

# GHS LABELING STANDARDS

## Globally Harmonized System



COMPLIES WITH OSHA'S  
HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200

Globally Harmonized System (GHS) defines and classifies hazards of chemical products while communicating health and safety information on labels and material safety data sheets (SDS). Adopted by the United Nations in 2013, GHS outlines the protocol for labeling chemicals by including criteria for the classification of health, physical and environmental hazards. By creating a standardized format that can be recognized world-wide, GHS standards provide a set of guidelines for ensuring the safe production, transport, handling, use and disposal of hazardous materials making workplace conditions safer for all employees exposed to chemical hazards.

GHS is not a law but rather a system designed to replace all diverse classification systems while presenting one universal standard that countries can adopt into their own systems. In 2012, OSHA revised the Hazard Communication Standard (HCS) to align with GHS to include regulation on hazard classification, labeling, safety data sheets (SDSs) and training. Other countries and regions around the world have begun implementing parts of GHS with each nation's government responsible for overseeing its compliance.

### Timeline for Hazard Communication Standard (HCS)

OSHA has outlined the following timeline and requirements for implementing the Hazard Communication Standard.

December 1, 2013	June 1, 2015	December 1, 2015	June 1, 2016
Employers must train employees on new label elements and SDS format.	Chemical manufacturers, importers, distributors must reclassify chemicals; send SDS and labels in the GHS format.	Products shipped by distributors must have new SDS and label format.	Employers must be in full compliance with guidelines. Workplace labeling will be updated and a training policy implemented.

### Elements of the Globally Harmonized System

In order to ensure chemical safety in the workplace, information about the identities and hazards of the chemicals must be available and understandable to workers. OSHA's Hazard Communication Standard (HCS) requires the development and communication of such information:

- **Classification of Chemicals** – Chemical manufacturers are required to determine the hazards associated with each chemical they produce.
- **Standardized Labeling Format** – All chemical labels must include six key elements to describe the hazardous material.
- **Standardized Safety Data Sheets (SDS)** – Contain a standard 16-section format with specific information required within each section.

### Labeling Format










OSHA's updated Hazard Communication Standard requires each label include six key elements. Additional information may be included on a label or sign given the GHS format is followed.

1. **Signal Word** – indicate relative severity of hazard.
2. **Symbols (Hazard Pictograms)** – convey health, physical and environmental hazards using black symbols on white backgrounds with a red border.
3. **Product Name or Identifiers**
4. **Hazard Statements** – phrases that describe the nature of the hazardous product.
5. **Precautionary Statements** – phrases that describe preventative measures, first aid response, storage and disposal information for the hazardous product.
6. **Manufacturer Information** – company name, address, telephone number.



## Hazard Communication Pictograms and Hazards

The Hazard Communication Standard (HCS) requires hazards be identified with a black pictogram on a white background framed with a red border. Each pictogram is determined by the classification in which each chemical hazard is defined.

<p><b>Health Hazard</b></p>  <p>Carcinogens, reproductive toxicity, respiratory sensitizer, target organ toxicity, aspiration toxicity, mutagens</p>	<p><b>Flame</b></p>  <p>Flammables, Pyrophorics, Self-Heating, Self-Reactives, Organic Peroxides, Flammable Gas</p>	<p><b>Explanation Mark</b></p>  <p>Skin and Eye Irritant, Skin Sensitizers, Acute Toxicity, Narcotic Effects, Respiratory Irritant, Hazardous to Ozone</p>
<p><b>Skull and Crossbones</b></p>  <p>Acute Toxicity (Fatal or Toxic)</p>	<p><b>Corrosion</b></p>  <p>Skin Corrosions and Burns, Eye Damage, Corrosive to Metals</p>	<p><b>Exploding Bomb</b></p>  <p>Explosives, Reactives, Organic Peroxides</p>
<p><b>Flame Over Circle</b></p>  <p>Oxidizers</p>	<p><b>Gas Cylinder</b></p>  <p>Gases Under Pressure</p>	<p><b>Environment (non-mandatory)</b></p>  <p>Aquatic toxicity</p>

MSA goes beyond what is required to allow owners to include relevant information for the safe, efficient operations of their facilities. We have worked with OSHA to develop GHS compliant signs and labels that accurately communicate hazards for the protection of plant workers and infrastructure. We create GHS labels and signs with the required information based on your specifications, while remaining compliant with GHS regulations.

As a single source supplier, MSA works with customers to develop a comprehensive GHS labeling/signage program. We offer a complement of services including design, engineering, manufacturing and installation or full turnkey packages to complete labeling programs from beginning to end in a seamless, cost effective process.

**For more information on GHS, please visit the following sources:**

OSHA's Guide to The Globally Harmonized System of Classification and Labelling of Chemicals - [www.osha.gov/dsg/hazcom/ghs.html](http://www.osha.gov/dsg/hazcom/ghs.html)

United Nations Economic Commission for Europe – [www.unece.org/trans/danger/publi/ghs/ghs\\_rev05/05files\\_e.html](http://www.unece.org/trans/danger/publi/ghs/ghs_rev05/05files_e.html)

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