

Employees have the right to know about the physical and health hazards of chemicals present in their work place. The new 2012 Hazard Communications (HazCom) Standard incorporates a unified classification of substances and mixtures in relation to health, environment, and the physical hazards with new labeling requirements from the Globally Harmonized System (GHS).

The 2012 HazCom standard provides new definitions, labeling requirements and a specific 16-section format Safety Data Sheet. It also provides a universal identification to chemicals as well as training on how to safely handle their hazards making it easier for employees to understand chemical hazards.

Globally Harmonized System

The Globally Harmonized System of Classification and Labeling of Chemicals (GHS) is an international approach to hazard communication first adopted by the United Nations in 2003. The United States was an active participant in its development along with a wide variety of other international organizations. Employees are able to gain a better understanding of the chemicals in their workplace to help promote the proper handling, storing and transferring of chemicals as the new system provides standard requirements for safety data sheets and labeling. Incorporating GHS into the new 2012 Hazard Communication Standard creates consistency and clarity and helps to break down current international trade barriers.

Hazard Classification

The updated hazard classification system determines the hazardous effects of a chemical exposure based on weight of evidence and severity through six classes of hazards.

Health Hazard: exposed through routes of entry (breathing, ingestion and skin) causing adverse health effects.

Physical Hazard: puts people or property at risk through a violent reaction (ex: explosion)

Simple Asphyxiants: cause oxygen deprivation

Combustible Dusts: finely separated solid, with the potential to catch fire or explode

Pyrophoric: gas that ignites in air at or below 130°F

Hazards Not Otherwise Classified (HNOC): do not meet criteria of health or physical hazards, fall below cut off value or concentration of the hazard class, or is under GHS hazard category that has not been adopted by OSHA

Within each Hazard class are sub categories based on the degree of damage they cause. Category one is the most severe and any category from two on becomes less severe. The amount of categories depends on the hazard.

Labels

After a chemical has been classified, the label can be prepared. Labels must include the following information in no specific order:

Product Identifier: name of product and its code

Signal Word: indicates level of severity

Danger: severe hazards

Warning: less severe hazards

Pictogram: visual depicting the hazard

- Black hazardous image
- White background
- Red diamond border

Hazard Statement(s): describes the nature of the hazard

Precautionary Statements(s): describes and recommends steps to prevent adverse effects from improper use/handling and possible exposure to the chemical. There are four types: prevention, emergency response, storage and disposal.

Responsible Party's Information: name, phone number and address of the chemical distributor, importer, and/or manufacturer.

Supplementary Information: label producer may provide additional instructions or information (ex: personal protective equipment or expiration date)

Employees must maintain labels, replacing them if they become defaced and revising them within six months when new information is presented. When a chemical has more than one hazard, various pictograms shall be used. Employers also have the option to create their own workplace labels.

Safety Data Sheets

Safety Data Sheets (SDS), formally known as Material Safety Data Sheets (MSDS), must accompany all hazardous chemicals. Employers must have them readily available for their employees at all times. They can be accessible electronically as long as there are no barriers preventing access. SDS headings and required information must be in the order they are provided. The information is then readily available in a recognizable location.

Precautionary statements will be the same on the label as they are in the SDS's. Sections 12-15 are not enforced as they are outside of OSHA's jurisdictions. All SDS's must be in English but other languages may be added if necessary.

The 16-Sections of Safety Data Sheets are as followed:

- Section 1. Identification
- Section 2. Hazard(s) identification
- Section 3. Composition/information on ingredients
- Section 4. First-Aid measures
- Section 5. Fire-fighting measures
- Section 6. Accidental release measures
- Section 7. Handling and storage
- Section 8. Exposure controls/personal protection
- Section 9. Physical and chemical properties
- Section 10. Stability and reactivity
- Section 11. Toxicological information
- Section 12. Ecological information
- Section 13. Disposal considerations
- Section 14. Transport information
- Section 15. Regulatory information
- Section 16. Other information, including date of preparation or last revision

Sections 12-15: not required by OSHA

Transition Dates

December 1st, 2013 – Employers must have employees trained on the new label elements and safety data sheets (SDS's).

June 1st, 2015 – Chemical manufacturers, distributors, importers and employees must comply with modified provisions. Exception: The distributor has until December 1st, 2015 to ship containers without GHS labels from the manufacturer or importer but after that they must comply with GHS.

June 1st, 2016 – Employers must update their Hazard Communication Program and workplace labeling. They must also provide employee training on newly identified health hazards.

During these transitions chemical manufacturers, importers, distributors, and employers may comply with either the old or the new Hazard Communication Standard.

Pictograms

Health Hazard <ul style="list-style-type: none"> • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity 	Flame <ul style="list-style-type: none"> • Flammables • Pyrophorics • Self-Heating • Self-Reactives • Organic Peroxides • Emits Flammable Gas 	Exclamation Mark <ul style="list-style-type: none"> • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non Mandatory) 
Gas Cylinder <ul style="list-style-type: none"> • Gasses under Pressure 	Corrosion <ul style="list-style-type: none"> • Skin Corrosion • Burns • Eye damage • Corrosive to Metals 	Exploding Bomb <ul style="list-style-type: none"> • Explosives • Self-Reactives • Organic Peroxides 
Flame over Circle <ul style="list-style-type: none"> • Oxidizers 	Skull and Crossbones <ul style="list-style-type: none"> • Acute Toxicity (fatal or toxic) 	Environment (Non-Mandatory) <ul style="list-style-type: none"> • Aquatic Toxicity 

