

2021 OVERVIEW SERIES: HAZARD COMMUNICATION FACT SHEET

LENGTH: 14 MINUTES

PROGRAM SYNOPSIS:

Hazard Communication, commonly known as “HazCom,” refers to the procedures and processes used to effectively communicate to employees the hazards associated with workplace chemicals. Required by OSHA’s Hazard Communication Standard, your organization’s Hazard Communication Program includes a written plan that outlines essential elements of the program, such as container labeling, Safety Data Sheets, a listing of all hazardous chemicals onsite and employee training. The purpose of Hazard Communication training is to explain and reinforce the information conveyed through container labels and Safety Data Sheets so employees can apply this information in their workplace. That’s the focus of this program—helping workers to become familiar with the written Hazard Communication Plan, the types of chemical hazards in the workplace and the specific types of information provided by container labels and Safety Data Sheets.

Topics include the Global Harmonizing System, signal words, hazard and precautionary statements and pictograms that represent physical and health hazards.

PROGRAM OBJECTIVES:

After watching the program, the participant should be able to explain the following:

- What information must be included in an organization’s written Hazard Communication Plan;
- Why the Global Harmonizing System was created and how it improves Hazard Communication;
- What the three types of chemical hazards are;
- Which types of information are displayed on a chemical container label;
- What the physical and health hazard pictograms are and what hazards they are used to indicate;
- What types of information are included on all Safety Data Sheets.

INSTRUCTIONAL CONTENT:

HAZARD COMMUNICATION OVERVIEW

- Hazard Communication, commonly known as “HazCom,” refers to the procedures and processes used to effectively communicate to employees the hazards associated with workplace chemicals.
- Required by OSHA’s Hazard Communication Standard, your organization’s Hazard Communication Program includes a written plan that includes:
 - A listing of the hazardous chemicals onsite and their locations,
 - A description of the organization’s chemical container labeling program,
 - Documentation of the specific chemical training employees must receive in order to perform their specific job duties safely.
- As part of the Hazard Communication Program all chemical containers must be labeled with safety and health information related to the use, handling and storage of the chemical.
- OSHA’s Hazard Communication Standard also requires employers to maintain a Safety Data Sheet for every chemical located at their facility. A Safety Data Sheet is divided into 16 sections and contains more detailed information about the chemical or substance than that found on the container label.
- All employees have the right to access these Safety Data Sheets, as well as the company’s written Hazard Communication Program, anytime they wish to learn more about a particular chemical or substance.

- OSHA’s 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 OSHA’s Hazard Communication Standard is sometimes referred to as the “Right to Know” standard and also why Hazard Communication Training is also known as Right to Know training.
- By utilizing the information found on container labels and Safety Data Sheets, employees can easily learn about the hazards of the chemicals in their workplace, as well as the safe work practices and personal protective equipment needed to handle, use and store them safely.

THE WRITTEN HAZARD COMMUNICATION PLAN

- A written Hazard Communication Plan must be included in your organization’s Hazard Communication Program. The written plan specifies the policies, procedures and essential elements of the organization’s Hazard Communication Program, such as container labeling, the collection, storage and availability of Safety Data Sheets and a listing of all hazardous chemicals on-site as well as their location.
- The written Hazard Communication Plan will also detail specific guidelines for the training of employees.
- Some examples of specific chemical training that employees may receive include:
 - How to identify a leak or spill,
 - The physical and health hazards of chemicals used in their work area,
 - The safe work practices that must be followed,
 - Proper handling and storage,
 - The personal protective equipment needed to prevent exposure,
 - How to read and understand the information found on chemical labels and Safety Data Sheets.
- Your organization’s written Hazard Communication Plan is an important document that all employees have a right to review upon request.

