

AWARENESS TRAINING  
**Hazard Communication**  
FOR EMPLOYEES



## How to Use this Presentation

This presentation contains base material for use in an instructor-led training setting. You may modify this presentation to satisfy the specific training needs of your organization.

On some slides, the display text is supplemented with additional material in the slide notes.

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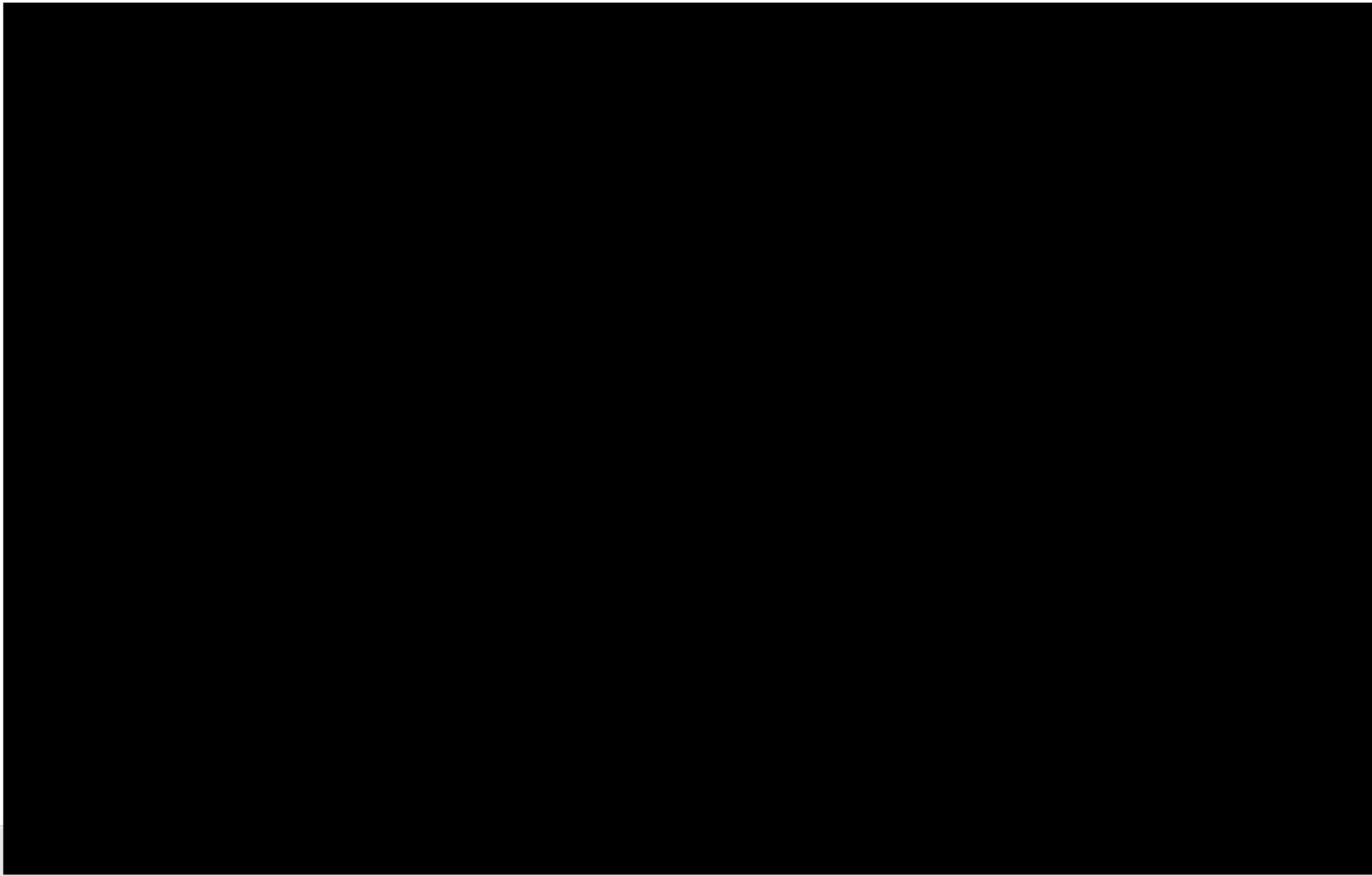
### **DISCLAIMER**

This training material presents very important, pertinent information. It should not be assumed, however, that this program satisfies every legal requirement of every state. Some states require the training be developed and delivered by an individual with specific training and experience.

