

GHS

Globally
Harmonized
System

FOR CLASSIFICATION AND LABELING OF CHEMICALS



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GHS: What is it? What does it mean to me? How do I comply?

The GHS (Globally Harmonized System of Classification and Labeling of Chemicals) was initially set forth by the United Nations in 1992. Its purpose was to enact one worldwide standard for classifying and labeling hazardous chemicals. The system gradually has been adopted in Europe and many other countries.

However, until recently, *harmonization with a global standard* has not been required for hazard communication warnings on container labels or Material Safety Data Sheets in the United States. Worldwide, before GHS, the many different standards in use and incomplete and inconsistent chemical data information often compromised safety of the handlers, users, and the environment. Strict requirements from one country also could end up barring trade in chemicals with another.

But on March 26, 2012, the system changes began. On that date, OSHA published its final rule to incorporate the GHS into its Hazard Communication Standard.

Following is a series of Questions & Answers organized by Accuform, using materials supplied by OSHA, to help you learn about GHS, the timeline you need to follow to get your compliance programs in place and the benefits that will result.

What does GHS do?

GHS explains to employers, manufacturers and distributors how to classify various chemicals or materials. Once classified, GHS describes the appropriate warning for them. GHS also standardizes how to display that information – every label and Safety Data Sheet (formerly Material Safety Data Sheets) will follow a standardized format.

How will workers benefit?

This harmonized approach will improve the consistency and accuracy of classifying and labeling hazardous substances. OSHA administrator David Michaels describes the new system this way: "Our original haz-com standard created the workers' 'right to know about hazards'...the updated rule creates their 'right to understand.'"

What is the timeline for phasing in GHS?

The table below summarizes the phase-in dates required under OSHA's revised standard.

Source: OSHA

GHS Timeline for Compliance

December 1, 2013	June 1, 2015	December 1, 2015	June 1, 2016	Ongoing
WHO: Employers WHAT: Train employees on new label requirements and safety data sheet (SDS) format.	WHO: Chemical manufacturers, importers, distributors, and employers WHAT: Comply with all final rule provisions but may ship products labeled under the old system until December 1, 2015.	WHO: Distributors WHAT: Shall not ship products labeled by chemical manufacturers or importers unless the labels comply with GHS.	WHO: Employers WHAT: Update workplace labeling and haz-com programs and train employees on newly identified physical or health hazards.	The GHS is expected to be a living document. Changes may be adopted on a two-year cycle through various rulemaking options.

Transition Period

Up to the effective completion dates, chemical manufacturers, importers, distributors, and employers may comply with either 29 CFR 1910.1200 (the final standard), the current standard, or both.

Will OSHA allow a transition period for the new labels and SDSs?

During the phase-in period, employers will be required to be in compliance with either the existing HCS or the new GHS, or both. OSHA recognizes that hazard communication programs will go through a period of time where labels and SDSs under both standards will be present in the workplace. Employers are not required to maintain two sets of labels and SDSs for compliance purposes.

Why must training be conducted prior to the compliance date?

OSHA is requiring that employees are trained on the new label elements (e.g., pictograms and signal words) and SDS format by December 2013, while full compliance with the final rule will begin in 2015. OSHA believes that many American workplaces may begin to receive labels and SDSs that are consistent with the GHS very shortly. So it is important that when employees begin to see the new labels and SDSs in their workplaces, they will be familiar with them, understand how to use them and access the information effectively.

What are the major changes in the new standard?

The three major areas of change are in hazard classification, labels and safety data sheets.

Hazard classification: Provides specific criteria for classification of health and physical hazards, as well as classification of mixtures.

- Labels:** Chemical manufacturers and importers will be required to provide a label that includes a harmonized signal word, pictogram, and hazard statement for each hazard class and category. Precautionary statements must also be provided.

- Safety Data Sheets:** Will now have a specified 16-section format.

How will chemical hazard evaluation change?

Under the GHS, there are specific criteria for each health and physical hazard, along with detailed instructions for hazard evaluation and determinations as to whether mixtures or substances are covered. OSHA has included the general provisions for hazard classification in paragraph (d) of the revised rule, and added extensive appendixes that address the criteria for each health or physical effect. To see a side by side comparison of the old and newly revised rules, please visit: <http://www.osha.gov/dsg/hazcom/side-by-side.html>.

How will labels change?

The new labels standards are designed to give everyone "the right to understand" the hazards of the substances with which they are working. All labels will require the following elements:

- Pictogram:** There are nine pictograms under the GHS. However, only eight pictograms are required under the HCS. (See samples of the pictograms below.)
- Signal words:** Two words are used to indicate the relative level of

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

the hazard's severity and alert the reader to a potential hazard on the label with the GHS. The signal words used are "danger" and "warning." "Danger" is used for the more severe hazards, while "warning" is used for less severe hazards.

- Hazard Statement:** a statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.
- Precautionary Statement:** a phrase that describes recommended measures to be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical or improper storage or handling of a hazardous chemical.

To see a sample GHS label from our current catalog, please visit: <http://www.accuform.com/files/vc/18/pdf/704.pdf>.

More information on labels requirements also is available by visiting: http://www.osha.gov/Publications/HazComm_QuickCard_Labels.html.

What pictograms are required?

The hazard pictograms and their corresponding hazards are shown above.

GHS Pictograms and Hazards

Source: OSHA, http://www.osha.gov/Publications/HazComm_QuickCard_Pictogram.html

For more information on pictogram labels, please see the Accuform catalog, or visit: <http://www.accuform.com/files/vc/18/pdf/705.pdf>.

Can I use a black border or blank red borders on pictograms for domestic shipment?

No.

How is the Safety Data Sheet (SDS) changing?

The information required on the safety data sheet (SDS) will remain essentially the same as that in the current standard. The change is that the information on the SDS is presented using consistent headings in a specified 16-section sequence.

For the format of the 16-section SDS, visit: http://www.osha.gov/Publications/HazComm_QuickCard_SafetyData.html

Conclusion

More than 43 million workers in 5 million workplaces in the United States are affected by the new standards. The overall costs to implement the new GHS are estimated by OSHA at more than \$201 million per year. Against these costs, OSHA estimates that the new standards will result in more than \$1 billion in safety, health and productivity benefits. In addition, GHS will make it much easier for US industries to compete in the global marketplace.

Accuform is prepared to help you make the transition to GHS. For more information, visit Accuform at www.Accuform.com or call 1-800-237-1001.