GHS & Hazard Communication

Changes for 2013 and Beyond
What is GHS?

The **Globally Harmonized System**

A Worldwide System for Hazard Communication.

It is an attempt to get everyone in the world to do things the same way when it comes to Hazard Communication.
Why the GHS?

• There are more than 650,000 chemicals presently used in the USA…*that we know of!*

• Chemicals are manufactured all around the world and shipped to other countries.
Why the GHS?

• Different countries and different manufacturers have their own way of doing things.

• So, **GHS will make everything the same**, regardless of where chemicals are made or what company makes them.
What will the GHS do?

The USA already has strong Hazard Communication requirements for safety:

- Training in chemical use and safety
- Personal Protective Equipment
- Material Safety Data Sheets (MSDS)
- Access to first aid equipment (i.e. eye wash)

So, changes for the USA will be relatively minor.
What are the changes under GHS?

1. MSDS

2. Labels
   - Hazard Pictograms:
   - Signal Words: “Danger” “Warning”
   - Hazard Statements
   - Precautionary Statements
Material Safety Data Sheets

MSDS will now be known as

SDS

or

Safety Data Sheets
Safety Data Sheets

Every SDS will have the same format and provide the same kinds of information so they all look the same:

1. Chemical identification
2. Hazard(s) identification
3. Composition/information on ingredients
4. First-aid measures
5. Fire-fighting measures
6. Accidental release measures
7. Handling and storage
8. Exposure control/personal protection
Safety Data Sheets

9. Physical and chemical properties
10. Stability and reactivity
11. Toxicological information
12. Ecological information
13. Disposal considerations
14. Transport information
15. Regulatory information
16. Other information

Bottom Line - the information will be about the same, but with a standardized format.
The Basic Parts of A GHS-Compliant Label

1. **Product Identifier** - Should match the product identifier on the Safety Data Sheet.
2. **Signal Word** - Either use “Danger” (severe) or “Warning” (less severe)
3. **Hazard Statements** - A phrase assigned to a hazard class that describes the nature of the product’s hazards
4. **Precautionary Statements** - Describes recommended measures to minimize or prevent adverse effects resulting from exposure.
5. **Supplier Identification** - The name, address and telephone number of the manufacturer or supplier.
6. **Pictograms** - Graphical symbols intended to convey specific hazard information visually.

Sample label courtesy of Weber Packaging Solutions • www.weberpackaging.com
Hazard Pictograms
Will be on chemical labels
Pictograms are universally understood pictures

Health Hazard
- Carcinogen
- Mutagenicity
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Aspiration Toxicity

Flame
- Flammables
- Pyrophorics
- Self-Heating
- Emits Flammable Gas
- Self-Reactives
- Organic Peroxides

Exclamation Mark
- Irritant (skin and eye)
- Skin Sensitizer
- Acute Toxicity (harmful)
- Narcotic Effects
- Respiratory Tract Irritant
- Hazardous to Ozone Layer (Non-Mandatory)
<table>
<thead>
<tr>
<th>Gas Cylinder</th>
<th>Corrosion</th>
<th>Exploding Bomb</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Gases Under Pressure</td>
<td>• Skin Corrosion/Burns</td>
<td>• Explosives</td>
</tr>
<tr>
<td></td>
<td>• Eye Damage</td>
<td>• Self-Reactives</td>
</tr>
<tr>
<td></td>
<td>• Corrosive to Metals</td>
<td>• Organic Peroxides</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flame Over Circle</th>
<th>Environment</th>
<th>Skull and Crossbones</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Oxidizers</td>
<td>• Aquatic Toxicity</td>
<td>• Acute Toxicity</td>
</tr>
<tr>
<td></td>
<td>(Non-Mandatory)</td>
<td>(fatal or toxic)</td>
</tr>
</tbody>
</table>
Signal Words
On chemical labels

“Danger” for severe hazards

“Warning” for less severe hazards

Note: the EPA uses “Caution” for the least severe of hazards.

Providing expertise to counties in the areas of lobbying, fiscal and legal research, communications, intergovernmental relations, information technology, field visits and risk management services.

www.ncacc.org
Hazard Statements
On chemical labels

A phrase assigned to each hazard category that describes the nature of the hazard.

Examples of hazard statements:
“Harmful if swallowed”
“Highly flammable liquid and vapor”
“Harmful to aquatic life”

GHS hazard statements are based in part on current EPA requirements and are generally very similar, but there can be some differences.
Precautionary Statements

On labels

Recommended measures that should be taken to minimize or prevent adverse effects resulting from exposures to or improper storage or handling of a hazardous product.
Precautionary Statements

Examples:
“Obtain special instructions before use”
“Do not spray on an open flame”
“Ground/bond container & receiving equipment”

“Do not eat, drink or smoke when using product”
When must changes be implemented?

• **Employers must train workers** on the new label elements and SDS format by **December 1, 2013**.

• Chemical manufacturers, importers, distributors, and employers must comply with all modified provisions of the final rule by **June 1, 2015**. However, distributors may ship products labeled by manufacturers under the old system until **December 1, 2015**.
When must changes be implemented?

• By June 1, 2016, employers must update alternative workplace labeling and hazard communication programs as necessary, and provide additional worker training for newly identified physical & health hazards.

• During this transition period, all chemical manufacturers, importers, distributors, and employers may comply with either 29 CFR 1910.1200 (this final standard), or the current standard, or both.
Websites with Additional Information:

Dept of Labor:
http://www.osha.gov/dsg/hazcom/ghs.html#1.6

EHS Today:
http://ehstoday.com/osha/guide-oshas-new-ghs-chemical-labeling-requirements