This training is AWARENESS LEVEL and does not authorize any person to perform work or validate their level of competency; it must be supplemented with operation and process-specific assessments and training, as well as management oversight, to assure that all training is understood and followed.

Your organization must do an evaluation of all exposures and applicable codes and regulations. In addition, establish proper controls, training, and protective measures to effectively control exposures and assure compliance.

This program is neither a determination that the conditions and practices of your organization are safe, nor a warranty that reliance upon this program will prevent accidents and losses or satisfy local, state, or federal regulations.



# Course Overview

1. GHS-Compliant Labeling
2. Safety Data Sheets (SDS)



# 1

## GHS-Compliant Labeling

### **What you need to know:**

1. How to read safety information found on labels
2. The nine pictograms
3. Labeling requirements for secondary containers and pipes that contain hazardous chemicals



**Video:** The GHS-compliant Label

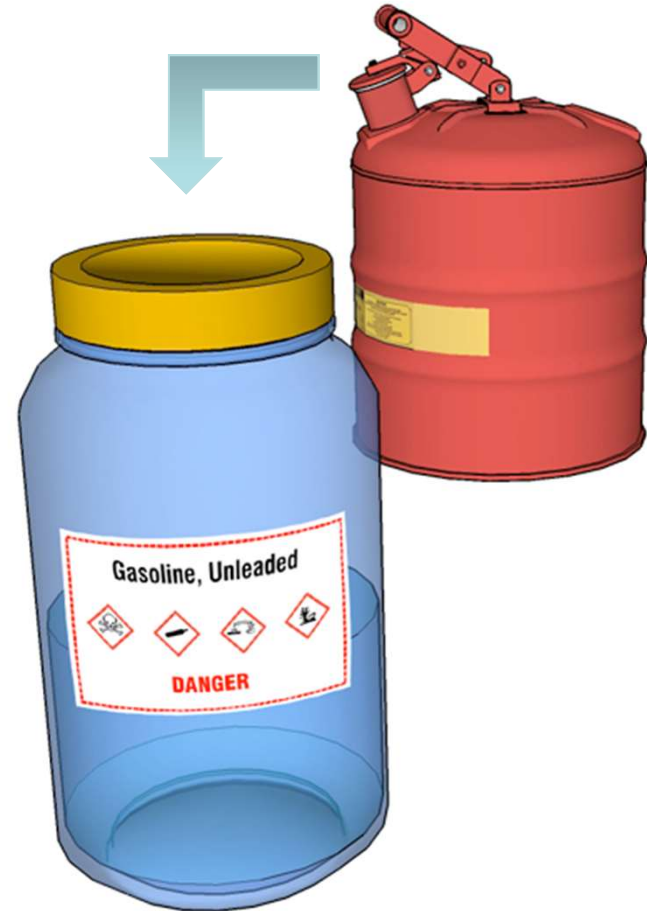
# Labels for Secondary Containers

When hazardous materials are transferred from their original containers into secondary containers that will be left unattended, these **must also be labeled with the contents and hazards**.

## Field Observations

Notify your supervisor if you observe secondary containers left unattended for any period of time without a **legible English label** containing the following information:

