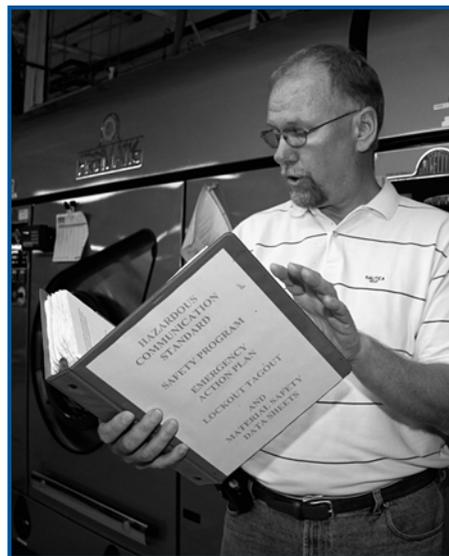


## Introduction

The hazard communication standard is designed to make information about hazardous chemicals that are present in workplaces available to exposed employees. The hazard communication standard applies to any business, including manufacturers that use hazardous chemicals, regardless of the number of individuals employed. The applicable standard is in Title 29, Section 1910.1200 of the Code of Federal Regulations.

The standard requires manufacturers or importers to assess the hazards of chemicals, which they produce or import, and all employers to provide information to their employees about the hazardous chemicals to which they are exposed, by means of a hazard communication program, labels, and other forms of warning, safety data sheets, and information and training. All Indiana employers are required to develop a hazard communication program if their employees are exposed to hazardous chemicals.



Employers must have a written program. The written program must include:

- How container labeling, including pipes and piping systems, will be addressed by the employer.
- How employee training will be administered, and how information regarding use of hazardous chemicals will be disseminated.
- How safety data sheets will be developed and maintained.
- A list of all hazardous chemicals. The chemical name on this list must be the same as on the SDS and container label to allow for cross-referencing. The list can be compiled for the workplace as a whole or for individual work areas.
- How employees will be informed about the hazards of non-routine tasks, such as production equipment maintenance or repair.
- How information will be communicated about exposure to hazardous chemicals when working in multi-employer settings (e.g., a contractor is working on the premises). This information includes:
  - The method for accessing each employer's SDSs.

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- Appropriate training of exposed employees by their respective employer on the hazards posed and any necessary controls or personal protective equipment required.
- The labeling mechanism used by each employer.

In addition to the written program:

- Employees must be trained in the identification, use, and hazards of the chemicals they work with and any appropriate protective measures (29 CFR 1910.1200 [h][3]).
- SDSs for hazardous chemicals must be maintained in an orderly fashion and accessible to the employee within the work shift (29 CFR 1910.1200 [g][8]).
- Containers, such as spray bottles, bags, drums, and storage tanks, must be labeled or identified with the content and type of hazard the material poses. Labels from the manufacturer or distributor must also contain the name and address of the manufacturer.
- All pipes and piping systems in the workplace that contain hazardous chemicals must be identified by labels, signs, color coding, placards, written operating instructions, batch tickets, process sheets, schematics, or any other method of demarcation at takeoff and central points.

Product manufacturers are responsible for providing properly labeled containers. There are some federal acts with labeling requirements that supercede the labeling requirements of 29 CFR 1910.1200 (b)(5). If a product is subject to one of the following acts, the manufacturer must comply with that particular act's labeling requirements and not the hazard communication standard labeling requirements:

- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)
- Federal Food, Drug, and Cosmetic Act
- Federal Alcohol Administration Act
- Consumer Product Safety Act
- Federal Hazardous Substances Act
- Federal Seed Act
- Toxic Substances Control Act (TSCA)

Another provision of the hazard communication standard requires employers to retain all U.S. Department of Transportation placards, labels, and markings on incoming containers. These labels must remain on the containers until they are cleaned and purged of all residue and vapors. Employers who transfer chemicals from these types of containers (e.g., 55-gallon drums) to in-house containers do not need to transfer the label unless the container will be shipped off the work site.

The hazard communication standard does NOT apply to:

- Hazardous waste as defined in Chapter 4 (such as spent solvents).
- Articles [anything that during the course of its normal use does not have the potential to result in exposure of the employee to a hazardous substance (e.g., shipping containers and tools), food, drugs, or cosmetics intended for personal consumption by employees while in the workplace (29 CFR 1910.1200 (b)(6)].
- Consumer-use items (i.e., materials any ordinary consumer could purchase. To be exempt from coverage, these consumer items must be used in the workplace in the same fashion and amount as the ordinary consumer would use them. While many of the hazardous materials used by manufacturers are available to consumers, these products are not used in a consumer fashion and, therefore, are not exempt.)

## **Globally Harmonized System of Classification and Labeling of Chemicals**

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GHS is an acronym for *Globally Harmonized System of Classification and Labeling of Chemicals*. We use a variety of chemicals every day in our workplaces and homes. With the increase in global trade involving chemicals, it was recognized that a system needed to be put in place to ensure more consistency with how chemicals were labeled and classified. OSHA's Hazard Communication Standard system will not go away, but will be modified by GHS so that the United States will be more aligned with the systems of other countries that have adopted GHS.

In early 2012 the United States adopted GHS, giving employers until December 1, 2013 to train employees on safety data sheets and GHS labels. Employers will have until June 1, 2016 to be fully compliant with the modified Hazard Communication Standard. GHS will require specific criteria for physical and health hazards and detailed instructions for hazard evaluation.