THE GLOBAL HARMONIZING SYSTEM

- The Global Harmonizing System, or GHS for short, was incorporated into OSHA’s Hazard Communication Standard on March 26, 2012 in an effort to bring the regulation more in line with international protocols.
- Created by the international community and adopted by the United Nations, the Global Harmonizing System provides a single set of harmonized criteria for classifying chemicals and mixtures according to their physical, health and environmental hazards.
- The GHS improves hazard communication by specifying communication elements, such as signal words, pictograms, and hazard and precautionary statements.
- These common elements are used on container labels and Safety Data Sheets worldwide to quickly convey information about a chemical’s hazards.
- The reference guide titled, “A Guide to the Globally Harmonized System of Classification and Labeling of Chemicals”, provides a detailed explanation of this information. This guide is published by the United Nations and is commonly known as the “Purple Book.”
- It is not necessary for most chemical workers to have a complete understanding of the entire Global Harmonizing System; however, all workers must understand the specific elements of the system used to communicate the hazards of the chemicals in their workplace.

TYPES OF CHEMICAL HAZARDS

- The Global Harmonizing System or “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, reactive or can damage property or harm people.
- Chemicals that present a health hazard are those that may 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 harm to the aquatic environment, damage 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 by the Global Harmonizing System. There are 10 classes of health hazards and there are 16 classes of physical hazards.
- The type and hazard class of any particular chemical, as defined by the GHS, helps determine the critical safety information and communication elements that appear on the container label and Safety Data Sheet.

INFORMATION FOUND ON CONTAINER LABELS

- The container label should be your first source of information about the hazards and characteristics of a specific chemical or substance.
- The container label will display the chemical's name, the United Nations' product identifier and the supplier's name, address and emergency phone number.
- The label may also include a signal word, hazard statements, precautionary statements and pictograms, all of which are designed to quickly communicate a chemical's hazards.
- The signal word is used to indicate the relative severity of the chemical's most severe hazard. There are only two signal words used: "Danger" and "Warning."
- The signal word "Danger" is used to represent more severe hazards, such as "severe skin burns," while the signal word "Warning" is used to represent lesser hazards, such as "mild skin irritation."
- Only one signal word, corresponding to the chemical's most severe hazard, will be shown on a label.
- Also found on a chemical's label are hazard statements and precautionary statements. These statements concisely describe the nature of a chemical's hazards and the measures that should be taken to minimize those hazards.
- Finally, a chemical label may also contain a pictogram. These globally standardized images are used to quickly convey the physical, health and environmental hazards presented by a chemical or substance.
- If you don't understand the meaning of the information found on a chemical's label, or you need additional information, you should refer to its Safety Data Sheet.
- Taking a moment to read the important information contained on a container label is the first step to working safely with any chemical or substance.

HAZARD & PRECAUTIONARY STATEMENTS

- Hazard and precautionary statements are often found on chemical labels. These statements concisely describe the nature of a chemical's hazards and the measures that should be taken to minimize those hazards.
- Hazard statements are standard phrases developed by the GHS and assigned to a specific hazard class and category.
- For example, the hazard statement, "Causes eye irritation" will be listed for a chemical that is an eye irritant and the hazard statement; "Toxic if inhaled" will be listed for a substance with acute inhalation toxicity.
- For chemicals that contain multiple hazards, a hazard statement for each hazard will appear on the chemical's label.
- Precautionary statements are used to quickly explain the safe work practices and other measures required to prevent or minimize any harmful effects of the chemical.
- The GHS has created five different types of precautionary statements:
 - 1) General, such as "Read label before use"
 - 2) Prevention, for example "Wear protective gloves"
 - 3) Response, such as "If on skin wash with plenty of water"
 - 4) Storage, for example "Store in a well-ventilated place"
 - 5) Disposal, such as "Dispose in accordance with local regulations."

PICTOGRAMS THAT REPRESENT PHYSICAL HAZARDS

- Physical hazard pictograms are standardized graphic images found on a chemical label that represent the physical hazards presented by a chemical or substance.
- Physical hazards are the properties of a substance that could cause damage to property or harm to people.
- There are five pictograms used to indicate physical hazards:
 - 1) The “exploding bomb” pictogram indicates that a material is explosive or unstable.
 - 2) The “flame” pictogram is used to represent flammable gases, flammable liquids and flammable solids as well as pyrophoric substances. A pyrophoric substance can self-ignite when exposed to air.
 - 3) The “flame over circle” pictogram, also called the “oxidizer” pictogram, signifies that the chemical can cause a fire or increase the intensity of a fire.
 - 4) The “gas cylinder” pictogram is used when a substance is a compressed gas, dissolved gas or liquefied gas under pressure.
 - 5) The “corrosion” pictogram signifies that the material is corrosive to metal. The corrosion pictogram is also used to represent the health hazard of skin corrosion and serious eye damage.
- The corrosion pictogram is the only pictogram used to represent both a physical hazard and a health hazard.
- We have not listed all of the physical hazards represented by these pictograms. Refer to a chemical’s Safety Data Sheet for more detailed information about the hazards of any specific chemical.