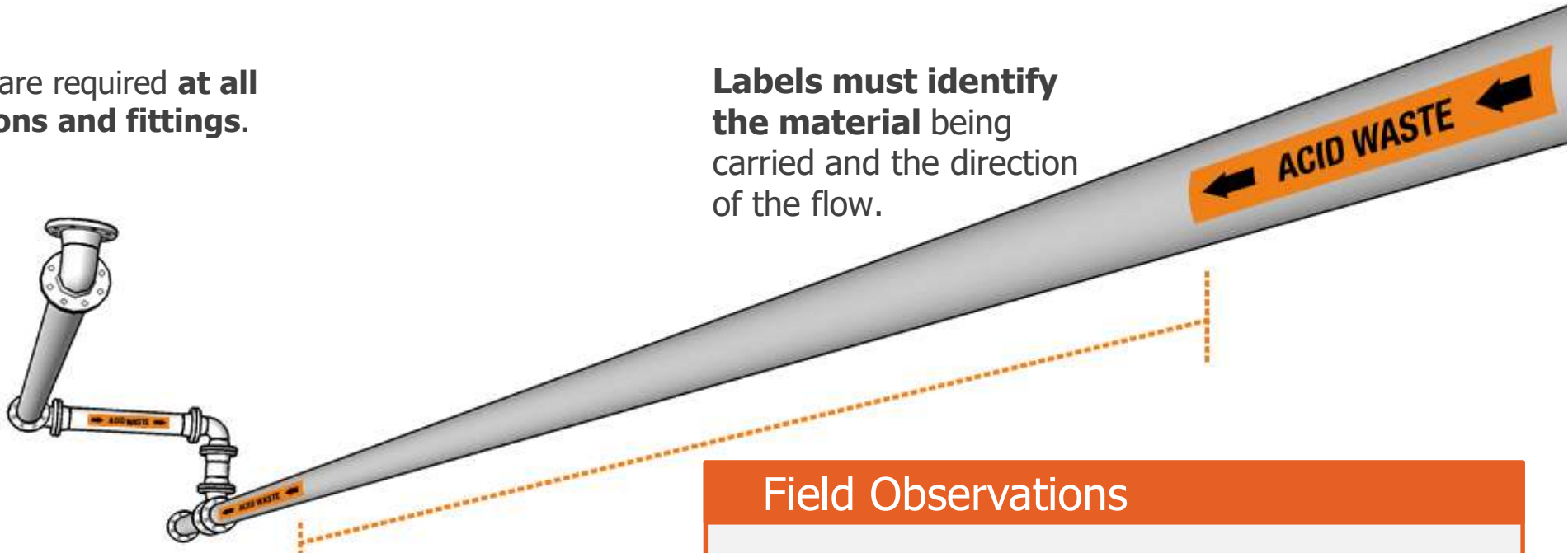
- The **identity** of the chemical
- **Appropriate warnings** that provide an immediate understanding of the primary hazards (e.g., words, pictures, or symbols)



# Labels for Pipes

Labels are required **at all junctions and fittings.**

Labels must identify **the material** being carried and the direction of the flow.



**25 feet** is the maximum distance between labels.

## Field Observations

Notify your supervisor if you observe pipes carrying hazardous chemicals without labels for the following:

- The material being carried
- The direction of flow



# Exercise 1: Pictogram Identification

Match each pictogram to its corresponding description.



