Hazard statement 3 Precautionary statements & pictograms 4 Fill Weight: Lot Number: Gross Weight: Fill Date: Expiration Date: 5 Company Name, Street Address, City, State, Zip, Country, Phone Number, Emergency Phone</p>	<p>(2) GHS pictogram: a symbol plus other graphic elements, such as a border, background pattern, or color that is intended to convey specific information about the hazards of a chemical. Each pictogram consists of a different symbol on a white background within a red square frame set on a point (i.e., a red diamond).</p> <p>(3) Hazard statement: a statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.</p> <p>(4) Precautionary statement: a phrase that describes recommended measures to minimize or prevent adverse effects resulting from exposure to a hazardous chemical; or improper storage or handling of a hazardous chemical</p> <p>(5) Supplier identification: The name, address and telephone number of the manufacturer or supplier of the substance or mixture should be provided on the label.</p>
<p>(1) Harmonized signal word: a single word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used are "danger" and "warning." "Danger" is used for the more severe hazards, while "warning" is used for less severe hazards.</p>	