



# **1910 General Industry Hazard Communication Program**

# Introduction

## Lesson objectives:

1. Identify the employer's responsibilities under the HCS, including training requirements
2. Identify components of a Hazard Communication program
3. Describe requirements of the different types of Hazard Communication labels
4. Locate pertinent information about chemicals on labels, including other forms of hazard communication, to ensure "right to understanding" provisions of GHS requirements

# Introduction

## Case Study



Source: OSHA

# Introduction

## HCS/GHS

- Save lives
  - Approximately 43 deaths per year deaths
  - Approximately 585 injuries/illnesses per year
- Save \$
  - \$475.2M in increased productivity
  - \$32.2M in cost savings



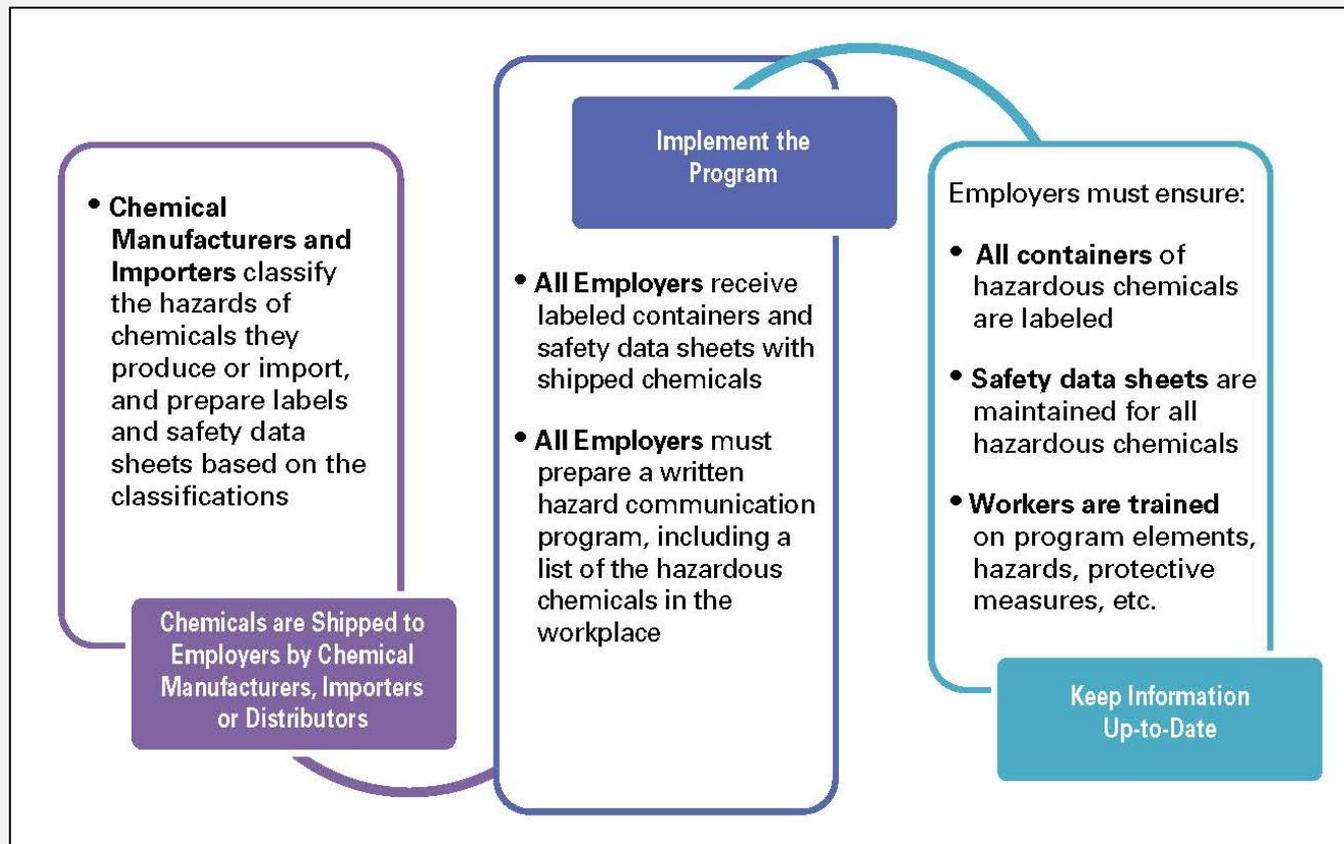
# Employer Responsibilities

## Employer responsibilities under the HCS:

- Ensure labels are on incoming labels and not defaced
- Maintain SDSs from shipments
- Obtain SDSs if not received
- Ensure SDSs are readily accessible
- Ensure chemicals in workplace are properly labeled, tagged, or marked
- Provide information and training to employees
- Provide information/access for employees in multi-employer workplaces
- Develop, implement, and maintain a written hazard communication program

