
New OSHA Hazard Communication Standard -Minimum Training Requirements-

Chemical manufacturers, importers, distributors, and employers must have employees trained on the new label elements and the SDS format by December 1, 2013.

This material is provided by Midwest Hardware Association and it may be used as a guide for training your employees on the new OSHA Hazardous Communication Standard. This is not intended, nor should it be used, as a substitute for specific legal advice.

TRAINING MATERIAL

What is Globally Harmonized System (GHS)?

1. Explaining GHS.

OSHA has modified the Hazard Communication Standard (HCS) to adopt the Globally Harmonized System (GHS) to improve safety and health of workers through more effective communication on chemical hazards.

The original HCS standard allowed chemical manufacturers and importers to convey information on labels and Material Safety Data Sheets (MSDS) in whatever format they chose. The adoption of GHS will help to improve information received and provide a more standardized approach to Safety Data Sheets (SDS) and labeling of hazardous products.

- A standardized format of the Safety Data Sheets (SDS) [*previously known as Material Safety Data Sheets (MSDS)*] will enable employers, workers, health professionals, and emergency responders to access the information more efficiently and effectively.
- Standardized labeling of products will provide a better identification of hazardous products and reduce confusion.

Training on New Labels

1. Type of information the employee would expect to see on the new labels.

- **Name, address, and phone number of the chemical manufacturer, distributor, or importer.**
- **Product identifier.**
 - This is how the hazardous chemical is identified. This can be, but is not limited to, the chemical name, code number, or batch number.
 - The manufacturer, importer, or distributor can decide the appropriate product identifier. The same product identifier must be both on the label and in the SDS, Section 1, Identification.

➤ **Signal word.**

- This is used to indicate the relative level of severity of the hazard and alert the reader to a potential hazard on the label.
- There are only two signal words, “Danger” and “Warning.” Within a specific hazard class, “Danger” is used for the more severe hazards and “Warning” is used for the less severe hazards.
- There will only be one signal word on the label no matter how many hazards a chemical may have. If one of the hazards warrants the signal word “Danger” and another warrants the signal word “Warning,” then only “Danger” should appear on the label.

➤ **Pictogram.**

- 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.
- There are nine pictograms under the GHS to convey the health, physical, and environmental hazards. The Hazard Communication Standard (HCS) requires eight of these pictograms, OSHA has designated eight pictograms under this standard for application to a hazard category (*the exception being the environmental pictogram*).

HCS Pictograms and Hazards		
<p>Health Hazard</p>  <ul style="list-style-type: none"> • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity 	<p>Flame</p>  <ul style="list-style-type: none"> • Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides 	<p>Exclamation Mark</p>  <ul style="list-style-type: none"> • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (non-mandatory)
<p>Gas Cylinder</p>  <ul style="list-style-type: none"> • Gases Under Pressure 	<p>Corrosion</p>  <ul style="list-style-type: none"> • Skin Corrosion/Burns • Eye Damage • Corrosive to Metals 	<p>Exploding Bomb</p>  <ul style="list-style-type: none"> • Explosives • Self-Reactives • Organic Peroxides
<p>Flame Over Circle</p>  <ul style="list-style-type: none"> • Oxidizers 	<p>Environment (non-mandatory)</p>  <ul style="list-style-type: none"> • Aquatic Toxicity 	<p>Skull and Crossbones</p>  <ul style="list-style-type: none"> • Acute Toxicity (fatal or toxic)

- **Hazard statement(s):**
 - Hazard statements describe the nature of the hazard(s) of a chemical, including where appropriate and the degree of hazard. For example, “Causes damage to kidneys through prolonged or repeated exposure when absorbed through the skin.”
 - All of the applicable hazard statements must appear on the label.
 - Hazard statements may be combined where appropriate to reduce redundancies and improve readability.
 - The hazard statements are specific to the hazard classification categories, and chemical users should always see the same statement for the same hazards, no matter what the chemical is or who produces it.

- **Precautionary statement(s):**
 - This is a phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical or improper storage or handling.