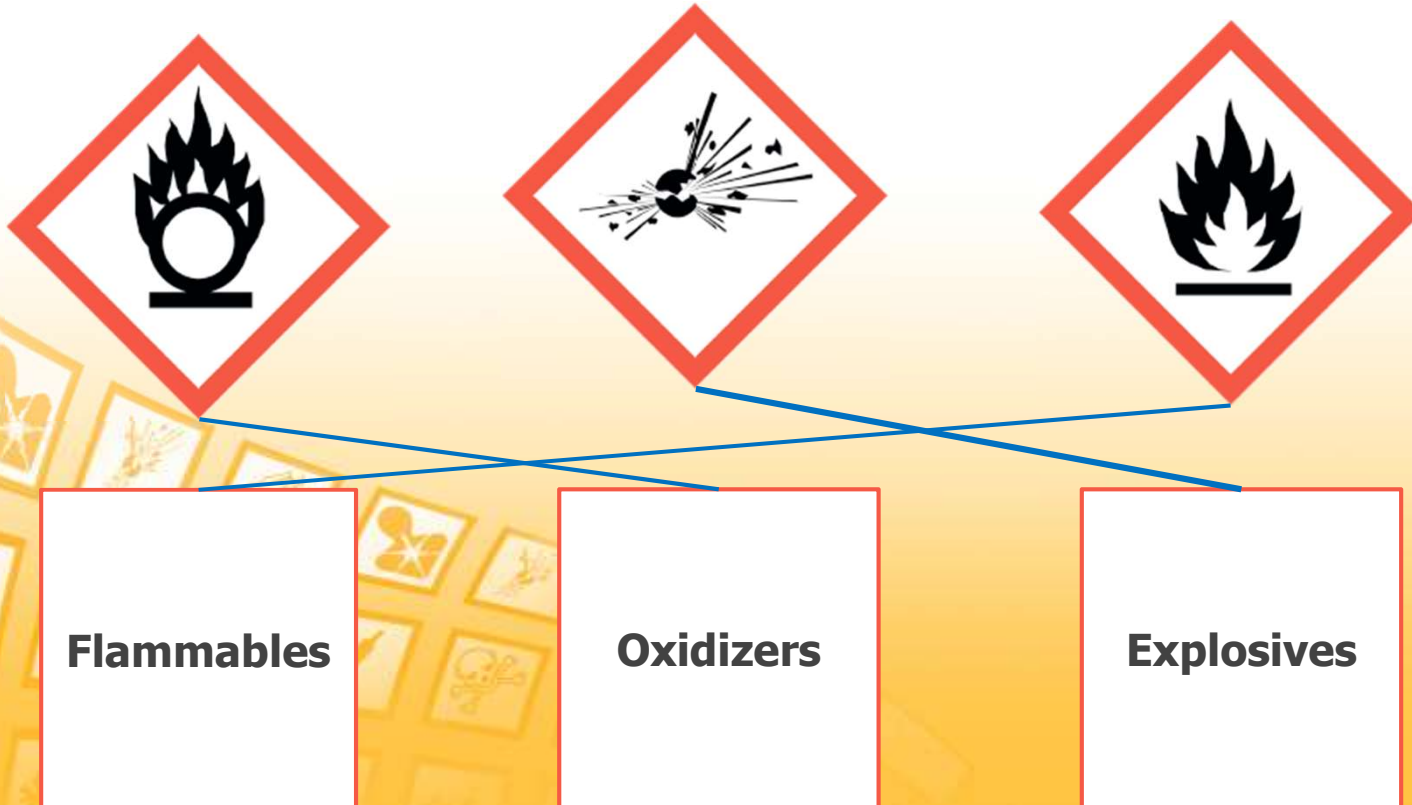
**Flammables**

**Oxidizers**

**Explosives**

# Exercise 1: Pictogram Identification

Answer:



## Exercise 2: Pictogram Identification

Match each pictogram to its corresponding description.



**Gases Under  
Pressure**

**Acute  
Toxicity**

**Corrosives**



## Exercise 2: Pictogram Identification

Answer:



**Gases Under Pressure**



**Acute Toxicity**



**Corrosives**

## Exercise 3: Pictogram Identification

Match each pictogram to its corresponding description.



**Environmental  
Toxicity**

**Health Hazard**

**Irritant**

## Exercise 3: Pictogram Identification

Answer:



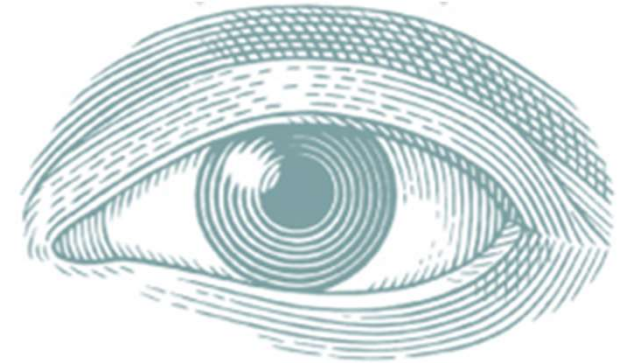
**Environmental  
Toxicity**

**Health Hazard**

**Irritant**

# Container Labeling: Your Role

As an **employee** or **private contractor**, you must be aware of hazardous container labeling requirements and exercise appropriate caution.



## Field Observations

- ▶ Do you know how to read a GHS-compliant product label?
- ▶ Are labels visible on every hazardous chemical container?
- ▶ Are labels properly maintained and not obscured or otherwise damaged?
- ▶ Is every secondary container appropriately labeled?
- ▶ Are pipes that carry hazardous materials properly labeled?
- ▶ Does every label conform to required standards?

If the answer is “no” to any of these questions, **notify your supervisor** or the designated safety administrator for your facility.