# Employer Responsibilities

How hazard communication works:



Source: OSHA

# Hazard Communication Program

Requirements for a written program:

- Develop, implement, and maintain a written hazard communication program
- Main intent is to ensure compliance with standard in a systematic way that coordinates all elements

# Hazard Communication Program

## Components of written program:

- Lists of hazardous chemicals present at worksite
- Availability of SDSs to employees and downstream employers
- Labeling of chemical containers
- Training programs regarding hazards of chemicals and protective measures

# Hazard Communication Program

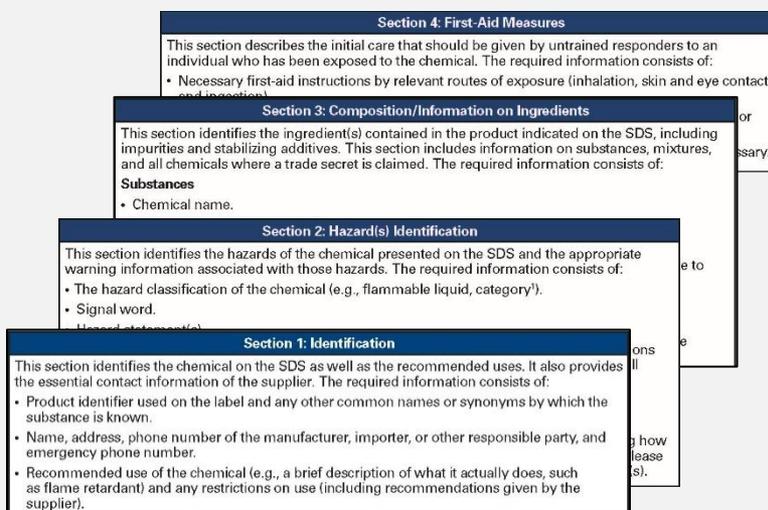
## List of hazardous chemicals:

- Use product identifier
  - Product name, common name or chemical name
  - Same as name used on SDS and label
- Inventory of chemicals – employer must have available an SDS for each
- Covers all chemicals in all forms, whether contained or not
- Include chemicals in containers, pipes, and those generated by work operations

# Hazard Communication Program

## Safety data sheet (SDS):

- Available and accessible to workers
- Required for all hazardous chemical used
- Do not use hazardous chemicals if there is no SDS available
- 16-section format



Source: OSHA

# Hazard Communication Program

## SDS documentation:

- Designate person(s) responsible for obtaining and maintaining SDSs
- Describe how SDSs are maintained and how employees can access them
- Procedures if SDS is not received with first shipment
- Must have SDS for each chemical; train workers on SDS format and use



Source: OSHA

# Hazard Communication Program

## SDS 16-section format:

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



Source: OSHA

# Hazard Communication Program

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



Not regulated  
by OSHA

# Hazard Communication Program

## Example of New Format SDS

### GHS System and Labels Down in Section 2

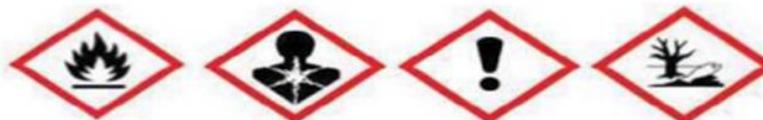
#### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** : Product XYZ  
**Synonyms** :  
**SDS Number** : 888100008809      **Version** : 1.1  
**Product Use Description** : Fuel  
**Company** :  
**Chemtrec (Emergency Contact)** : (800) 424-9300

#### SECTION 2. HAZARDS IDENTIFICATION

**Classifications** : Flammable Liquid – Category 1 or 2 depending on formulation.  
Aspiration Hazard – Category 1  
Carcinogenicity – Category 2  
Specific Target Organ Toxicity (Repeated Exposure) – Category 2  
Specific Target Organ Toxicity (Single Exposure) – Category 3  
Skin Irritation – Category 2  
Eye Irritation – Category 2B  
Chronic Aquatic Toxicity – Category 2

