

**HAZARD COMMUNICATION:**

**NEW LABEL ELEMENTS AND SAFETY DATA SHEET (SDS) FORMAT**



# AGENDA

- Hazard Communication
  - Recent Changes
  - Pictograms
  - New Label Format
  - Signal Word
  - Safety Data Sheets



# HAZARD COMMUNICATION: CHANGES

- Due to regulatory changes, on June 1, 2015:
  - Material Safety Data Sheets (MSDS) became Safety Data Sheets (SDS)
    - SDS serve the same purpose as MSDS
    - SDS will be in a uniform format and easier to read
  - Labels on hazardous chemicals include:
    - Pictograms which visually identify the main hazards
    - Signal words: “warning” (less serious risk) or “danger” (more serious risk)
    - Hazard statements (what is the hazard?)
    - Precautionary statements (what should you do to protect yourself from the hazard?)



# HAZARD COMMUNICATION: NEW LABEL FORMAT

**SAMPLE LABEL**

CODE \_\_\_\_\_ } **Product Identifier**  
 Product Name \_\_\_\_\_


Company Name \_\_\_\_\_ } **Supplier Identification**  
 Street Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_  
 Postal Code \_\_\_\_\_ Country \_\_\_\_\_  
 Emergency Phone Number \_\_\_\_\_

Keep container tightly closed. Store in a cool, well-ventilated place that is locked.  
 Keep away from heat/sparks/open flame. No smoking.  
 Only use non-sparking tools.  
 Use explosion-proof electrical equipment.  
 Take precautionary measures against static discharge.  
 Ground and bond container and receiving equipment.  
 Do not breathe vapors.  
 Wear protective gloves.  
 Do not eat, drink or smoke when using this product.  
 Wash hands thoroughly after handling.  
 Dispose of in accordance with local, regional, national, international regulations as specified.

**In Case of Fire:** use dry chemical (BC) or Carbon Dioxide (CO<sub>2</sub>) fire extinguisher to extinguish.

**First Aid**  
 If exposed call Poison Center.  
 If on skin (or hair): Take off immediately any contaminated clothing. Rinse skin with water.

**Hazard Pictograms**



**Signal Word**  
**Danger**

Highly flammable liquid and vapor. } **Hazard Statements**  
 May cause liver and kidney damage.

**Precautionary Statements**

**Supplemental Information**

**Directions for Use**

\_\_\_\_\_










\_\_\_\_\_

\_\_\_\_\_

Fill weight: \_\_\_\_\_ Lot Number: \_\_\_\_\_  
 Gross weight: \_\_\_\_\_ Fill Date: \_\_\_\_\_  
 Expiration Date: \_\_\_\_\_



# HAZARD COMMUNICATION: PICTOGRAMS

<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 (harmful)</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>



# HAZARD COMMUNICATION: PICTOGRAMS

**Health Hazard**



- **Carcinogen**
- **Mutagenicity**
- **Reproductive Toxicity**
- **Respiratory Sensitizer**
- **Target Organ Toxicity**
- **Aspiration Toxicity**

Health Hazard chemicals pose a risk to your health if used improperly.



# HAZARD COMMUNICATION: PICTOGRAMS



**This pictogram will usually be used in combination with a Health Hazard pictogram to signify particularly hazardous chemicals.**

Chemicals that will produce adverse effects following a single dose of the substance.

These effects are more serious than the Acute Toxicity (harmful) listed under the Exclamation Point pictogram (next slide).



# HAZARD COMMUNICATION: PICTOGRAMS

## Exclamation Mark



- Irritant (skin and eye)
- Skin Sensitizer
- Acute Toxicity (harmful)
- Narcotic Effects
- Respiratory Tract Irritant
- Hazardous to Ozone Layer (Non-Mandatory)

The Exclamation Mark pictogram will usually be used in combination with a Health Hazard pictogram to signify particular health risks which are less severe than the Skull and Crossbones category.





# HAZARD COMMUNICATION: PICTOGRAMS



The Flame pictogram indicates there is a fire risk, and you should be especially concerned about ignition sources and combustible materials.



# HAZARD COMMUNICATION: PICTOGRAMS

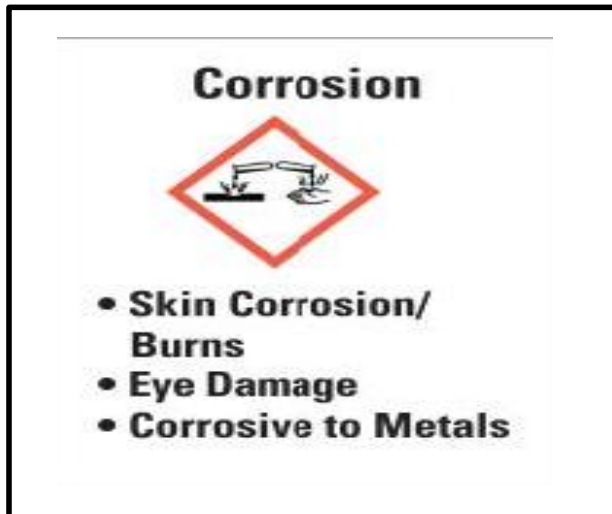


**Chemicals labeled with a Flame Over Circle can create an increased fire risk in your work or storage environment.**

**Oxidizers** are chemicals that produce additional oxygen in an environment, which may cause or contribute to the combustion of other materials.



# HAZARD COMMUNICATION: PICTOGRAMS



The Corrosion label should prompt you to be especially aware of PPE and storage requirements.



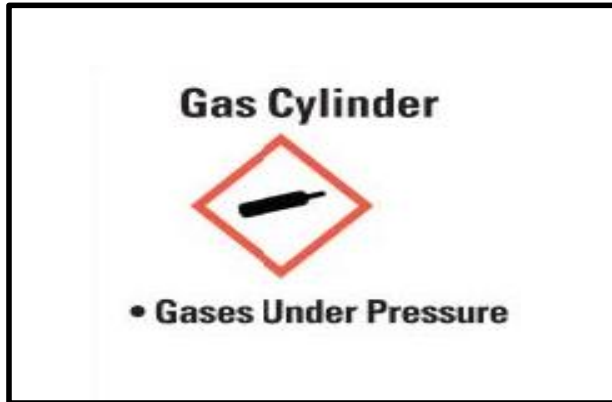
# HAZARD COMMUNICATION: PICTOGRAMS



Chemicals marked with an Exploding Bomb pose a significant physical risk and should be treated with extreme caution.



# HAZARD COMMUNICATION: PICTOGRAMS



The Gas Cylinder pictogram alerts you to the physical hazards inherent in the use and storage of compressed gas.



# HAZARD COMMUNICATION: PICTOGRAMS



The Environment pictogram is a “non-mandatory” category for safety training because it is regulated by other agencies but is included here for your information.



# HAZARD COMMUNICATION: NEW LABEL FORMAT

**SAMPLE LABEL**

**Product Identifier**

CODE \_\_\_\_\_  
Product Name \_\_\_\_\_

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**Supplier Identification**

Company Name \_\_\_\_\_  
Street Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_  
Postal Code \_\_\_\_\_ Country \_\_\_\_\_  
Emergency Phone Number \_\_\_\_\_

**Hazard Pictograms**

**Signal Word**  
Danger

**Hazard Statements**

Highly flammable liquid and vapor.  
May cause liver and kidney damage.

**Supplemental Information**

**Directions for Use**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Fill weight: \_\_\_\_\_ Lot Number: \_\_\_\_\_  
Gross weight: \_\_\_\_\_ Fill Date: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

**Precautionary Statements**

Keep container tightly closed. Store in a cool, well-ventilated place that is locked.  
Keep away from heat/sparks/open flame. No smoking.  
Only use non-sparking tools.  
Use explosion-proof electrical equipment.  
Take precautionary measures against static discharge.  
Ground and bond container and receiving equipment.  
Do not breathe vapors.  
Wear protective gloves.  
Do not eat, drink or smoke when using this product.  
Wash hands thoroughly after handling.  
Dispose of in accordance with local, regional, national, international regulations as specified.

**In Case of Fire:** use dry chemical (BC) or Carbon Dioxide (CO<sub>2</sub>) fire extinguisher to extinguish.

**First Aid**  
If exposed call Poison Center.  
If on skin (or hair): Take off immediately any contaminated clothing. Rinse skin with water.

What is it?


Who makes it?

Level of risk



# HAZARD COMMUNICATION: NEW LABEL FORMAT

**SAMPLE LABEL**

<p>CODE _____ Product Name _____</p>	}	<b>Product Identifier</b>	<p><b>Hazard Pictograms</b></p> 
<p>Company Name _____ Street Address _____ City _____ State _____ Postal Code _____ Country _____ Emergency Phone Number _____</p>	}	<b>Supplier Identification</b>	<p><b>Signal Word</b> <b>Danger</b></p>
<p>Keep container tightly closed. Store in a cool, well-ventilated place that is locked. Keep away from heat/sparks/open flame. No smoking. Only use non-sparking tools. Use explosion-proof electrical equipment. Take precautionary measures against static discharge. Ground and bond container and receiving equipment. Do not breathe vapors. Wear protective gloves. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Dispose of in accordance with local, regional, national, international regulations as specified.</p> <p><b>In Case of Fire:</b> use dry chemical (BC) or Carbon Dioxide (CO<sub>2</sub>) fire extinguisher to extinguish.</p> <p><b>First Aid</b> If exposed call Poison Center. If on skin (or hair): Take off immediately any contaminated clothing. Rinse skin with water.</p>			<div style="border: 1px solid black; border-radius: 10px; padding: 5px; width: fit-content; margin: 0 auto;"> <p>Highly flammable liquid and vapor. May cause liver and kidney damage. } <b>Hazard Statements</b></p> </div> <p><b>Precautionary Statements</b></p>
			<p><b>Supplemental Information</b></p> <p><b>Directions for Use</b></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Fill weight: _____ Lot Number: _____ Gross weight: _____ Fill Date: _____ Expiration Date: _____</p>


What are the hazards?





# HAZARD COMMUNICATION: NEW LABEL FORMAT

**SAMPLE LABEL**

<p>CODE _____ }                  Product Name _____ } <b>Product Identifier</b></p> <p>Company Name _____ }                  Street Address _____ }                  City _____ State _____ } <b>Supplier Identification</b>                  Postal Code _____ Country _____ }                  Emergency Phone Number _____ }</p>	<p><b>Hazard Pictograms</b></p>  <p><b>Signal Word</b> <b>Danger</b></p>	
<div style="border: 2px solid blue; border-radius: 20px; padding: 10px; margin-bottom: 10px;"> <p>Keep container tightly closed. Store in a cool, well-ventilated place that is locked.                      Keep away from heat/sparks/open flame. No smoking.                      Only use non-sparking tools.                      Use explosion-proof electrical equipment.                      Take precautionary measures against static discharge.                      Ground and bond container and receiving equipment.                      Do not breathe vapors.                      Wear protective gloves.                      Do not eat, drink or smoke when using this product.                      Wash hands thoroughly after handling.                      Dispose of in accordance with local, regional, national, international regulations as specified.</p> <p><b>In Case of Fire:</b> use dry chemical (BC) or Carbon Dioxide (CO<sub>2</sub>) fire extinguisher to extinguish.</p> <p><b>First Aid</b>                      If exposed call Poison Center.                      If on skin (or hair): Take off immediately any contaminated clothing. Rinse skin with water.</p> </div>	<p><b>Precautionary Statements</b></p> <p style="font-size: 2em; color: purple;">↑</p> <p style="font-size: 1.5em; color: purple;">How to protect yourself</p>	<p>Highly flammable liquid and vapor. } <b>Hazard Statements</b>                  May cause liver and kidney damage. }</p> <p><b>Supplemental Information</b></p> <p>Directions for Use                  _____                  _____                  _____</p> <p>Fill weight: _____ Lot Number: _____                  Gross weight: _____ Fill Date: _____                  Expiration Date: _____</p>



# HAZARD COMMUNICATION: SIGNAL WORD



## Pay attention to the Signal Word on the new labels!

- The Signal Word (“Warning” or “Danger”) is determined by the level of risk for each chemical on each hazard.
- For example, if a chemical is labeled as a Health Hazard and the hazard statement indicates that it is a carcinogen....
  - “Warning” means the substance “is suspected of causing cancer”
  - “Danger” means the substance “may cause cancer” ( There is more scientific evidence that the chemical will cause an increased risk of cancer if used improperly).



# HAZARD COMMUNICATION: SIGNAL WORD

Either way,

**WARNING**

or

**DANGER**

**Always follow the proper precautions!**



# HAZARD COMMUNICATION: Other Label Elements

OSHA label elements for:

Pyrophoric Gases:

- Signal Word: Danger
- Hazard Statement: “Catches fire spontaneously if exposed to air”

Simple Asphyxiants:

- Signal Word: Warning
- Hazard Statement: “May displace oxygen and cause rapid suffocation”

Combustible Dusts:

- Signal Word: Warning
- Hazard Statement: “May form combustible dust concentrations in the air”



# HAZARD COMMUNICATION: SAFETY DATA SHEETS

- **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** includes all hazards regarding the chemical; **required label elements**.
- **Section 3, Composition/information on ingredients** includes information on chemical ingredients; trade secret claims.
- **Section 4, First-aid measures** includes important symptoms/effects, acute, delayed; required treatment.
- **Section 5, Fire-fighting measures** lists suitable extinguishing techniques, equipment; chemical hazards from fire.



# HAZARD COMMUNICATION: SAFETY DATA SHEETS

- **Section 6, Accidental release measures** lists emergency procedures; protective equipment; proper methods of containment and cleanup.
- **Section 7, Handling and storage** lists precautions for safe handling and storage, including compatibilities.
- **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** lists the chemical's characteristics.
- **Section 10, Stability and reactivity** lists chemical stability and possibility of hazardous reactions.



# HAZARD COMMUNICATION: SAFETY DATA SHEETS

- **Section 11, Toxicological information** includes routes of exposure; related symptoms, acute and chronic effects; numerical measures of toxicity.
- **Section 12, Ecological information** provides information to evaluate the environmental impact of the chemical(s) if it were released to the environment.
- **Section 13, Disposal considerations** provides guidance on proper disposal practices, recycling or reclamation of the chemical(s) or its container, and safe handling practices.
- **Section 14, Transport information** provides guidance on classification information for shipping and transporting of hazardous chemical(s) by road, air, rail or sea.



# HAZARD COMMUNICATION: SAFETY DATA SHEETS

- **Section 15, Regulatory information** identifies the safety, health, and environmental regulations specific for the product that is not indicated anywhere else on the SDS.
- **Section 16, Other information**, includes the date of preparation or last revision.