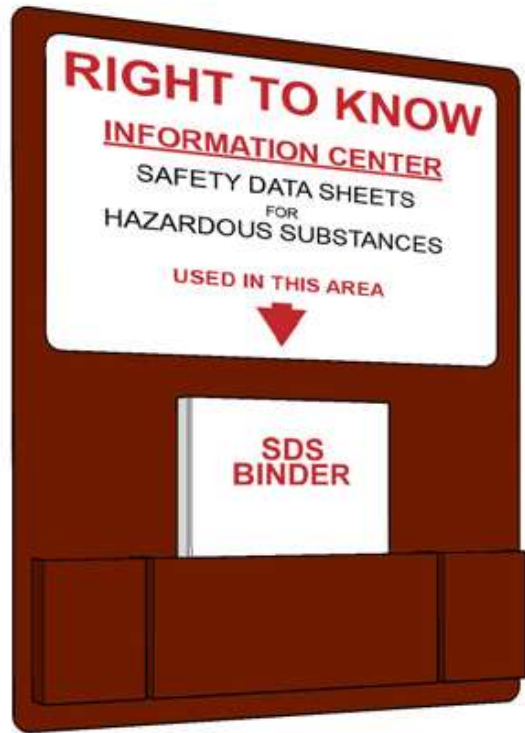
# 2

## Safety Data Sheets (SDS)

### What you need to know:

1. The 16 standardized sections of an SDS
2. How to use an SDS to determine the related hazards and controls
3. The employer responsibility to provide easy access to the SDS

## Exercise: The Safety Data Sheet



**Your employer must make an SDS easily available for each hazardous chemical at your facility.**



## 2 Safety Data Sheets (SDS)

# Using a SDS

In this activity you will use an SDS (provided in PDF format) and explore each of the 16 document sections.

For each SDS section, you will reference the document to answer a question.

Click the area below to download the SDS and get started.



Adobe Acrobat  
Document



### Download SDS (pdf)

Use this SDS as a reference for the remainder of this activity.

**SAFETY DATA SHEET**

**Chevron Phillips**  
Chemical Company LP

**Benzene**  
Version 1.8

Revision Date 2014-06-30

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**Product information**

Trade name : Benzene  
Material : 1098293, 1059192, 1059060, 1037212, 1037213, 1037103, 1029170, 1037104, 1015526, 1016960

**Company** : Chevron Phillips Chemical Company LP  
10001 Six Pines Drive  
The Woodlands, TX 77380

**Emergency telephone:**

**Health:**  
866.442.9628 (North America)  
1.832.813.4984 (International)

**Transport:**  
North America: CHEMTREC 800.424.9300 or 703.527.3887  
Asia: +800 CHEMCALL (+800 2436 2255)  
EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)  
South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

**Responsible Department** : Product Safety and Toxicology Group  
**E-mail address** : MSDS@CPChem.com  
**Website** : www.CPChem.com

**SECTION 2: Hazards identification**

**Classification of the substance or mixture**  
This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

**Emergency Overview**

**Danger**

**Physical state:** Liquid    **Color:** Clear, Colorless    **Odor:** sweet, distinct

**OSHA Hazards** : Flammable Liquid, Aspiration  
skin irritation



# Section 1: Product and Company Identification



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**Section 1** includes the product identifier used on the label, the recommended use, any restrictions of use, the contact information of the manufacturer, importer, or responsible party, and an emergency phone number.

Reference Section 1 of the provided SDS to answer the following.

The trade name for this SDS is "Gasoline, unleaded."

- True
- False



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Document

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Reference Section 1 of the provided SDS to answer the following.

The trade name for this SDS is "Gasoline, unleaded."

- True
- False

## Section 2: Hazards Identification



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Document

**Section 2** includes the classification of the chemical, the signal word, hazard statements, hazard symbols (including pictograms), and special hazards, such as not using water in a fire situation.

Reference Section 2 of the provided SDS to answer the following:

This chemical is classified as a \_\_\_\_\_ skin irritant, and the signal word is \_\_\_\_\_.

- Category 2, warning
- Category 2, danger
- Category 3, danger
- Category 3, warning
- Category 4, warning

## Section 2: Hazards Identification



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Document

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- Category 2, warning
- Category 2, danger**
- Category 3, danger
- Category 3, warning
- Category 4, warning

## Section 3: Composition/Information on Ingredients



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Document

**Section 3** includes the chemical name, the common name and synonyms, the Chemical Abstract System (CAS) number, and the hazardous ingredients with percentages of each.

Also for mixtures (as opposed to substances), the chemical name and exact percentage or concentration of all ingredients classified as health hazards is required.

Reference Section 3 of the provided SDS to answer the following:

---

Choose all that apply. Common names and synonyms include \_\_\_\_\_.