**Pictograms** :



**Signal Word** : **Danger**

Source: OSHA

# Hazard Communication Program

## Labeling:

- All containers of hazardous materials must be labeled
- Immediate warning
- Snapshot of hazards and protective information

# Hazard Communication Program

## Documentation for labeling:

- Designate person(s) responsible for labeling compliance
- Describe alternatives to labeling of stationary process containers
- Ensure all workplace containers are labeled appropriately
- Labels included in training (shipping and workplace containers)
- Procedures for reviewing/updating workplace label information



# Hazard Communication Program

## Requirements for **workplace labels**:

- Employers can create own labeling system that works for their workplace/employees
- Can choose same label required for shipped containers or alternative labels as long as they provide general information about hazards
- Train employees to understand



Source: OSHA

# Hazard Communication Program

## Training requirements:

- Train employees on hazardous chemicals in their work area
  - Before initial assignment
  - When new hazards are introduced
  - Non-routine tasks
- Include in training
  - Methods/observations to determine presence/release of chemical in work area
  - Hazards of chemicals
  - Appropriate protective measures
  - Where and how to obtain additional information



Source: OSHA

# Hazard Communication Labels

## Types of labels:

- HCS shipping labels
- HCS workplace labels
- NFPA 704 labels
- HMIS labels
- DOT shipping labels, placarding, and markings



Source of graphics: OSHA

# Hazard Communication Labels

## Required elements for HCS shipping labels:

- Product identifier
- Signal word
- Hazard statement(s)
- Precautionary statement(s)
- Pictogram
- Name, address, telephone number

SAMPLE LABEL	
<b>PRODUCT IDENTIFIER</b> CODE Product Name	<b>HAZARD PICTOGRAMS</b> 
<b>SUPPLIER IDENTIFICATION</b> Company Name Street Address City, State _____ Postal Code, Country _____ Emergency Phone Number _____	<b>SIGNAL WORD</b> <b>Danger</b>
<b>PRECAUTIONARY STATEMENTS</b> Keep container tightly closed. Store in 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 measure 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. <b>In Case of Fire:</b> use dry chemical (BC) or Carbon dioxide (CO <sub>2</sub> ) fire extinguisher to extinguish. <b>First Aid</b> If exposed call Poison Center. If on skin (on hair): Take off immediately any contaminated clothing. Rinse skin with water.	<b>HAZARD STATEMENT</b> Highly flammable liquid and vapor. May cause liver and kidney damage. <b>SUPPLEMENTAL INFORMATION</b> <b>Directions for use</b> _____ _____ _____ <b>Fill weight Lot Number</b> _____ <b>Gross weight Fill Date</b> _____ <b>Expiration Date</b> _____

Source: OSHA

# Hazard Communication Labels

Figure 5: Example of Required HCS Label Elements

**How the hazardous chemical is identified**

**Product Identifier**  
Pictogram (Symbol in Red Frame)



**Contact information of responsible party**

**Signal Word** (*Danger*)  
**Hazard Statement(s)** (*Extremely flammable gas*)  
**Pictogram** (*Flammable gas*)  
**Precaution Statement(s)** (*Keep away from heat and open flames. No smoking. Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so. Store in well-ventilated place.*)

**Name, Address, and Telephone Number of Manufacturer, Importer, or Other Responsible Party**

Source: OSHA

# Hazard Communication Labels

Figure 5: Example of Required HCS Label Elements



Source: OSHA

# Hazard Communication Labels



Figure 3: HazCom 2012 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>

Source: OSHA

# Hazard Communication Labels



Figure 3: HazCom 2012 Pictograms

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# Hazard Communication Labels

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**Not regulated by OSHA**

Source: OSHA

# Hazard Communication Labels

## GHS Label Elements

Statement assigned to hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

Product Identifier  
Pictogram (Symbol in Red Frame)



Describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling.

Signal Word (Danger)

Hazard Statement(s) (Extremely flammable gas)

Precautionary Statement(s) (Keep away from heat and open flames. No smoking. Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so. Store in well-ventilated place.)