PICTOGRAMS THAT REPRESENT HEALTH HAZARDS

- Health hazard pictograms are standardized graphic images found on a chemical label that represent the properties of a substance that can cause illness or injury to the eyes, lungs, skin, internal organs or other body parts.
- The “corrosion” pictogram is used to represent the health hazard of skin corrosion and serious eye damage. The corrosion pictogram also signifies that the material is corrosive to metal.
- The corrosion pictogram is the only pictogram used to represent both a physical hazard and a health hazard.
- The “exclamation point” pictogram, also called the “irritant” pictogram, represents skin irritation, eye irritation, respiratory tract irritation and non-fatal acute toxicity.
- The “skull and crossbones” pictogram denotes that a chemical is acutely toxic and exposure may be fatal.
- The “health hazard” pictogram indicates that the substance is an aspiration hazard, carcinogen, causes respiratory sensitization, reproductive toxicity or specific target organ toxicity.
- We have not listed all of the health hazards represented by these pictograms. Refer to a chemical’s Safety Data Sheet for more detailed information about the hazards of any specific chemical.

SAFETY DATA SHEETS

- If you need to seek out additional or more detailed information about a chemical than what is provided by the container label, you should consult its Safety Data Sheet, or SDS.
- The SDS includes information such as the properties of each chemical, the physical, health, and environmental hazards, protective measures and safety precautions for handling, storing, and transporting the chemical.
- Safety Data Sheets have a uniform format in which information is presented in 16 sections that appear in a specific order.
- Sections 1 through 8 contain general information about the chemical: identification, hazards, composition, safe handling practices and emergency control measures.
- Sections 9 through 11 contain technical and scientific information such as physical and chemical properties, stability and reactivity information, toxicological information and exposure control information.

- Sections 12 through 15 contain information required by agencies other than OSHA and include ecological information, disposal considerations, transport information and other regulatory information.
- Section 16 contains “other” information such as the date the SDS was prepared or revised.
- Of particular interest to chemical workers are Section 4, first aid information; Section 6, spill response; and, Section 8, personal protective equipment.
- All employees must have access to their organization’s Safety Data Sheets and should consult them prior to working with a specific chemical.

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ANSWERS TO THE REVIEW QUIZ

1. c

2. b

3. b

4. a

5. a

6. b

7. b

8. c

9. b

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REVIEW QUIZ

Name _____ Date _____

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

1. The reference guide titled, "A Guide to the Globally Harmonized System of Classification and Labeling of Chemicals", is commonly known as the _____.
 - a. Blue Book
 - b. Red Book
 - c. Purple Book

2. It is not necessary for workers to understand the specific elements of the system used to communicate the hazards of the chemicals in their workplace.
 - a. True
 - b. False

3. There are _____ of health hazards.
 - a. 5 classes
 - b. 10 classes
 - c. 16 classes

4. The container label should be your _____ source of information about the hazards and characteristics of a specific chemical or substance.
 - a. First
 - b. Last

5. The signal word _____ is used to represent more severe hazards.
 - a. Danger
 - b. Warning

6. "Wear protective gloves" is an example of the _____ type of precautionary statement.
 - a. General
 - b. Prevention
 - c. Response

7. The _____ pictogram is the only pictogram used to represent both a physical hazard and a health hazard.
 - a. Exploding bomb
 - b. Corrosion
 - c. Gas cylinder

8. Safety Data Sheets have a uniform format in which information is presented in _____ that appear in a specific order.
 - a. 8 sections
 - b. 12 sections
 - c. 16 sections

9. _____ of a Safety Data Sheet provides information on Spill Response.
 - a. Section 4
 - b. Section 6
 - c. Section 8