2. How an employee might use the labels in the workplace.

- **For example:**
 - Explain how information on the label can be used to ensure proper storage of hazardous chemicals.
 - Explain how the information on the label might be used to quickly locate information on first-aid when needed by employees or emergency personnel.

3. General understanding of how the elements work together on a label.

- **For example:**
 - Explain when a chemical has multiple hazards, different pictograms are used to identify the various hazards. The employee should expect to see the appropriate pictogram for the corresponding hazard class.
 - Explain when there are similar precautionary statements, the one providing the most protective information will be included on the label.

Training on the Format of the SDS Must Include the Following Information

1. Standardized 16-section format and the type of information found in the various sections.

- **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**
 - Hazard classification of the chemical
 - Signal word
 - Hazard and precautionary statements
 - Pictograms

- **Section 3, Composition/Information on Ingredients**
 - Substance Information
 - Chemical name
 - Common name and synonyms
 - Chemical Abstracts Service (CAS) number and other unique identifiers
 - Mixture Information
 - Same information required for substances
 - Chemical name and concentration of ingredients

- **Section 4, First-Aid Measures**
 - Necessary first-aid instructions by relevant routes of exposure (inhalation, skin, etc.)
 - Description of the most important symptoms or effects
 - Medical care recommendations, special treatment needed, and when necessary

- **Section 5, Fire-Fighting Measures**
 - Suitable extinguishing equipment
 - Advice on specific hazards that develop from the chemical during a fire

- **Section 6, Accidental Release Measures**
 - Use of personal precautions (e.g. ventilation) and protective equipment
 - Emergency procedures
 - Containment methods and materials
 - Cleanup procedures

- **Section 7, Handling and Storage**
 - Precautions for safe handling and storage, including incompatibilities

- **Section 8, Exposure Controls/Personal Protection**
 - Lists OSHA's Permissible Exposure Limits (PELs); Threshold Limit Values (TLVs)
 - Appropriate engineering controls
 - Personal Protective Equipment (PPE)

- **Section 9, Physical and Chemical Properties**
 - Identifies physical and chemical properties associated with the substance or mixture
 - Appearance
 - Flammability or explosive limits
 - Odor and odor threshold
 - Vapor pressure and density
 - pH level
 - Relative density
 - Melting and freezing point
 - Solubility
 - Initial boiling point and range
 - Flash point
 - Evaporation rate

- Partition co-efficient
- Auto-ignition temperature
- Decomposition temperature
- Viscosity

- **Section 10, Stability and Reactivity**
 - Reactivity description
 - Chemical stability

- **Section 11, Toxicological Information**
 - Information on likely routes of exposure (inhalation, ingestion, skin, and eye contact) and should indicate if the information is unknown
 - Description of delayed, immediate, or chronic effects from short-term and long-term exposure
 - Measurement of toxicity
 - Description of symptoms if exposed
 - If a potential carcinogen

- **Section 12, Ecological Information***
 - Information to evaluate the environmental impact of the chemical if released into the environment

- **Section 13, Disposal Considerations***
 - Provides guidance on proper disposal practices and safe handling

- **Section 14, Transport Information***
 - Guidance on classification information for shipping and transporting by road, air, rail, or sea

- **Section 15, Regulatory Information***
 - Identifies the safety, health, and environmental regulations specific for the product which is not indicated elsewhere on the SDS

- **Section 16, Other Information**
 - Includes the date of preparation or last revision

**Note: Since other Agencies regulate this information, OSHA will not be enforcing Sections 12 through 15.*

2. How the information on the label is related to the SDS.

- **For example:**
 - Explain the precautionary statements would be the same on the label and on the SDS

REFERENCES

OSHA Hazard Communication

<https://www.osha.gov/dsg/hazcom/index.html>

December 1, 2013, Training Requirements Fact Sheet

<https://www.osha.gov/Publications/OSHA3642.pdf>

OSHA Brief on Labels and Pictograms

<https://www.osha.gov/Publications/OSHA3636.pdf>

OSHA Quick Cards (can be used for training material)

<https://www.osha.gov/dsg/hazcom/ghsquickcards.html>