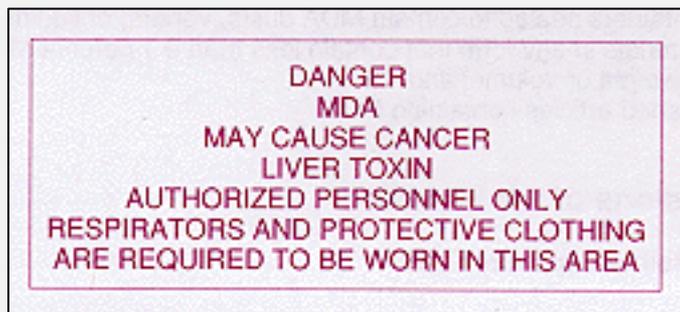
Name, Address, and telephone Number  
of Manufacturer, Importer, or Other Responsible Party

Source: OSHA

# Hazard Communication Program

## Requirements for **workplace labels**:

- Same information as label from manufacturer or product identifier and words, pictures, symbols, or combination thereof
- May include signs, placards, process sheets, batch tickets, operation procedures, or other written materials



Source of graphics: OSHA



# Hazard Communication Labels

- Alternative workplace labels:
  - Permitted for workplace labels
  - Must provide at least general information regarding hazards of chemicals
  - Hazard warnings or pictograms that conflict with HCS label elements cannot be used
  - Examples: NFPA 704 and HMIS



Source: OSHA

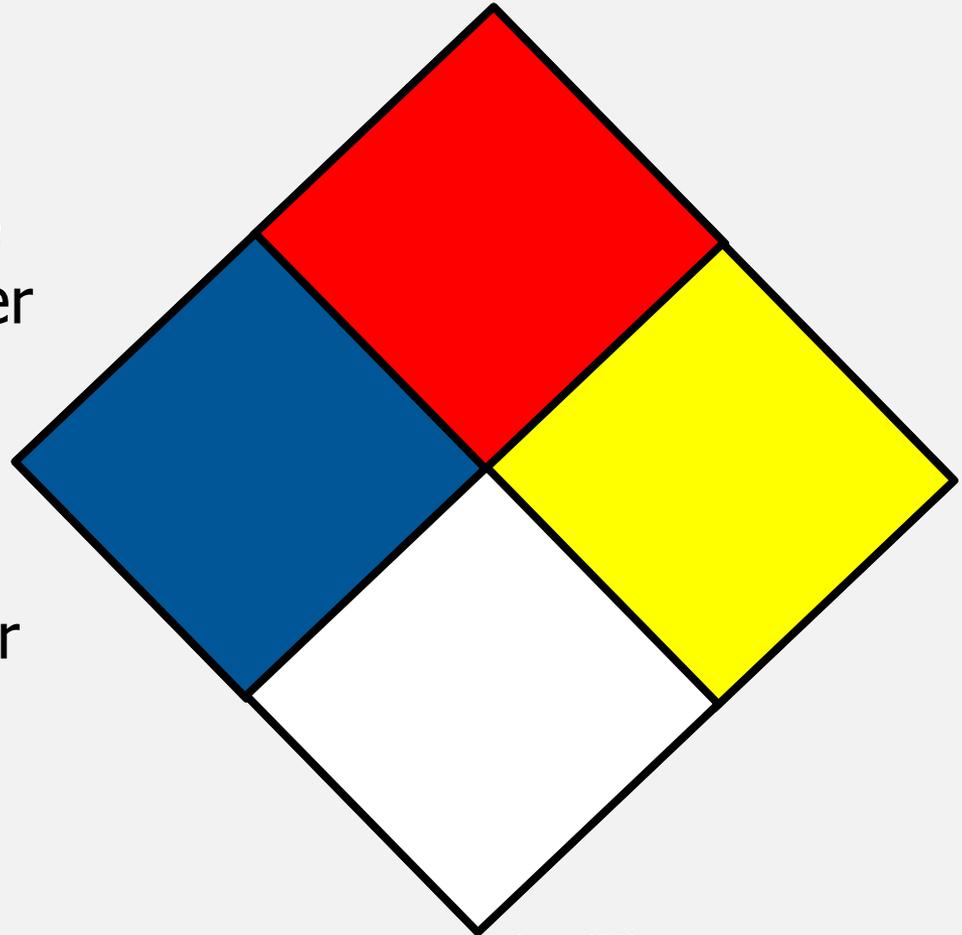


Source: TEEEX

# Hazard Communication Labels

## Other labels:

- NFPA 704
  - Overall diamond shape made up of four smaller diamonds
  - Each smaller diamond is a different color
  - Numbers within smaller diamonds represent severity of hazard



Source: OTIEC

# Hazard Communication Labels

– NFPA 704 – hazards and severity ratings

**White = Other special hazards**

**W = Reactivity to water**

**OX = Oxidizer**

**SA = Simple asphyxiant**

**1 = Slight hazard**

**2 = Moderate hazard**

**3 = Extreme hazard**

**4 = Deadly hazard**

**Flammability Hazard**

**Blue = Health hazards**

**0 = Normal material that poses no health**

**Red = Flammability Hazards**

**0 = Will not burn**

**1 = Flashpoint above 200°F**

**2 = Flashpoint between 100 – 200°F**

**3 = Flashpoint below 100°F**

**4 = Flashpoint less than 73°F**

**Other Special Hazard**

Source: OTIEC

# Hazard Communication Labels



# Hazard Communication Labels

- HMIS label
  - Intended for “in-plant” (workplace) labeling compliance
  - Color-coded bars
  - Numerical scale, 0-4, with 0 as lowest hazard and 4 as highest hazard
    - 0 = Minimal hazard
    - 1 = Slight hazard
    - 2 = Moderate hazard
    - 3 = Serious hazard
    - 4 = Severe hazard

<i>(Product identifier)</i>	
<b>HEALTH</b>	<input type="text"/> <input type="text"/>
<b>FLAMMABILITY</b>	<input type="text"/>
<b>PHYSICAL HAZARD</b>	<input type="text"/>
<b>PERSONAL PROTECTION</b>	<input type="text"/>

Source: OTIEC

# Hazard Communication Labels

- HMIS hazard indicators

<i>(Product identifier)</i>	
<b>HEALTH</b>	<input type="checkbox"/> <input type="checkbox"/>
<b>FLAMMABILITY</b>	<input type="checkbox"/>
<b>PHYSICAL HAZARD</b>	<input type="checkbox"/>
<b>PERSONAL PROTECTION</b>	<input type="checkbox"/>

Source: OTIEC

## PPE Index:

A = Safety glasses

B = Safety glasses + gloves

C = Safety glasses + gloves + apron

D = Face shield + gloves + apron

E = Safety glasses + gloves + dust respirator

F = Safety glasses + gloves + apron + dust respirator

G = Safety glasses + gloves + vapor respirator

H = Splash goggles + gloves + apron + vapor respirator

I = Safety glasses + gloves + dust and vapor respirator

J = Splash goggles + gloves + apron + dust and vapor respirator

K = Air-line hood or mask + gloves + full suit + boots

X = Ask supervisor or safety specialist

# Hazard Communication Labels

Ammonium Hydroxide		
HEALTH	*	2
FLAMMABILITY		0
PHYSICAL HAZARD		0
PERSONAL PROTECTION		J

Source: OTIEC

# Hazard Communication Labels

- DOT shipping containers – marking, labeling, and placarding
  - Uses graphic elements on square-on-point placards or labels to identify shipments of hazardous materials
  - Square-on-points have backgrounds of various colors
  - Where shipping container is also container used in workplace, workers must be made aware of DOT pictograms
  - DOT Classification – groups hazardous materials based on dangers posed in transportation; 9 classes

# Hazard Communication Labels

- Labels
- Placards
- Markings



Source: OSHA



Source: TEEEX

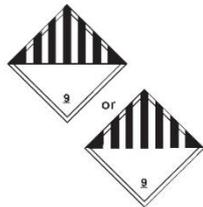


Source: DOT - PHMSA

# Hazard Communication Labels

## DOT warning labels

**Hazardous Materials Warning Labels**  
Actual label size: at least 100 mm (3.9 inches) on all sides

<p><b>CLASS 1 Explosives:</b> Divisions 1.1, 1.2, 1.3, 1.4, 1.5, 1.6</p>  <p style="text-align: center;">§172.411</p>	<p><b>CLASS 2 Gases:</b> Divisions 2.1, 2.2, 2.3</p>  <p style="text-align: center;">§172.405(a), §172.415, §172.416, §172.417</p>	<p><b>CLASS 3 Flammable Liquid</b></p>  <p style="text-align: center;">§172.419</p>	<p><b>CLASS 4 Flammable Solid, Spontaneously Combustible, and Dangerous When Wet:</b> Divisions 4.1, 4.2, 4.3</p>  <p style="text-align: center;">§172.420, §172.422, §172.423</p>	<p><b>CLASS 5 Oxidizer, Organic Peroxide:</b> Divisions 5.1 and 5.2</p>  <p style="text-align: center;">§172.426, §172.427</p>	
<p><b>CLASS 6 Poison (Toxic), Poison Inhalation Hazard, Infectious Substance:</b> Divisions 6.1 and 6.2</p>  <p style="text-align: center;">§172.323, §172.405(c), §172.429, §172.430, §172.432</p>		<p><b>CLASS 7 Radioactive</b></p>  <p style="text-align: center;">§172.436, §172.438, §172.440, §172.441</p>	<p><b>CLASS 8 Corrosive</b></p>  <p style="text-align: center;">§172.442</p>	<p><b>CLASS 9 Miscellaneous Hazardous Material</b></p>  <p style="text-align: center;">§172.446</p>	<p><b>Cargo Aircraft Only</b></p>  <p style="text-align: center;">§172.448</p> <p><b>Empty Label</b></p>  <p style="text-align: center;">§172.450</p>

\* Include compatibility group letter.  
\*\* Include division number and compatibility group letter.

For Regulated Medical Waste (RMW), an Infectious Substance label is not required on an outer packaging if the OSHA Biohazard marking is used as prescribed in 29 CFR 1910.1030(g). A bulk package of RMW must display a BIOHAZARD marking.

Source: DOT - PHMSA

# Hazard Communication Labels

## DOT warning placards

### Hazardous Materials Warning Placards

Actual placard size: at least 250 mm (9.84 inches) on all sides

CLASS 1 Explosives	CLASS 2 Gases	CLASS 3 Flammable Liquid and Combustible Liquid	CLASS 4 Flammable Solid, Spontaneously Combustible, and Dangerous When Wet		
<p>§172.522 §172.523 §172.524 §172.525</p> <p>* For Divisions 1.1, 1.2, or 1.3, enter division number and compatibility group letter, when required; placard any quantity. For Divisions 1.4, 1.5, and 1.6, enter compatibility group letter, when required; placard 454 kg (1,001 lbs) or more.</p>	<p>§172.528 §172.530 §172.532 §172.540</p> <p>For NON-FLAMMABLE GAS, OXYGEN (compressed gas or refrigerated liquid), and FLAMMABLE GAS, placard 454 kg (1,001 lbs) or more gross weight. For POISON GAS (Division 2.3), placard any quantity.</p>	<p>§172.542 §172.544</p> <p>For FLAMMABLE, placard 454 kg (1,001 lbs) or more. GASOLINE may be used in place of FLAMMABLE placard displayed on a cargo tank or portable tank transporting gasoline by highway. Placard combustible liquid transported in bulk. See §172.504(f)(2) for use of FLAMMABLE placard in place of COMBUSTIBLE. FUEL OIL may be used in place of COMBUSTIBLE on a cargo or portable tank transporting fuel oil not classed as a flammable liquid by highway.</p>	<p>§172.546, §172.547, §172.548</p> <p>For FLAMMABLE SOLID and SPONTANEOUSLY COMBUSTIBLE, placard 454 kg (1,001 lbs) or more. For DANGEROUS WHEN WET (Division 4.3), placard any quantity.</p>		
CLASS 5 Oxidizer & Organic Peroxide	CLASS 6 Poison (Toxic) and Poison Inhalation Hazard	CLASS 7 Radioactive	CLASS 8 Corrosive	CLASS 9 Miscellaneous	Dangerous
<p>Organic Peroxide, Transition-2011 (rail, vessel, and aircraft) 2014 (highway)</p> <p>§172.550, §172.552</p> <p>For OXIDIZER and ORGANIC PEROXIDE (other than TYPE B, temperature controlled), placard 454 kg (1,001 lbs) or more. For ORGANIC PEROXIDE (Division 5.2), Type B, temperature controlled, placard any quantity.</p>	<p>§172.504(f)(10), §172.554, §172.555</p> <p>For POISON (PGI or PGII), other than inhalation hazard and POISON (PGIII), placard 454 kg (1,001 lbs) or more. For POISON-INHALATION HAZARD (Division 6.1), inhalation hazard only, placard any quantity.</p>	<p>§172.556</p> <p>Placard any quantity - packages bearing RADIOACTIVE YELLOW-III labels only. Certain low specific activity radioactive materials in "exclusive use" will not bear the label, but the radioactive placard is required for exclusive use shipments of low specific activity material and surface contaminated objects transported in accordance with §172.504(e) Table 1 and §173.427(a)(6).</p>	<p>§172.558</p> <p>For CORROSIVE, placard 454 kg (1,001 lbs) or more.</p>	<p>§172.560</p> <p>Not required for domestic transportation. A bulk packaging containing a Class 9 material must be marked with the appropriate ID number displayed on a Class 9 placard, an orange panel, or a white square-on-point display.</p>	<p>§172.521</p> <p>A freight container, unit load device, transport vehicle, or rail car which contains non-bulk packages with two or more categories of hazardous materials that require different placards specified in Table 2 §172.504(e) may be placarded with DANGEROUS placards instead of the specific placards required for each of the materials in Table 2. However, when 1,000 kg (2,205 lbs) or more of one category of material is loaded at one loading facility, the placard specified in Table 2 must be applied.</p>
					<p>§172.315(a)(2) (Vessel transport only).</p>

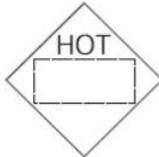
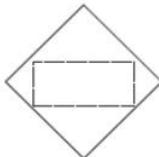
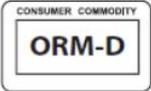
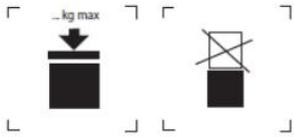
**Safety begins with communication!**

Source: DOT - PHMSA

# Hazard Communication Labels

## DOT markings

**HAZARDOUS MATERIALS MARKINGS**

<p>Package Orientation (Red or Black)</p>  <p>§172.312(a)</p>	<p>Keep Away from Heat</p>  <p>§172.317</p>	<p>OVERPACK</p>  <p>§173.25(a)(4)</p>	<p>Fumigant Marking (Red or Black)</p>  <p>§172.302(g) and §173.9</p>	<p>INHALATION HAZARD</p>  <p>§172.313(a)</p>	<p>HOT</p>  <p>§172.325</p>	<p>Biological Substances, Category B</p>  <p>§172.332(a)</p>	<p>UN3373</p>  <p>§173.199 (a)(5)</p>
<p>All other Modes</p>  <p>§172.315</p>	<p>Air Only</p>  <p>§172.315</p>	<p>ORM-D, Transition December 31, 2020</p>  <p>§172.316</p>	<p>UN1755</p>  <p>§173.4a(g)</p>	<p>Excepted Quantity</p>  <p>§173.4a(g)</p>	<p>Marking of IBCs</p>  <p>§178.703(b)(7)(i)</p>	<p>Marine Pollutant</p>  <p>§172.322</p>	

\* The new limited quantity marking designates hazardous material packages prepared for air transport (Y) and packages not prepared for air transport (all other modes). The ORM-D classification and the use of packagings marked "Consumer commodity, ORM-D" is authorized until December 31, 2020, for domestic highway, rail, and vessel transportation. Transitional exception—Square-on-point with Identification Number: except for transportation by aircraft and until December 31, 2014, a package containing a limited quantity may be marked with identification number, preceded by the letters "UN" or "NA".

Source: DOT - PHMSA

# Locating Information

## Example 1: HS85 Label

**HS85**  
Batch number: 85L6543



**Warning**  
Harmful if swallowed

Wash hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Dispose of contents/container in accordance with local, state and federal regulations.

**First aid:**

If swallowed: Call a doctor if you feel unwell. Rinse mouth.

GHS Example Company, 123 Global Circle, Anyville, NY 130XX

Telephone (888) 888-8888

Source: OSHA

# Locating Information

Identifier: NOMIXUP 7042012



**DANGER!**

**Hazard Statements:**

Extremely Flammable Gas  
May Cause Cancer  
May Cause Respiratory Irritation  
In Contact with Water Releases Flammable Gas

**Precautionary Statements:**

Keep away from heat/sparks/open flames/hot surfaces.-No Smoking  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Avoid breathing vapors and mists.  
Wear protective gloves and eye protection.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
Call poison center/doctor if you feel unwell.  
Leaking Gas Fire: Do not extinguish unless leak can be stopped safely.  
Eliminate all ignition sources if safe to do so.  
Store in tightly closed container in a well-ventilated place, locked up.  
Use outdoors or use in a well-ventilated place.  
Dispose of contents in accordance with local/regional/national regulations.