- Benzol
- Cyclopedrine
- Phene
- Phene Hydride

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## Section 4: First Aid Measures



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Document

**Section 4** includes the correct procedures, which are specific to the method of exposure, acute and delayed symptoms of overexposure, and the type of medical attention or treatment needed.

Reference Section 4 of the provided SDS to answer the following:

If this chemical is swallowed, the first measure is to immediately induce vomiting.

- True
- False



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Document

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Reference Section 4 of the provided SDS to answer the following:

If this chemical is swallowed, the first measure is to immediately induce vomiting.

- True
- False

## Section 5: Firefighting Measures



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Document

**Section 5** includes suitable extinguishing media and specific firefighting hazards.

Reference Section 5 of the provided SDS to answer the following:

---

A high volume water jet is listed as a suitable measure for fighting fires.

- True
- False



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Document

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- True
- False

## Section 6: Accidental Release Measures



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Document

**Section 6** includes personal precautions, personal protective equipment (PPE), emergency procedures, containment methods, and materials for cleanup.

Reference Section 6 of the provided SDS to answer the following:

Choose all that apply. What personal precautions should you take to prepare for an accidental release?

- Use PPE.
- Ensure adequate ventilation.
- Close all doors and windows.
- Remove all sources of ignition.

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- Close all doors and windows.
- Remove all sources of ignition.

## Section 7: Handling and Storage



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Document

**Section 7** details safe handling and storage precautions.

Reference Section 7 of the provided SDS to answer the following:

---

“Use only explosion-proof equipment” is one of the fire and explosion precautions.

- True
- False

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Document

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Reference Section 7 of the provided SDS to answer the following:

---

“Use only explosion-proof equipment” is one of the fire and explosion precautions.

- True
- False

## Section 8: Exposure Controls and PPE



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Document

**Section 8** includes recommended and required exposure limits for hazardous materials.

Field hazard assessments and the SDS are used to determine the proper PPE for employees working with the material.

Reference Section 8 of the provided SDS to answer the following:

---

If there is potential for uncontrolled release, use a \_\_\_\_\_.

- Filtering facepiece
- Negative pressure respirator
- Self-contained breathing apparatus
- Positive pressure, air-supplying respirator

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- Filtering facepiece
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- Positive pressure, air-supplying respirator



## Section 9: Physical and Chemical Properties



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Document

**Section 9** includes the following properties: appearance, odor, melting point, pH, vapor pressure, density, and solubility.

Reference Section 9 of the provided SDS to answer the following:

This chemical is a straw-colored liquid.

- True
- False



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Adobe Acrobat  
Document

**Section 9** includes the following properties: appearance, odor, melting point, pH, vapor pressure, density, and solubility.

Reference Section 9 of the provided SDS to answer the following:

This chemical is a straw-colored liquid.

- True
- False

# Section 10: Stability and Reactivity



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Document

**Section 10** includes the chemical's stability or reactivity with other chemicals or environmental conditions.

Reference Section 10 of the provided SDS to answer the following:

---

This chemical may react with oxygen and strong oxidizing agents.

- True
- False

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Adobe Acrobat  
Document

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Reference Section 10 of the provided SDS to answer the following:

This chemical may react with oxygen and strong oxidizing agents.

- True
- False

# Section 11: Toxicological Information



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Document

**Section 11** includes possible health effects for various routes of exposure.

Reference Section 11 of the provided SDS to answer the following:

What may happen if you accidentally get benzene in your eye?

- Death
- Irreversible eye damage
- Loss of consciousness
- Nothing, as benzene is meant to be placed in your eyes

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What may happen if you accidentally get benzene in your eye?

- Death
- Irreversible eye damage
- Loss of consciousness
- Nothing, as benzene is meant to be placed in your eyes

## Section 12: Ecological Information



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Document

**Section 12** describe a chemical's degradability, mobility in soil, aquatic or terrestrial toxicity, or other adverse effects.

Reference Section 12 of the provided SDS to answer the following:

This substance is safe when diluted in water and will not harm aquatic life.

- True
- False

## Section 12: Ecological Information



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Document

**Section 12** describe a chemical's degradability, mobility in soil, aquatic or terrestrial toxicity, or other adverse effects.

Reference Section 12 of the provided SDS to answer the following:

This substance is safe when diluted in water and will not harm aquatic life.

- True
- False



## Section 13: Disposal Considerations



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Document

**Section 13** includes information on safe handling and methods of disposal, including the disposal of any contaminated packaging. It may also include a description of waste residues.

