Changes to the GHS

Safety Data Sheets and Chemical Classifications

OSHA has modified the Hazard Communication Standard to adopt the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) to improve the safety and health of workers through more effective communications on chemical hazards. The GHS provides a standardized approach, including detailed criteria for determining what hazardous effects a chemical poses, as well as standardized label elements assigned by hazard class and category.

The three major areas of change include chemical classifications, labels and safety data sheets (SDSs). This helpful flier outlines changes specific to SDSs and chemical classifications.





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Safety Data Sheets

OSHA's Hazard Communication Standard (HCS) requires chemical manufacturers, distributors, or importers to provide Safety Data Sheets (SDSs) formerly known as Material Safety Data Sheets (MSDSs) to communicate the dangers of hazardous chemical products. As of June 1, 2015, the HCS will require new SDSs to be in a uniform format, and include the section numbers, headings and associated information under the headings below:

- Section 1, Identification: Includes product identifier; manufacturer or distributor name, address, phone number; emergency phone number; recommended use; restrictions on use.
- Section 2, Hazard(s) Identification: Includes all hazards regarding the chemical; required label elements.
- Section 3, Composition/ Information on Ingredients: Includes information on chemical ingredients; trade secret claims.
- Section 4, First-aid Measures: Includes important symptoms/ effects, acute, delayed; required treatment.
- Section 5, Fire-Fighting Measures: Lists suitable extinguishing techniques, equipment; chemical hazards from fire.
- Section 6, Accidental Release Measures: Lists emergency procedures; protective equipment; proper methods of containment and cleanup.



- Section 7, Handling and Storage: Lists precautions for safe handling and storage, including incompatibilities.
- Section 8, Exposure Controls/ Personal Protection: Lists OSHA's Permissible Exposure Limits; Threshold Limit Values; appropriate engineering controls; personal protective equipment.
- Section 9, Physical and Chemical Properties: Lists the chemical's characteristics.
- Section 10, Stability and Reactivity: Lists chemical stability and possibility of hazardous reactions.
- Section 11, Toxicological Information: Includes routes of exposure; related symptoms, acute and chronic effects; numerical measures of toxicity.

- Section 12, Ecological information
- Section 13, Disposal considerations
- Section 14, Transport information
- Section 15, Regulatory information
- Section 16, Other Information: Includes the date of preparation or last revision.

Employers are required to maintain copies of all SDSs for the chemicals used and/or stored within the work area. They should have a system to ensure all SDSs are present and to periodically check for the most current SDS (based on revision date) when received from a manufacturer, importer or distributer. Note: Since other agencies regulate this information, OSHA will not enforce Sections 12 through 15.



Safety Data Sheets and Chemical Classifications



Chemical Classifications

Previously, chemical hazards were evaluated in a relatively subjective manner. Chemicals must now go through a specific, prescriptive classification process to determine which hazards are present and which hazard and precautionary statements apply. This system also establishes both hazard classes and hazard categories — for most of the effects. The classes are divided into categories that reflect the relative severity of the effect.

Health Hazard Categories

- Acute Toxicity
- Skin Corrosion/Irritation
- Respiratory or Skin Sensitization
- Germ Cell Mutagenicity
- Carcinogenicity
- Reproductive Toxicity
- Specific Target Organ Toxicity Single Exposure
- Specific Target Organ Toxicity Repeated Exposure
- Aspiration
- Simple Asphyxiates



Physical Hazard Categories

- Explosives
- Flammable Aerosols
- Oxidizing Gases
- Gases under Pressure
- Compressed Gases
- Liquefied Gases
- Refrigerated Liquefied Gases
- Dissolves Gases
- Flammable Liquids
- Flammable Solids
- Self-Reactive Chemicals
- Pyrophoric Liquids
- Pyrophoric Solid
- Pyrophoric Gases
- Self-heating Chemicals
- Chemicals, which in contact with water, emit flammable gases Environmental Hazard Categories (not regulated by OSHA)

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