XYZ Chemical Company 123 Main St. Anywhere , NY, USA 1-800-000-1111

Source: OSHA

# Locating Information



Source: OSHA

# Locating Information

In which section of an SDS would you find the following information?

1. Hazard identification such as hazard classification, signal word, and precautionary statements

**Section 2: Hazard(s) Identification**

2. Initial care instructions for untrained responders attending to an individual who has been exposed to the chemical

**Section 4: First-Aid Measures**

3. Recommendations for PPE

**Section 8: Exposure Controls/Personal Protection**

# ACCIDENT

A Temporary Mechanic was assigned to supervise and assist another craft that was contracted to perform “pit sealing” in a hydraulic elevator pit located in a parking garage.

The TM provided access to the pit by raising the elevator, placing pipe stands, closing and pinning the pit valve and performing lockout/ tagout.

The TM provided access to a GFCI outlet outside of the pit and remained in the vicinity near the machine room and his service vehicle.

The pit sealing crew commenced work by pouring a gallon of Acetone on the pit floor, cleaning the oil and grease from the floor.



# ACCIDENT

As they began using an angle grinder to remove high spots on the pit floor, sparks ignited the Acetone vapor.

Both men caught fire from the ignition and flashback of the explosion.

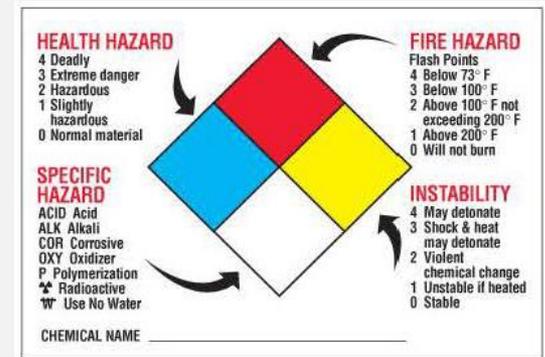
The TM heard the event, grabbed the fire extinguisher from the machine room, and extinguished the fire. He continued to assist until emergency responders arrived.



# ACCIDENT

## Recommendations & Lessons Learned

- Insist that your employer provides safety data sheets for chemicals used by other crafts under your control.
- Understand hazardous materials warning labels and review employer's hazardous communication program.
- Non-elevator work performed in pits by others should be continuously supervised to prevent catastrophic events from occurring
- Enroll in a confined space awareness course for a greater understanding of safe work practices in confined spaces



# Knowledge Check

1. A hazard communication program requires which of the following components?
  - a. Written program
  - b. SDS/labeling
  - c. Training
  - d. All of the above

**Answer: d. All of the above**

# Knowledge Check

2. How many sections are required on an SDS?
- a. 11 sections
  - b. 16 sections
  - c. 4 sections
  - d. As many as necessary to convey understanding

**Answer: b. 16 sections**

# Knowledge Check

3. Which of the following statements is true of the pictograms on HCS labels?

- a. They are identical to those used on DOT transport labels and may have various background colors
- b. They consist of four bars that are color-coded as blue, red, yellow, and white to match hazards
- c. HCS pictograms are required and standardized red square-on-points with black hazard symbols and white backgrounds
- d. All of the above

**Answer: c. HCS pictograms are required and standardized red square-on-points with black hazard symbols and white backgrounds.**

# Knowledge Check

4. Your right to understand is \_\_\_\_\_.
- a. Not simply shown or told
  - b. Not simply given an SDS
  - c. Required at initial assignment/when thing change
  - d. All of the above

**Answer: d. All of the above**

# Summary

In this module we discussed:

- Employer's responsibilities under HCS
- Components of a hazard communication program
- Requirements of different types of hazard communication labels
- How to locate pertinent information

Through the Alliance between OSHA's 10 Regional Offices and the Elevator Contractors of America (ECA), Elevator Industry Work Preservation Fund (EIWPF), International Union of Elevator Constructors (IUEC), National Association of Elevator Contractors (NAEC), National Elevator Industry Educational Program (NEIEP), and National Elevator Industry Inc. (NEII), collectively known as The Elevator Industry Safety Partners, developed this Hazard Communication Industry Specific Training for informational purposes only. It does not necessarily reflect the official views of OSHA or the U.S. Department of Labor. May 2021

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Any questions?

