



HAZCOM: New label elements and safety data sheet (SDS) format

This training package was developed by Integrated Risk Solutions and made freely available as open source content to assist organizations in complying with the OSHA requirement 1910.1200(j)(1), which states “Employers shall train employees regarding the new label elements and safety data sheets format by December 1, 2013.”



AGENDA

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

HAZARD COMMUNICATION: UPCOMING CHANGES

- Due to regulatory changes, on or before June 1, 2015:
 - Material Safety Data Sheets (MSDS) will become 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 will 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 Name _____	Product Identifier
Company Name _____ Street Address _____ City _____ State _____ Postal Code _____ Country _____ Emergency Phone Number _____	Supplier Identification
Hazard Pictograms	
 	
Signal Word Danger	
<p>Keep container tightly closed. Store in a cool, well-ventilated place that is locked.</p> <p>Keep away from heat/sparks/open flame. No smoking.</p> <p>Only use non-sparking tools.</p> <p>Use explosion-proof electrical equipment.</p> <p>Take precautionary measures against static discharge.</p> <p>Ground and bond container and receiving equipment.</p> <p>Do not breathe vapors.</p> <p>Wear protective gloves.</p> <p>Do not eat, drink or smoke when using this product.</p> <p>Wash hands thoroughly after handling.</p> <p>Dispose of in accordance with local, regional, national, international regulations as specified.</p> <p>In Case of Fire: use dry chemical (BC) or Carbon Dioxide (CO₂) fire extinguisher to extinguish.</p> <p>First Aid If exposed call Poison Center. If on skin (or hair): Take off immediately any contaminated clothing. Rinse skin with water.</p>	Precautionary Statements
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: _____	

HAZARD COMMUNICATION: PICTOGRAMS

Corrosion



- Skin Corrosion/ Burns
- Eye Damage
- Corrosive to Metals

Health Hazard



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

Exclamation Mark



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

Flame



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

Gas Cylinder



- Gases Under Pressure

Environment

(Non-Mandatory)



- Aquatic Toxicity

Skull and Crossbones



- Acute Toxicity (fatal or toxic)

Flame Over Circle



- Oxidizers

Exploding Bomb



- Explosives
- Self-Reactives
- Organic Peroxides

HAZARD COMMUNICATION: PICTOGRAMS

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

Health Hazard



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

HAZARD COMMUNICATION: PICTOGRAMS

- The Skull and Crossbones pictogram will usually be used in combination with a Health Hazard pictogram to signify particularly hazardous chemicals.
 - Chemicals with **Acute Toxicity (fatal or toxic)** are 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).

Skull and Crossbones



- **Acute Toxicity (fatal or toxic)**

HAZARD COMMUNICATION: PICTOGRAMS

- 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.

Exclamation Mark



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

HAZARD COMMUNICATION: PICTOGRAMS

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

Flame



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

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.

Flame Over Circle



• Oxidizers

HAZARD COMMUNICATION: PICTOGRAMS

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

Corrosion



- Skin Corrosion/
Burns
- Eye Damage
- Corrosive to Metals

HAZARD COMMUNICATION: PICTOGRAMS

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

Exploding Bomb



- Explosives
- Self-Reactives
- Organic Peroxides

HAZARD COMMUNICATION: PICTOGRAMS

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

Gas Cylinder



• **Gases Under Pressure**

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.

Environment
(Non-Mandatory)



• **Aquatic Toxicity**

HAZARD COMMUNICATION: NEW LABEL FORMAT

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Signal Word Danger	
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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” (in other words, there is more scientific evidence that the chemical will cause an increased risk of cancer if used improperly).

Health Hazard



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

HAZARD COMMUNICATION: SIGNAL WORD

Either way,

WARNING

or

DANGER

Always follow the proper precautions!

HAZARD COMMUNICATIONS: 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 COMMUNICATIONS: 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 incompatibilities.
- **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 COMMUNICATIONS: 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 COMMUNICATIONS: 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.

REFERENCES

- OSHA <http://www.osha.gov/dsg/hazcom/index.html>
- Globally Harmonized System of Classification and Labeling of Chemicals (Fourth Revised Edition)
http://www.unece.org/trans/danger/publi/ghs/ghs_rev04/04files_e.html

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QUIZ

Name:

Date:

1. Why will Safety Data Sheets be easier to use than Material Safety Data Sheets?
2. Which Signal Word on a label indicates the risk of a chemical is more severe? (Circle one)

Warning

or

Danger
3. When is it more important to read and follow the Precautionary Statements listed on a chemical label?
4. Identify the meaning (in your own words) of the below pictograms:

