

Changes to Hazard Communication Labeling and Safety Data Sheet Format

An Overview of the Globally Harmonized System of Classification and Labeling of Chemicals

Texas Department of Insurance, Division of Workers' Compensation
Workplace Safety

Disclaimer

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The following presentation is provided only as a guide to assist employers and employees in complying with the training requirements of the Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard, 29 Code of Federal Regulations (CFR) 1910.1200, as well as to provide other helpful information. It is not intended to supersede the requirements of the standard. An employer should review the standard for particular requirements that are applicable to their individual situation, and make adjustments to this program that are specific to their company. An employer will most likely need to add information relevant to their particular facility in order to develop an effective, comprehensive program.

Objectives

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- Explain the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).
- Explain why the United States has adopted usage of the GHS.
- Cover the applicable changes to the existing Hazard Communication Standard.
- Review the new label and data sheet formats.
- Inform employers about GHS training requirements and obligations to their employees.

Hazard Communication Standard (HCS)

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- The Occupational Safety and Health Administration (OSHA) revised its HCS to align with the United Nation (UN)'s publication "Globally Harmonized System of Classification and Labeling of Chemicals" (i.e. The Purple Book)
- Published March 26, 2012; 77 Federal Register (FR) 17574
- Affects 29 Code of Federal Regulations (CFR) §1910.1200

Globally Harmonized System (GHS)

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- The major changes to the HCS are:
 - Hazard classification (implementation date: June 1, 2015) ;
 - Labels;
 - Safety Data Sheets (SDSs); and
 - Information and training requirements.
- The parts of the HCS standard that do not relate to the GHS that are remaining largely unchanged are:
 - basic framework;
 - scope; and
 - Exemptions.

Effective Dates (j)

Effective Completion Date and Requirements

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Effective Completion Date	Requirements	Who
December 1, 2013	Train employees on the new label elements and SDS format.	Employers
June 1, 2015 *December 1, 2015	Compliance with all modified provisions of this final rule, except: *the Distributor may ship containers labeled under the HCS 1994 by a manufacturer or importer until December 1, 2015.	Chemical manufacturers, importers, distributors, and employers
June 1, 2016	Update alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards.	Employers
Transition period to the effective completion dates noted above	May comply with either 29 CFR §1910.1200 (the final standard), or the current standard, or both.	Chemical manufacturers, importers, distributors, and employers

Training Requirements

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- By December 1, 2013, employers must have trained their employees on two significant changes to the revised standard:
 - Use of the new labeling elements; and
 - Use of the standardized format for SDSs, formerly Material Safety Data Sheets (MSDSs).

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GHS Labeling

GHS Labeling

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- Training on label elements must include information on:
 - Product identifier;
 - Signal word (**standardized**);
 - Pictogram (**standardized**);
 - Hazard statement (**standardized**);
 - Precautionary statement(s); and
 - Name, address, and phone number of the chemical manufacturer, distributor, or importer.

GHS Labeling Elements

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- **Product Identifier:** How the hazardous chemical is identified. This can be the chemical name, code number, or batch number. The manufacturer, importer or distributor will decide the appropriate identifier. The same identifier must be used on both the label and Section 1 of the SDS.
- **Signal Word (standardized):** Used to indicate the *relative* level of severity of hazard and alert to potential hazards.
 - **Danger:** more severe hazards
 - **Warning:** less severe hazards
- **Pictogram (standardized):** OSHA has designated eight mandatory pictograms and one non-mandatory pictogram under this standard for use in a hazard category.

GHS Labeling Elements (cont.)

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- **Hazard Statement (standardized):** Describes the nature of the hazard(s) of a chemical, including the degree of hazard. Can be found in the UN's Globally Harmonized System of Classification and Labeling of Chemicals, Annex 3.
- **Precautionary Statement:** Means a phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting in exposure to or improper handling/storage of the hazardous chemical.
- **Name, address and phone number of the chemical manufacturer, distributor, or importer.**

GHS Pictograms

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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.

A square red frame set at a point without a hazard symbol is not a pictogram and is not permitted on the label.

GHS Pictograms and Hazard Classes		
 • Oxidizers	 • Flammables • Self-Heating • Pyrophorics • Self-Heating • Toxic Flammable Gas • Organic Peroxides	 • Explosives • Self-Reactives • Organic Peroxides
 • Acute toxicity (severe)	 • Corrosives	 • Gases Under Pressure
 • Carcinogen • Respiratory Sensitizer • Reproductive Toxicity • Target Organ Toxicity • Mutagenicity • Aspiration Toxicity	 • Environmental Toxicity	 • Irritant • Dermal Sensitizer • Acute toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritation

Material Safety Data Sheets vs. Safety Data Sheets

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MSDS

- The MSDS has eight non-mandatory sections.
- The MSDS is the current version, but is being replaced completely by the SDS by June 1, 2015.

SDS

- The SDS will be in a standardized 16 section format.
- Essentially follows the American National Standards Institute (ANSI) Z400.1-2004 format.

Minimum Information for an SDS

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#	Section	Description
1.	Identification of the substance or mixture and of the supplier	GHS product identifier; other means of identification; supplier's details (name, address, phone number, etc); emergency phone number.
2.	Hazards Identification	Includes all hazards regarding the chemical; required label elements.
3.	Composition and information on ingredients	Includes information on chemical ingredients; trade secret claims.
4.	First Aid Measures	Includes important symptoms and effects (acute/delayed); required treatment.
5.	Firefighting Measures	Lists suitable extinguishing methods and equipment; chemical hazards from fire.

Minimum Information (cont.)

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#	Section	Description
6.	Accidental Release Measures	Lists emergency procedures; protective equipment; proper methods of containment and cleanup.
7.	Handling and Storage	Precautions for safe handling; conditions for safe storage, including any incompatibilities.
8.	Exposure Controls and Personal Protection	Control parameters (occupational exposure limit values, etc.); appropriate engineering controls; individual protection measures.
9.	Physical and Chemical Properties	Appearance; odor; odor threshold; pH; melting and freezing points; boiling point/range; flash point; evaporation rate; flammability, etc.
10.	Stability and Reactivity	Chemical stability; possibility of hazardous reactions; incompatible materials.

SDSs

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- Training must show how the information on the SDS relates to the label.
 - Example: the precautionary statements would be the same on label as on the SDS.
- Both SDSs and labels must be updated in an appropriate and timely manner to “new and significant information.”
 - “new and significant information” is defined as information that changes the GHS hazard classification.

General Training Requirements

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- OSHA requires employers to present information in a manner and language that their employees can understand.
- If the employee’s vocabulary is limited or the employee is not literate, the GHS training must account for those limitations.

Summary

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Resources

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- Comparison of OSHA's current HCS and GHS
 - http://www.osha.gov/dsg/hazcom/docs/ghsoshac_omparison.pdf
- UN's Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
 - http://www.unece.org/trans/danger/publi/ghs/ghs_rev01/01files_e.html
Includes physical, health, and environmental hazard classification guidelines; hazard statements; information on SDSs and labels; and examples.

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