

## **ESH196A - Hazard Communication Update**

### Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

#### **Introduction**

This program was prepared to tell you about changes to the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (HCS or HazCom).

If you work at Argonne, you must take this course. New employees will receive the training as part of new employee orientation.

#### **In this presentation, we will:**

- Discuss changes to the Standard
- Identify the label elements
- Outline the Safety Data Sheet requirements
- Discuss the implementation schedule

#### **Why am I required to take this course?**

For people who work with chemicals every day, it is obvious that this training is necessary.

However, even if you work in an office and don't really use chemicals, you need the training. Many offices are close to laboratories, work shops or other facilities where hazardous chemicals are used. Chemicals may be moved through the corridor outside of your office for example.

Being aware of the new labeling and safety data sheet system will help you understand the hazards of the chemicals where you work.

#### **GHS Benefits**

OSHA revised the HazCom Standard to align with the United Nations' Globally Harmonized System of Classification and Labeling of Chemicals (GHS) on March 26, 2012.

The revision changes this performance-based Standard to one with more structured requirements for labeling of chemicals.

#### **The Globally Harmonized System is recognized internationally, which means:**

- More standardized labels and safety data sheets
- Increased efficiency and reduced costs
- Increased worker understanding of hazards
- Increased safety



#### **What's different in the new Standard?**

##### **1. Revised hazard classification requirements**

- Manufacturers and importers of hazardous chemicals will have to use the new (to the USA) hazard classification system.

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- The hazard classification will address health, environmental, aquatic and physical hazards, as well as hazards of chemicals and chemical mixtures.

If you would like to learn more about hazard classification, [click here](#).

## 2. Changed chemical labels

Labels will include:

- signal words, such as "danger" and "caution"
- pictograms
- hazard statements
- precautionary statements

## 3. Changing Material Safety Data Sheets (MSDS) to Safety Data Sheets (SDS)

- New format; 16 sections.

## 4. Information and training on the new requirements

- We have to provide information on the new label elements and the change to SDSs.

## Pictograms

Chemical labels will now include pictograms. Pictograms contain the hazard symbols plus other graphic elements.

A pictogram may represent more than one hazard. More than one pictogram may appear on a label or SDS.

Detailed information on pictograms is available from ESQ Industrial Hygiene.

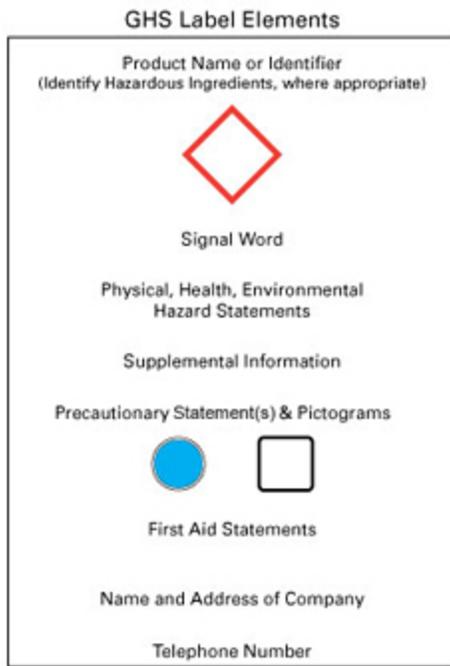
Downloadable PDF of the "Pictograms and Hazards" chart is available [here](#).

HCS Pictograms and Hazards

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

## GHS Labels Elements

The HazCom Standard requires chemical manufacturers, importers, or distributors to ensure that each hazardous chemical container leaving the workplace is labeled, tagged or marked with the following information:



- **Product Name or Identifier (Chemical Identity)**
- **Signal Word**
- **Hazard Statement(s)**
- **Supplemental Information**
- **Precautionary Statement(s)**
- **Pictogram(s)**
- **Name, Address and Telephone Number (Supplier Identifier)**

#### More Information

Click each link below if you'd like to learn more about:

- [label elements](#)
- [workplace labels](#)

[Click here](#) if you'd like to see an example of the new label format.

### Safety Data Sheet Elements

Under the new Standard, Safety Data Sheets (SDSs) replace Material Safety Data Sheets (MSDSs). They provide information about chemical hazards and safety precautions.

#### The SDS should contain 16 headings:

- |   |                                       |
|---|---------------------------------------|
| 1. Identification                             | 9. Physical and Chemical Properties   |
| 2. Hazards Identification                     | 10. Stability and Reactivity          |
| 3. Composition/ingredients                    | 11. Toxicology                        |
| 4. First Aid                                  | 12. Ecological Information (optional) |
| 5. Firefighting Measures                      | 13. Disposal (optional)               |
| 6. Accidental Release Measures                | 14. Transport Information (optional)  |
| 7. Handling /Storage                          | 15. Regulatory Information (optional) |
| 8. Exposure Control/Personal Protection (PPE) | 16. Other (revision information)      |

For an example, [click here](#).

### Implementation Schedule

There are 4 key compliance dates related to OSHA's adoption of Globally Harmonized System of Classification and Labeling of Chemicals (GHS):

- **December 1, 2013** - Employee training on labels, SDS format
- **June 1, 2015** - Manufacturers, importers comply with SDS, labeling
- **December 1, 2015** - Last day to ship with old labeling system
- **June 1, 2016** - Update workplace labeling HazCom program

#### For more information on GHS

- contact Industrial Hygiene (2-2881)
- visit the [OSHA website](#)