Reference Section 13 of the provided SDS to answer the following:

This product should not be allowed to enter drains, water courses, or the soil.

- True
- False



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Reference Section 13 of the provided SDS to answer the following:

This product should not be allowed to enter drains, water courses, or the soil.

- True
- False

## Section 14: Transport Information



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Document

**Section 14** includes the chemical's proper shipping name, transportation hazards, environmental hazards, and other transportation precautions.

Reference Section 14 of the provided SDS to answer the following:

The designated US DOT class for this substance is \_\_\_\_\_.

- ND1452, BENZENE, 4, IV, RQ (BENZENE)
- UN2114, BENZENE, 4, II, RQ (ACETONE)
- UN1114, BENZENE, 3, II, RQ (BENZENE)
- UN1114, BENZENE, 3, III, RQ (ACETONE)

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- **UN1114, BENZENE, 3, II, RQ (BENZENE)**
- UN1114, BENZENE, 3, III, RQ (ACETONE)

## Section 15: Regulatory Information



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Document

**Section 15** details any national or regional regulations for the product that have not already been covered.

Reference Section 15 of the provided SDS to answer the following:

---

This chemical is known by State of California to cause cancer.

- True
- False

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Document

**Section 15** details any national or regional regulations for the product that have not already been covered.

Reference Section 15 of the provided SDS to answer the following:

---

This chemical is known by State of California to cause cancer.

- True
- False

## Section 16: Other Information



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Document

**Section 16** contains other information, such as data preparation or the latest revision date of the SDS or other related documents.

Reference Section 16 of the provided SDS to answer the following:

---

The NFPA Classification for benzene is \_\_\_\_\_.

- Health Hazard: 2, Fire Hazard: 3, Reactivity Hazard: 0
- Health Hazard: 1, Fire Hazard: 4, Reactivity Hazard: 1
- Health Hazard: 1, Fire Hazard: 2, Reactivity Hazard: 4
- Health Hazard: 2, Fire Hazard: 2, Reactivity Hazard: 3

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Document

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Reference Section 16 of the provided SDS to answer the following:

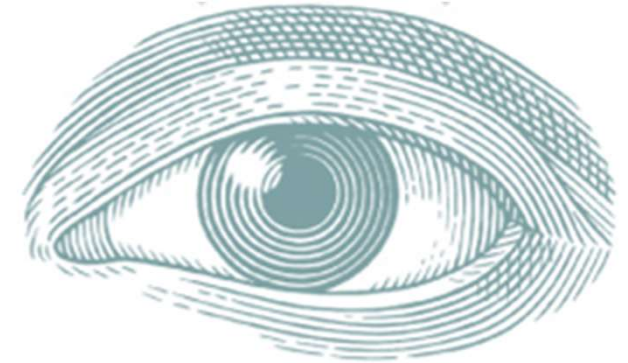
The NFPA Classification for benzene is \_\_\_\_\_.

- Health Hazard: 2, Fire Hazard: 3, Reactivity Hazard: 0
- Health Hazard: 1, Fire Hazard: 4, Reactivity Hazard: 1
- Health Hazard: 1, Fire Hazard: 2, Reactivity Hazard: 4
- Health Hazard: 2, Fire Hazard: 2, Reactivity Hazard: 3



## SDSs: Your Role

As an **employee** or **private contractor**, you have the right to know and understand the hazards posed by the materials you work with. You also have a role in preserving safety for your coworkers by identifying potential oversights or program improvements.



### Field Observations

- ▶ Do you know how to read a SDS?
- ▶ Can you easily access SDS for the hazardous materials that you work with or around?
- ▶ Are SDSs kept in an organized manner that can be quickly navigated?

If the answer is “no” to any of these questions, **notify your supervisor** or the designated safety administrator for your facility.



# Congratulations!

You have completed this training course.

## Action Items

- **Establish how to contact your supervisor** or program coordinator in case of an emergency.
- **Memorize the elements** of a GHS-compliant hazardous container label and associated symbols.
- **Establish where to find SDSs** for all hazardous chemicals you work with or around.
- **Review SDSs** for all hazardous chemicals your work with or around.
- **Participate in training talks and safety drills** that address chemical safety in your workplace.
- **Notify your supervisor** if you observe noncompliant labels or cannot locate a SDS.