CAL / OSHA: HAZARD COMMUNICATION
FACT SHEET

LENGTH: 13 MINUTES

PROGRAM SYNOPSIS:
Hazardous chemicals can be found in most workplaces across a variety of industries and protecting workers from exposure can prevent injuries and illnesses. You must be trained and know what each chemical in your place of work does and how it can affect you should you come in contact with them even if you do not come in contact with them on a daily basis.

PROGRAM OBJECTIVES:
After watching the program, the participant will be able to explain the following:
- What is included in a hazard communication program;
- Potential hazards that chemicals can contain;
- The images that are associated with certain chemicals;
- The step-by-step instructions for each chemical based on their Safety Data Sheet.

INSTRUCTIONAL CONTENT:

BACKGROUND
- Hazardous chemicals can be found in most workplaces across a variety of industries and protecting workers from exposure can prevent injuries and illnesses.
- California OSHA requires employers to implement a program known as Hazard Communication or "HazCom."
- The purpose of this program is to provide information to employees about the hazardous chemicals to which they may be exposed.
- The hazard communication program includes information on labels, safety data sheets, and employee training.
- Corrosive and caustic chemicals, flammable and combustible chemicals, chemicals that present physical or health hazards and chemicals that present environmental hazards are all commonly used in a wide variety of industries and workplaces.
- These chemicals perform a vital role in our operations but can also cause serious injury, illness, death or environmental damage when workers fail to follow safe work practices while using, handling or storing hazardous chemicals.
- For a hazard communication program to be effective, all employees must understand and use the information it provides to work safely with hazardous chemicals. The Hazard Communication Program is defined by a written plan.

THE WRITTEN PLAN
- The written hazard communication plan contains a listing and location of all hazardous chemicals on site.
- The plan also includes a description of our facility's chemical container labeling program, which includes a procedure for labeling secondary containers.
- The written plan also documents the employee training required to ensure all employees receive the chemical specific training they need to safely perform their job duties.
- For example, employees who work directly with hazardous chemicals will be trained how to recognize the occurrence of a leak or spill, to understand the physical and health hazards of the chemicals with which they work, in the selection and use of required protective equipment and how to read chemical labels and safety data sheets.
- California also requires employers to train contractors that may be exposed to hazardous chemicals on the same information.
- Employees will also be instructed how to access the written hazard communication plan as well as all safety data sheets for hazardous chemicals located at the facility.
- The Cal OSHA regulation mandates that employees have access to this information because all employees have a "right to know" about the hazards of any chemicals with which they work.
- This is why the Hazard Communication Standard is sometimes referred to as the "Right to Know" standard.

- California OSHA's regulations has incorporated the "globally harmonized system for the classification and labeling of chemicals," commonly called the GHS. Developed by the United Nations, the GHS divides chemicals into hazards, classes and categories, with hazards being the most general grouping.

PHYSICAL HAZARDS

- The GHS defines three types of chemical hazards: physical hazards, health hazards and environmental hazards.
- Chemicals that present a physical hazard are those that are flammable, explosive or reactive and can damage property or harm people.
- Chemicals that present a health hazard are those that could cause illness or injury to the skin, eyes, lungs or other organs and body parts.
- Chemicals that present an environmental hazard are those that cause aquatic toxicity and damage to living organisms in water or cause damage to the earth's ozone layer.
- The chemicals represented by each of these three general hazard types have been further divided into classes of hazards. There are 10 classes of health hazards and 16 classes of physical hazards.
- There are five pictograms designed to represent the 16 classes of physical hazards. We will show each pictogram and list a few of the hazard classes it represents.
- The exploding bomb pictogram represents these hazard classes which include explosives and organic peroxides.
- The flame pictogram represents these hazard classes which include flammable gases, flammable liquids and flammable solids.
- The flame over circle or oxidizer pictogram represents the hazard classes which include oxidizing materials.
- The gas cylinder pictogram represents the hazard classes which include compressed gas, liquefied gas or dissolved gas.
- The corrosion pictogram represents the hazard classes which includes materials corrosive to metal.

HEALTH & ENVIRONMENTAL HAZARDS

- There are four pictograms that represent health hazards, one of which is also the corrosion pictogram.
- The corrosion pictogram is the only pictogram that represents both a physical hazard and a health hazard.
- The corrosion pictogram also represents the hazard classes of skin corrosion and serious eye damage.
- The skull and crossbones pictogram represents the health hazard classes which include acute toxicity to the skin, lungs, or digestive system.
- The health hazard pictogram represents the health hazard classes which include germ cell mutagenicity, carcinogenicity and reproductive toxicity.
- These hazards can adversely affect the DNA of cells, cause cancer or have adverse effects on reproduction.
- The exclamation point pictogram, sometimes called the irritant pictogram, represents the health hazard classes which include skin irritation, eye irritation and respiratory tract irritation.
- There are also pictograms to represent environmental hazards. This pictogram is used when a substance poses acute or chronic hazards to the aquatic environment.
- And the Irritant Pictogram can be used to represent a damaging hazard to the ozone layer.
- Remember the point of these pictograms is to represent the potential hazards of a substance.
- Their presence is an indication that you may need to seek out additional information in order to safely work with the chemical.