The two biggest changes in GHS are the chemical hazard classification system and how we communicate those hazards. GHS is more comprehensive in these areas. The starting point in GHS is the classification, which is classifying a chemical to its inherited dangerous properties. For example, a chemical might be a corrosive. Under the Hazard Communication Standard system there would only be one classification: Corrosive. Under GHS there are three categories and three subcategories, as set forth below.

Skin Corrosion / Irritation		
<b>Category 1 – Skin Corrosion</b>		
Destruction of dermal tissue: visible necrosis in at least one animal		
Subcategory 1A Exposure: < 3 minutes Observation: < 1 hour	Subcategory 1B Exposure: < 1 hour Observation: < 14 days	Subcategory 1C Exposure: < 4 hours Observation: < 14 days
<b>Category 2 – Skin Irritation</b>		
Reversible adverse effects in dermal tissue Draize score: $\geq 2.3 < 4.0$ or persistent inflammation		
<b>Category 3 – Mild Skin Irritation</b>		
Reversible adverse effects in dermal tissue Draize score: $\geq 1.5 < 2.3$		

Under physical hazards, under the Hazard Communication Standard system, there was only one classification: Flammable. Under GHS, there are four categories under the classification for flammable liquids:

Flammable Liquids	
Category	Criteria
1	Flash point < 23 degrees Celsius (C) and initial boiling point $\leq 35^{\circ}\text{C}$ ( $95^{\circ}\text{F}$ )
2	Flash point < $23^{\circ}\text{C}$ and initial boiling point $> 35^{\circ}\text{C}$ ( $95^{\circ}\text{F}$ )
3	Flash point $\geq 23^{\circ}\text{C}$ and $\leq 60^{\circ}\text{C}$ ( $140^{\circ}\text{F}$ )
4	Flash point $\geq 60^{\circ}\text{C}$ ( $140^{\circ}\text{F}$ ) and $\leq 93^{\circ}\text{C}$ ( $200^{\circ}\text{F}$ )

GHS also changes the way chemical containers should be labeled. For example, under GHS, chemicals in original shipping containers should be labeled with the following information:

1. The product or chemical identifier should be at the top.
2. The contact information for the product supplier must be clearly indicated at the bottom of the label and must include the company name, address and telephone number.
3. Hazard pictograms must have a black symbol on a white background with a red diamond frame. Pictograms are standardized graphics that are assigned to a specific hazard class or category. Pictograms on a GHS label may convey health,

physical or environmental hazard information. One pictogram may be used to represent several hazards within a class. There are five physical and four health pictograms. They are listed at the end of this chapter.

4. The signal word should be marked beneath the product identifier. GHS only permits two words that can be used. Out of these two words, only one word can be used at a time — DANGER or WARNING — to distinguish between hazard levels.
5. Under the signal word, a hazard statement should appear to describe the hazard.
6. The label should contain a precautionary statement. For example, the hazard statement for a skin irritant may be: “Causes skin irritation.”

As part of GHS, material safety data sheets are now referred to as safety data sheets (SDSs). SDSs will be divided into this 16-section format and required ordering of sections:

Safety Data Sheet Format	
1.	Identification
2.	Hazard(s) Identification
3.	Composition/Ingredient Information
4.	First-Aid Measures
5.	Fire-Fighting Measures
6.	Accidental Release Measures
7.	Handling and Storage
8.	Exposure Control/Personal Protection
9.	Physical & Chemical Properties
10.	Stability & Reactivity
11.	Toxicological Information
12.	Ecological Information
13.	Disposal Considerations
14.	Transport Information
15.	Regulatory Information
16.	Other Information

**Important Dates for GHS Compliance**

March 26, 2012	The final rule of GHS was sent to the Federal Register.
May 25, 2012	OSHA adopted GHS.
December 1, 2013	Employers due date to train employees on GHS labels and SDS format.
June 1, 2015	Chemical manufacturers, chemical distributors, employers, and chemical importers have to be in compliance with GHS. One caveat is that chemical distributors will have an additional six months (December 1, 2015) to discard old chemicals containing old labels.
June 1, 2016	Employers must be fully compliant with GHS.

### GHS Hazard Communication Pictograms

The following pictograms can be downloaded from the U.S. Department of Labor's Occupational Safety & Health Administration website at [www.osha.gov/dsg/hazcom/pictograms/](http://www.osha.gov/dsg/hazcom/pictograms/).



Explosives  
Self Reactant  
Organic Peroxides



Gases Under Pressure



Carcinogenic  
Respirator Sensitizer



Environmental Toxicity



Skin & Eye Irritant  
Dermal Sensitizer  
Acute Toxicity



Flammable  
Self Reactive  
Pyrophoric



Oxidizers



Skin Corrosion



Acute Toxicity

### **Free Technical Assistance**

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For assistance with occupational safety and health questions or to request free, professional on-site consultation services, contact a safety or health consultant with the Indiana Department of Labor's INSafe division by e-mailing [insafe@dol.IN.gov](mailto:insafe@dol.IN.gov) or by calling (317) 232-2688. Visit INSafe's website at [www.IN.gov/dol/insafe.htm](http://www.IN.gov/dol/insafe.htm) for more information.