CHEMICAL LABELS

- When workers need additional information, the first place to find it is on the chemical label. In addition to containing the applicable pictograms, the container label will include a product identifier.
- The product identifier is the name or number used to identify a hazardous substance. Also included on the label will be the supplier information. The name, address and telephone number should be provided.
- The hazard classes created by the GHS are grouped to an even larger number of very specific sub-sections or categories. Each specific hazard category is assigned a number or a letter as an indication of the severity of its hazards.
- A hazard category assigned the number 1, or the letter A, represents the most severe hazard categories.
- For example, a Category 1 Flammable Solid presents a more severe hazard than a Category 2 Flammable Solid.
- The GHS uses these hazard categories and their relative severity to define what information appears on the chemical

label.

- For example, the chemical label may also contain a signal word. A signal word is used to represent the seriousness of a chemical's most severe hazard.
- Only two signal words are used: “Danger” and “Warning.”
- A chemical with a label displaying the signal word “Danger” has a more severe hazard than a chemical with a label displaying the signal word “Warning.”
- Chemical labels may also contain hazard statements and precautionary statements.
- Hazard statements have been developed to concisely describe the nature of a chemical’s hazards and have been defined based on each hazard category and the severity of its hazard.
- Be aware that many chemicals contain multiple hazards. When this is the case, a hazard statement for each hazard will appear on the label.
- In addition to hazard statements, chemical labels will also contain Precautionary Statements. Precautionary statements describe measures that can be taken to prevent or minimize any harmful effects of the chemical.
- There are five types of precautionary statements: general, such as “Read label before use”; prevention, such as “Wear protective gloves”; response, such as “If on skin, wash with plenty of water”; storage, such as “Store in well ventilated place”; and disposal, such as “Dispose in accordance with local regulations.”
- Precautionary statements are also defined by the GHS based on a chemical's hazard class and category.
- The chemical label provides a great deal of important information a worker can use to stay safe.
- By paying attention to signal words and reading the hazard and precautionary statements, a well-trained worker will have the information needed to work safely with a chemical.

SAFETY DATA SHEETS

- However, many times a worker will need more detailed information than a chemical label can provide. When this is the case, a chemical’s Safety Data Sheet must be consulted.
- As part of the facility’s hazard communication plan, a Safety Data Sheet is maintained for every hazardous chemical on site. These Safety Data Sheets are always available for employee review.
- Safety Data Sheets are divided into sixteen sections.
- Safety Data Sheets are required to be uniform, meaning that each Safety Data Sheet will contain the same 16 sections in specific order.
- We’ll now highlight a few sections of the Safety Data Sheet that are of particular importance to chemical workers.
- Section 2: Hazards Identification. This section contains the health, environmental and physical hazards of the chemical as well as pictograms, hazard statements and precautionary statements.
- Section 4: First Aid Measures. This section describes the proper action to take during an exposure situation.
- Section 6: Accidental Release Measures. This section contains the proper methods to safely clean up a leak or spill.
- Section 8: Precautions to Control Exposure/Personal Protection. This section contains any exposure limits for the chemical as well as the protective equipment required to prevent exposure. This important section is where workers can look to see what PPE the chemical manufacturer recommends.
- Section 11: Toxicological Information. This section explains the chemical’s routes of entry into the human body as well as the signs and symptoms of exposure to the chemical.

PROPOSITION 65

- The state of California has a regulation known as “Proposition 65,” which requires the governor to publish a list of chemicals known to the State of California to cause cancer, birth defects, or reproductive harm.
- Employers must determine whether any of the hazardous chemicals in their chemical inventory are subject to Proposition 65 requirements and if so, ensure that they have proper Proposition 65 hazard warnings affixed to their containers or on appropriate posting signs in the workplace.
- Employees in California should become familiar with any Proposition 65 chemicals in their workplace and make sure they fully understand how to protect themselves from harmful exposure.
- Whether on the job or off, understanding and controlling the hazards presented by chemicals is critical to our safety and health.
- In this program, we have provided an overview of our Hazard Communication Program and pointed out how to use the information it provides to work safely with chemicals in the state of California.

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ANSWERS TO THE REVIEW QUIZ

1. b
2. b
3. a
4. a
5. a
6. b
7. a
8. a
9. a

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REVIEW QUIZ

The following questions are provided to determine how well you understand the information presented in this program.

Name_____Date_____

1. Hazard Communication programs include information on labels, safety data sheets and _____.

a. Breakrooms
b. Employee training
c. Office memos

2. For a hazard communication program to be effective, only some employees must understand and use the information it provides to work safely with hazardous chemicals.

a. True
b. False

3. California also requires employers to train contractors that may be exposed to hazardous chemicals on the same information.

a. True
b. False

4. The three types of chemical hazards include: physical, _____ and environmental.

a. Health
b. Seeing
c. Hearing

5. There are 10 classes of health hazards and 16 classes of physical hazards.

a. True
b. False

6. A corrosion pictogram represents hazards that are flammable.

a. True
b. False

7. When needing additional information, the first place to find it is on the chemical label.

a. True
b. False

8 Section 4 of the Safety Data Sheet entails First Aid Measures for the chemical you're working with.

a. True
b. False

9. Proposition 65 requires the governor to publish a list of chemicals known to the state of California to cause cancer, birth defects, or reproductive harm.

a. True
b. False